As confidentially submitted to the U.S. Securities and Exchange Commission on May 7, 2021.
This draft registration statement has not been publicly filed with the U.S. Securities and Exchange Commission and all information herein remains strictly confidential.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Cognition Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**2836**	**13-4365359**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

2403 Sidney Street
Pittsburgh, Pennsylvania 15203
(412) 481-2210

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Lisa Ricciardi
Chief Executive Officer
Cognition Therapeutics, Inc.
2403 Sidney Street
Pittsburgh, Pennsylvania 15203
(412) 481-2210

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Rachael M. Bushey **Joseph Walsh** **Troutman Pepper Hamilton Sanders LLP** **3000 Two Logan Square** **Philadelphia, Pennsylvania 19103** **(215) 981-4331**	**Stephen Older** **Rakesh Gopalan** **McGuireWoods LLP** **1251 Avenue of the Americas, 20th Floor** **New York, New York 10020** **(212) 548-2100**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	**Proposed maximum aggregate offering price[(1)]**	**Amount of registration fee[(2)]**
Common Stock, $0.001 par value per share	$	$

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes the aggregate offering price of additional shares of common stock that the underwriters have the option to purchase.

(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Subject to completion, dated , 2021

Preliminary prospectus

shares

Common stock

This is the initial public offering of shares of common stock of Cognition Therapeutics, Inc.

We are offering shares of our common stock. It is currently estimated that the initial public offering price per share will be between $ and $. Prior to this offering, there has been no public market for our common stock.

We intend to apply to list our common stock on the Nasdaq Global Market under the trading symbol "CGTX".

We are an "emerging growth company" and a "smaller reporting company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and may elect to do so in future filings.

Investing in our common stock involves a high degree of risk. See the section titled "Risk Factors" beginning on page 11 to read about factors you should consider before buying shares of our common stock.

	Per share	Total
Initial public offering price	$	$
Underwriting discounts and commissions[(1)]	$	$
Proceeds to us before expenses	$	$

(1) See the section titled "Underwriting" beginning on page 163 for additional information regarding compensation payable to the underwriters.

We have granted the underwriters an option for a period of 45 days to purchase up to additional shares of common stock at the initial public offering price, less the underwriting discounts and commissions.

The underwriters expect to deliver the shares against payment in New York, New York on , 2021.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

National Securities Corporation

Prospectus dated , 2021

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Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition and results of operations may have changed since that date.

For investors outside the United States: Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus and any such free writing prospectus outside the United States.

Through and including , 2021 (25 days after the date of this prospectus), all dealers that effect transactions in our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to unsold allotments or subscriptions.

Market and Industry Data

This prospectus contains estimates and other statistical data made by independent parties relating to our industry and the markets in which we operate, including estimates and statistical data about our market position, market opportunity, the incidence of certain medical conditions and other industry data. These data, to the extent they contain estimates or projections, involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates or projections. Although we have not independently verified the accuracy or completeness of the data contained in these industry publications and reports, based on our industry experience we believe that the publications are reliable, the conclusions contained in the publications and reports are reasonable and the third-party information included in this prospectus and in our estimates is accurate and complete.

PROSPECTUS SUMMARY

This summary highlights selected information contained in greater detail elsewhere in this prospectus. This summary is not complete and does not contain all of the information you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus. You should carefully consider, among other things, the sections titled "Risk Factors," "Special Note Regarding Forward-Looking Statements" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus. As used in this prospectus, unless the context otherwise requires, references to "we," "us," "our," the "company," "Cognition" and similar references refer to Cognition Therapeutics, Inc., and its consolidated subsidiary.

Overview

We are a clinical-stage biopharmaceutical company engaged in the discovery and development of innovative, small molecule therapeutics targeting age-related degenerative diseases and disorders of the central nervous system, or CNS, and retina. Currently available therapies for these diseases are limited, with many diseases having no approved therapies or treatments. Our goal is to develop disease modifying treatments for patients with these degenerative disorders by initially leveraging our expertise in the σ-2 (sigma-2) receptor, or S2R, which is expressed by multiple cell types, including neuronal synapses, and acts as a key regulator of cellular damage commonly associated with certain age-related degenerative diseases of the CNS and retina. We believe that targeting the S2R complex represents a mechanism that is functionally distinct from other current approaches in clinical development for the treatment of degenerative diseases.

Since our inception, we have collaborated and worked closely with key healthcare organizations and thought leading institutions in the field of degenerative diseases to develop and advance our therapeutic candidates. To date we have been awarded over $123 million in grants and financial support primarily from the National Institute of Aging, or NIA, a division of the National Institutes of Health to support our clinical trials.

Our lead product candidate, CT1812, is an orally delivered, small molecule antagonist designed to penetrate the blood-brain barrier and bind selectively to the S2R complex. The S2R complex is comprised of transmembrane protein 97, or TMEM97, a four-domain transmembrane protein that forms a complex with progesterone receptor membrane component 1, or PGRMC1. The S2R complex is expressed in the CNS, the retina, as well as peripheral organs, including the pancreas, liver and kidney. Internal and third-party studies suggest that the role of PGRMC1 and TMEM97, the protein components of the S2R complex, regulate cell damage response processes, including cholesterol biosynthesis, vesicle trafficking, progesterone signaling, lipid membrane-bound protein trafficking and receptor stabilization at the cell surface. In addition, the S2R complex regulates autophagy, the cellular process by which altered cellular proteins are degraded and removed. The aberrant activity of these processes, believed to be triggered by cellular stresses, is a hallmark of the dysfunction related to degenerative diseases.

We have initially focused on the development of CT1812 for the treatment of Alzheimer's disease, or AD, a disease that afflicts approximately 6.2 million people in the United States and disease prevalence is expected to more than double by 2050. The direct healthcare costs to care for patients with AD and other dementias in the United States is currently estimated to exceed $305 billion. CT1812 targets the accumulation of β-amyloid, or Aβ, oligomers, which has been linked to AD. By displacing these Aβ oligomers from neuronal receptors in the S2R complex, we expect to demonstrate that CT1812 can slow the loss of synapses and cognitive decline observed in AD. CT1812 is the first S2R antagonist to reach clinical trials and is currently in Phase 2 development for the treatment of AD.

We are continuing to enroll patients in two ongoing Phase 2 clinical trials (SHINE and SEQUEL) with CT1812 in mild-to-moderate AD. Preliminary results from an interim analysis of the first 24 patients in Part A of our ongoing SHINE Phase 2 clinical trial demonstrated a statistically significant decline in the presence of Aβ and a positive trend on cognitive function as measured by the Alzheimer's Disease Assessment Scale-Cognitive Subscale, or ADAS-Cog, in patients receiving CT1812 compared to placebo with a favorable safety profile, and we anticipate top-line data from this study in the first half of 2023. Our ongoing SEQUEL Phase 2 clinical trial is also evaluating changes in brain function, as measured by

electroencephalography, or EEG, in mild-to-moderate AD with top-line data expected in 2023. We have treated an estimated 164 subjects with CT1812 in our clinical trials to date including 76 patients with mild-to-moderate AD. CT1812 has continued to be generally safe and well tolerated and has been granted Fast Track designation by the U.S. Food and Drug Administration, or FDA, in this indication.

With the support of a grant of approximately $81 million from the NIA, we intend to enroll 540 patients in our COG0203 clinical trial with mild cognitive impairment, or MCI, due to AD or mild AD who have elevated levels of Aβ as determined by positron emission tomography, or PET, imaging or as measured in cerebral spinal fluid, or CSF. Patients will be randomized to receive CT1812 or a placebo for 18 months. In addition to cognitive and functional measures, such as the Clinical Dementia Rating Scale, or CDR, Sum of Boxes, or SOB, and ADAS-Cog, we intend to use a variety of biomarkers to measure target and/or pathway engagement and assess changes in neurodegeneration and disease progression. We will conduct this clinical trial in collaboration with the Alzheimer's Clinical Trial Consortium, or ACTC, an NIA-funded clinical trials network designed to accelerate studies for therapeutics for AD and related dementias. We expect to begin enrollment for this trial in the first half of 2022.

We intend to expand our CT1812 pipeline to include additional indications such as dry age-related macular degeneration, or dry AMD, a disease that results in the deterioration of the macula, causing visual distortion, loss of central vision and eventual blindness, for which there are currently no FDA approved treatments. The S2R complex is expressed in the retina in several cell types including the retinal pigment epithelial cells, or RPE, photoreceptors and retinal ganglion cells. We believe that an S2R antagonist, such as CT1812, may help to regulate the damage-response processes related to these cells that are impaired in dry AMD. After the completion of our ongoing preclinical studies, we intend to advance directly into a Phase 2 clinical trial in the second half of 2021, leveraging our knowledge of CT1812's preclinical and clinical safety profile to date.

We also intend to develop and advance other product candidates in the area of synucleinopathies. Synucleinopathies are a group of degenerative diseases characterized by the abnormal accumulation of the alpha-synuclein protein in neural cell bodies, including Parkinson's disease, or PD, and dementia with Lewy bodies, or DLB.

Our Pipeline

We are developing a pipeline of innovative, small molecule product candidates that are designed to target the S2R complex, a key regulator of the cellular damage response for diseases such as AD, dry AMD, geographic atrophy (an advanced form of dry AMD), or GA, and other conditions for which there is significant unmet medical need. Our current pipeline is summarized below:

Product Candidate	Target Indication	Commercial Rights Retained	Research/Discovery	Preclinical	Phase 1	Phase 2	Phase 3	Next Anticipated Milestone
CT1812	Mild-moderate AD	Worldwide						Phase 2 SHINE topline data (1H2023)
CT1812	Early-stage AD	Worldwide						Phase 2 COG0203 initiation (1H2022)
CT1812	Dry AMD	Worldwide						Phase 2 initiation (2H2021)
CT2168	Synucleinopathies	Worldwide						IND enabling studies
CT2074	Dry AMD	Worldwide						IND enabling studies

Our Strategy

Our objectives are to develop and advance our portfolio, beginning with our lead product candidate, CT1812, through clinical development for the treatment of age-related degenerative diseases and disorders of the CNS and retina and to leverage our understanding of the S2R complex and its regulation of pathways to pursue indications in other degenerative disorders. The key elements of our strategy include:

- ***Advance clinical development of our lead product candidate, CT1812, in mild-to-moderate AD and earlier stages of the disease***. Our lead product candidate, CT1812, has progressed through both safety and initial proof-of-concept clinical trials primarily through funding provided by the NIA. We plan to evaluate CT1812 in other AD populations as well and develop CT1812 for patients with earlier symptomatic stages of AD and Mild Cognitive Impairment, which is a slight and noticeable measurable decline in cognitive abilities due to AD. We plan to initiate the COG0203 clinical trial in patients with mild dementia associated with early-stage AD in the first half of 2022, which has been funded by a grant award of approximately $81 million from the NIA.
- ***Pursue the development of CT1812 for dry AMD***. We plan to evaluate CT1812 as a potential therapy for dry AMD, a common eye disease that results in the deterioration of the macula, causing visual distortion, loss of central vision and eventual blindness. We believe that an S2R antagonist, such as CT1812, may help to regulate the damage-response processes that are impaired in dry AMD. After the completion of our ongoing preclinical studies we intend to initiate a Phase 2 clinical trial in the second half of 2021.
- ***Leverage our understanding of the S2R complex to develop product candidates for other CNS and degenerative diseases, including synucleinopathies***. We intend to develop and advance other product candidates to treat synucleinopathies, which include PD and DLB. In the second half of 2021, we anticipate initiating a study in patients with DLB. We have a series of leads from which we plan to identify a candidate for study in PD. Data published in February 2021 showed that the S2R complex may play an integral role in the pathology of PD and we believe these results merit further study.
- ***Expand our pipeline through internal development, in-licensing and acquisitions***. We intend to leverage our expertise in drug development and business development to evaluate additional product candidates as well as bring forward novel chemical matter using our library generation and Novel Improved Conditioned Extraction, or NICE, screening platform. To achieve this objective, we may supplement our internal development initiatives through selective in-licensing arrangements, as well as investments in strategic collaborations or partnerships which complement our initiatives.
- ***Optimize the value of CT1812 and other product candidates in major markets.*** We currently retain all worldwide rights to CT1812 for all indications. We plan to develop and pursue approval of CT1812 and other future product candidates in major markets. Where appropriate, we may use strategic collaborations or partnerships to accelerate development and maximize the commercial potential of our programs. We and our key opinion leaders believe CT1812 also can be used in combination with other therapeutics targeting AD biologies and which may provide us with additional partnering opportunities.
- ***Continue to pursue non-dilutive funding opportunities***. The majority of our clinical trials have been funded by approximately $123 million in cumulative grants awarded by the NIA, which includes a grant award of approximately $81 million grant from the NIA to fund our upcoming Phase 2 (COG0203) study of CT1812 in patients with early-stage AD. These grants are non-dilutive and allow us to collaborate with research institutions in pursuing the development of our product candidates for age-related degenerative diseases and disorders of the CNS and retina. We intend to continue our work with these research institutions and plan to seek additional non-dilutive funding for our clinical development when possible.

Our Team

We have assembled a management team with extensive experience with CNS and degenerative diseases, significant expertise in the S2R biology domain, as well as drug discovery, clinical development, general management and business development. Collectively, our management team has a track record of managing drug development programs that have received regulatory approval and been successfully commercialized. These include programs at Bristol-Myers Squibb Company, Pfizer Inc. and Roche Holding AG. We augment the strengths of our management team with an experienced board of directors and scientific and medical advisory boards.

Risks Associated with our Business

Our business is subject to a number of risks of which you should be aware before making a decision to invest in our common stock. These risks are more fully described in the section titled "Risk Factors" immediately following this prospectus summary. These risks include, among others, the following:

- we are a clinical-stage biopharmaceutical company with no products approved for commercial sale and have incurred significant losses since our inception in 2007. We expect to incur significant losses over for the foreseeable future and may never achieve or maintain profitability;
- we have not yet completed Phase 2 clinical trials and have no history of commercializing products, which may make it difficult for an investor to evaluate the success of our business to date and to assess our future viability;
- even if this offering is successful, we will need substantial additional financing to meet our financial obligations and to pursue our business objectives;
- to date, we have partially relied on non-dilutive grants to cover certain of our capital requirements for our clinical trials, and we may fail to continue to receive non-dilutive funding;
- our business has been and could continue to be adversely affected by the evolving and ongoing COVID-19 global pandemic in regions where we or third parties on which we rely have significant manufacturing facilities, concentrations of clinical trial sites or other business operations;
- our business is heavily dependent on the successful development, regulatory approval and commercialization of CT1812 and any future product candidates that we may develop or acquire;
- we may not successfully expand our pipeline of product candidates, including by pursuing additional indications for CT1812 or by in-licensing or acquiring additional product candidates for other diseases;
- preclinical and clinical development involves a lengthy and expensive process with an uncertain outcome, and the results of preclinical studies and early clinical trials are not necessarily predictive of future results.
- we have not tested any of our product candidates in pivotal clinical trials and our product candidates may not have favorable results in future clinical trials;
- we have conducted, and in the future plan to conduct, clinical trials for product candidates outside the United States, and the FDA and comparable foreign regulatory authorities may not accept data from such trials;
- even if our current or future product candidates obtain regulatory approval, they may fail to achieve the broad degree of adoption and use by physicians, patients, hospitals, healthcare payors and others in the medical community necessary for commercial success; and
- if we are unable to obtain and maintain patent protection for our technology and product candidates including our lead product candidate, CT1812, or if the scope of the patent protection obtained is not sufficiently broad, we may not be able to compete effectively in our markets.

Recent Developments

SAFE Offering

In March 2021, we entered into simple agreements for future equity, or SAFEs, with various investors, pursuant to which we received gross proceeds in an aggregate amount equal to $8.94 million. The amount invested by the investors in the SAFEs is automatically convertible into shares of our common stock upon the closing of this offering at a conversion price equal to 80% of the initial public offering price of our common stock in this offering.

Notes Conversion

From March 2018 to July 2020, we issued convertible promissory notes in the aggregate principal amount of $13.0 million with an interest rate of 8.0% per annum, pursuant to note purchase agreements entered into with certain holders of our capital stock. On May 1, 2021, the holders of all of our outstanding convertible promissory notes agreed to an acceleration of the date of the automatic conversion from June 30, 2021 to May 1, 2021 for all convertible promissory notes. Accordingly, on May 1, 2021, all of our outstanding convertible promissory notes were converted into 10,928,155 shares of our Series B-1 convertible preferred stock, at a conversion price equal to $1.385 per share. As of the date of this prospectus, no notes are outstanding. Pursuant to the terms of our Series B-1 convertible preferred stock, all shares will automatically convert into shares of our common stock upon the closing of this offering on a one-for-one basis.

Our Corporate Information

We were incorporated under the laws of the State of Delaware on August 21, 2007. Our principal executive offices are located at 2403 Sidney Street, Pittsburgh, Pennsylvania 15203, and our telephone number is (412) 481-2210. Our corporate website address is www.cogrx.com. Information contained on, or accessible through, our website shall not be deemed incorporated into and is not a part of this prospectus or the registration statement of which it forms a part. We have included our website in this prospectus solely as an inactive textual reference.

Implications of Being an Emerging Growth Company

As a company with less than $1.07 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced reporting requirements that are otherwise generally applicable to public companies. As such, we may take advantage of reduced disclosure and other requirements otherwise generally applicable to public companies, including:

- presenting only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus;
- not being required to have our registered independent public accounting firm attest to management's assessment of our internal control over financial reporting;
- presenting reduced disclosure about our executive compensation arrangements;
- not being required to hold non-binding advisory votes on executive compensation or golden parachute arrangements; and
- extended transition periods for complying with new or revised accounting standards.

We have taken advantage of some of these reduced disclosure and other requirements in this prospectus. Accordingly, the information contained herein may be different than the information you receive from our competitors that are public companies or other public companies in which you hold stock.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to private companies.

We will remain an emerging growth company until the earliest of (1) the last day of the fiscal year following the fifth anniversary of the closing of this offering, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

We are also a "smaller reporting company," meaning that the market value of our stock held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700.0 million and our annual revenue is less than $100.0 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our stock held by non-affiliates is less than $250.0 million or (ii) our annual revenue is less than $100.0 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700.0 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

THE OFFERING

Issuer	Cognition Therapeutics, Inc.
Common stock offered by us	shares (or shares if the underwriters' exercise in full their option to purchase additional shares).
Offering price	$ per share.
Common stock outstanding before the offering	shares.
Common stock to be outstanding after this offering	shares (or shares if the underwriters exercise in full their option to purchase additional shares).
Over-allotment option	We have granted a 45-day option to the underwriters to purchase up to additional shares of common stock to cover overallotments, if any.
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $ million (or approximately $ million if the underwriters exercise in full their option to purchase up to additional shares of common stock), based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering to fund research and development of our product candidates and development programs, including our planned Phase 2 trials of CT1812 for the treatment of mild-to-moderate AD, our planned Phase 2 proof of concept trials of CT1812 for dry AMD, our IND-enabling studies of compounds in our library for the treatment of neurodegenerative indications such as PD, and the remainder for our other research and development activities, as well as for working capital and other general corporate purposes. See the section titled "Use of Proceeds" for additional information.
Risk factors	Investing in our common stock involves a high degree of risk. You should read the section titled "Risk Factors" for a discussion of factors to consider carefully, together with all the other information included in this prospectus, before deciding to invest in our common stock.
Proposed Nasdaq Global Market trading symbol	"CGTX"

The number of shares of our common stock to be outstanding after this offering is based on shares of common stock outstanding as of December 31, 2020, assuming (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 51,452,501 shares of our common stock, (ii) the issuance of shares of our common stock upon the assumed net exercise of warrants that otherwise expire upon or prior to the closing of this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), and (iii) the issuance of shares of our common stock issuable upon the conversion of the SAFEs upon the closing of this offering in the aggregate amount of $8.94 million (assuming an initial

public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), and excludes:

- 14,839,637 shares of our common stock issuable upon the exercise of stock options as of December 31, 2020, at a weighted-average exercise price of $0.30 per share;
- 332,625 shares of our common stock reserved for issuance pursuant to future awards as of December 31, 2020 under our 2017 Equity Incentive Plan, or the 2017 Plan, which will become available under our 2021 Equity Incentive Plan, or the 2021 Plan, after the closing of this offering;
- shares of our common stock reserved for future issuance under the 2021 Plan which will become effective upon the effectiveness of the Registration Statement of which this prospectus forms a part, as well any future increases in the number of shares of our common stock reserved for future issuance pursuant to the 2021 Plan; and
- shares of our common stock reserved for future issuance under our Employee Stock Purchase Plan, or the ESPP, which will become effective upon the effectiveness of the Registration Statement of which this prospectus forms a part, as well as any future increases in the number of shares of common stock reserved for issuance under the ESPP.

Unless otherwise indicated, all information contained in this prospectus, including the number of our shares of common stock that will be outstanding after this offering, assumes or gives effect to:

- no exercise of the outstanding options described above;
- the filing and effectiveness of our third amended and restated certificate of incorporation immediately prior to the closing of this offering;
- a for reverse stock split of our common stock to be effected prior to the closing of this offering;
- the automatic conversion of all our outstanding preferred stock into an aggregate of 51,452,501 shares of our common stock upon the closing of this offering;
- the issuance of shares of common stock upon the assumed net exercise of warrants that otherwise expire upon the closing of this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus);
- the issuance of shares of our common stock issuable upon the conversion of the SAFEs in the aggregate amount of $8.94 million (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus); and
- no exercise by the underwriters of their option to purchase up to additional shares of our common stock.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables set forth a summary of our historical consolidated financial data as of, and for the periods ended on, the dates indicated. We have derived the consolidated statement of operations data for the years ended December 31, 2019 and 2020 and the consolidated balance sheet data as of December 31, 2019 and 2020 from our audited consolidated financial statements appearing elsewhere in this prospectus. This selected consolidated financial data should be read in conjunction with our financial statements and the related notes included elsewhere in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future.

	Year Ended December 31,	
(in thousands, except share and per share data)	**2019**	**2020**
Consolidated Statements of Operations Data:		
Operating Expenses:		
Research and development	$ 14,379	$ 12,887
General and administrative	3,452	4,520
Total operating expenses	17,831	17,407
Loss from operations	(17,831)	(17,407)
Other income (expense):		
Grant income	13,164	10,855
Change in the fair value of the derivative liability	(231)	18
Change in the fair value of the warrant liability	(7)	181
Other income, net	1,087	394
Loss on debt extinguishment	—	(129)
Interest expense, net	(1,024)	(1,751)
Total other income (expense), net	12,989	9,568
Net loss	(4,842)	(7,839)
Cumulative preferred stock dividends	(3,920)	(4,234)
Net loss attributable to common stockholders	$ (8,762)	$ (12,073)
Net loss per share attributable to common stockholders, basic and diluted	$ (5.77)	$ (7.35)
Weighted-average common shares outstanding, basic and diluted[(1)]	1,519,285	1,643,514
Pro forma net loss per share attributable to common stockholders, basic and diluted[(2)]		
Pro forma weighted-average common shares outstanding, basic and diluted[(2)]		

(1) See Note 2 to our consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the basic and diluted net loss per share and the number of shares used in the computation of the per share amounts.

(2) The calculations for the pro forma net loss per share attributable to common stockholders, basic and diluted, and the pro forma weighted-average shares of common stock outstanding, basic and diluted, assume the conversion of all our outstanding shares of preferred stock into common stock, the assumed net exercise of warrants to purchase common stock that otherwise expire upon or prior to the closing of this offering and the conversion of the SAFEs into shares of our common stock, as if the conversion or exercise had occurred at the beginning of the period presented, or the issuance date, if later.

(in thousands)	As of December 31, 2019	2020
Consolidated Balance Sheet Data:		
Cash and cash equivalents	$ 2,890	$ 5,189
Working capital[(1)]	3,477	3,658
Total assets	7,459	7,119
Derivative liability	1,493	2,209
Warrant liability	181	—
Total liabilities	12,954	19,933
Convertible preferred stock	52,927	55,370
Accumulated deficit	(58,239)	(68,220)
Total stockholders' deficit	(58,422)	(68,184)

(1) We define working capital as total current assets less total current liabilities. See our audited consolidated financial statements included elsewhere in this prospectus and related notes for further details regarding our total current assets and total current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our consolidated financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our common stock. We have listed below (not necessarily in order of importance or probability of occurrence) what we believe to be the most significant risk factors applicable to us. The occurrence of any of the events or developments described below could materially and adversely affect our business, financial condition, results of operations and prospects. In such an event, the market price of our common stock could decline and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations. Some of the statements in the following risk factors constitute forward-looking statements. Please see the section titled "Special Note Regarding Forward-Looking Statements."

Risks Related to Our Financial Position and Capital Needs

We are a clinical-stage biopharmaceutical company with no products approved for commercial sale and have incurred significant losses since our inception in 2007. We expect to incur significant losses over the foreseeable future and may never achieve or maintain profitability.

Since our inception, we have incurred significant net losses, and we expect to continue to incur significant expenses and operating losses for the foreseeable future. Our net losses were $4.8 million and $7.8 million for the years ended December 31, 2019 and 2020, respectively. As of December 31, 2020, we had an accumulated deficit of $68.2 million. Our clinical trials have been funded by approximately $123.0 million in cumulative nondilutive grants, awarded by the National Institute of Aging, or NIA, a division of the National Institutes of Health. We have also raised $57.5 million in gross proceeds through our private placements of convertible preferred stock, convertible promissory notes and Simple Agreement for Future Equity, or SAFE. We have no products approved for commercialization and have never generated any revenue from product sales.

We have devoted substantially all of our financial resources and efforts to the development of our product candidates, including conducting preclinical studies and clinical trials. We expect to continue to incur significant expenses and operating losses over the next several years. We expect that it could be several years, if ever, before we have a commercialized product. Our net losses may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase substantially for the foreseeable future as we:

- conduct our ongoing and planned clinical trials of CT1812, as well as initiate and complete additional clinical trials;
- pursue regulatory approval of CT1812 for the treatment of mild-to-moderate Alzheimer's disease, or AD, dry age-related macular degeneration, or dry AMD, and Parkinson's disease, or PD, and dementia with Lewy bodies, or DLB, and other age-related degenerative diseases and disorders of the central nervous system, or CNS, and retina;
- seek to discover and develop additional clinical and preclinical product candidates using Novel Improved Conditioned Extraction, or NICE, screening platform;
- adapt our regulatory compliance efforts to incorporate requirements applicable to marketed products;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, manufacturing and scientific personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts;
- incur additional legal, accounting and other expenses in operating as a public company;
- scale up our clinical and regulatory capabilities; and

- establish a commercialization infrastructure and scale up external manufacturing and distribution capabilities to commercialize any product candidates for which we may obtain regulatory approval, including CT1812.

To become and remain profitable, we must succeed in developing and eventually commercializing product candidates that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our product candidates, obtaining regulatory approval, and manufacturing, marketing and selling any product candidates for which we may obtain regulatory approval, as well as discovering and developing additional product candidates. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate any revenue or revenue that is significant enough to achieve profitability. Even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our company and could impair our ability to raise capital, expand our business, maintain our development efforts, obtain product approvals, diversify our offerings or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We have not yet completed Phase 2 clinical trials and have no history of commercializing products, which may make it difficult for an investor to evaluate the success of our business to date and to assess our future viability.

We commenced operations in 2007, and our operations to date have been largely focused on developing our clinical and preclinical product candidates and our Novel, Improved Conditioned Extraction, or NICE, screening platform, or NICE screening platform. To date, we have not yet demonstrated our ability to successfully complete pivotal clinical trials, obtain regulatory approvals, manufacture a product on a commercial scale, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing products.

We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We may also need to transition from a company with a research focus to a company capable of supporting commercial activities. Our inability to adequately address these risks and difficulties or successfully make such a transition could adversely affect our business, financial condition, results of operations and growth prospects.

Even if this offering is successful, we will need substantial additional capital to meet our financial obligations and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

Our operations have required substantial amounts of capital since inception, and we expect our expenses to increase significantly in the foreseeable future. Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and achieve product sales. We expect to continue to incur significant expenses and operating losses over the next several years as we complete our ongoing clinical trials of our product candidates, initiate future clinical trials of our product candidates, seek marketing approval for CT1812 for the treatment of age-related degenerative diseases and disorders of the CNS and retina, such as AD, dry AMD, PD and DLB, and advance any of our other product candidates we may develop or otherwise acquire. In addition, our product candidates, if approved, may not achieve commercial success. Our revenue, if any, will be derived from sales of products that we do not expect to be commercially available for the foreseeable future, if at all. If we obtain marketing approval for CT1812 or any other product candidates that we develop or otherwise acquire, we expect to incur significant commercialization expenses related to product sales, marketing, distribution and manufacturing. We also expect an increase in our expenses associated with creating additional infrastructure to support operations as a public company.

As of December 31, 2020, we had $5.2 million in cash and cash equivalents and have not generated positive cash flows from operations. Based on our current business plans, we believe that the net proceeds

from this offering, together with our existing cash and cash equivalents and income from our non-dilutive grants, will be sufficient for us to fund our operating expenses and capital expenditures requirements through at least . We have based these estimates on assumptions that may prove to be incorrect or require adjustment as a result of business decisions, and we could utilize our available capital resources sooner than we currently expect. Our future capital requirements will depend on many factors, including, but not limited to:

- the scope, progress, costs and results of our ongoing and planned clinical trials of CT1812, as well as the associated costs, including any unforeseen costs we may incur as a result of preclinical study or clinical trial delays due to the COVID-19 pandemic or other delays;
- the scope, progress, costs and results of preclinical development, laboratory testing and clinical trials for any future product candidates we may decide to pursue;
- the extent to which we develop, in-license or acquire other product candidates and technologies;
- the costs and timing of process development and manufacturing scale-up activities associated with our product candidates and other programs we advance them through preclinical and clinical development;
- the availability, timing and receipt of any future NIA Grants;
- the number and development requirements of other product candidates that we may pursue;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- our ability to establish collaborations to commercialize CT1812 or any of our other product candidates outside the United States;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims; and
- the additional costs we may incur as a result of operating as a public company, including our efforts to enhance operational systems and hire additional personnel, including enhanced internal controls over financial reporting.

The expected net proceeds from this offering will not be sufficient to fund any of our product candidates through regulatory approval, and we will need to raise substantial additional capital to complete the development and commercialization of C1812 and our product candidates. If we receive regulatory approval for any of these product candidates, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing and distribution, depending on where we choose to commercialize. Additional funds may not be available on a timely basis, on favorable terms, or at all, and such funds, if raised, may not be sufficient to enable us to continue to implement our long-term business strategy. Further, our ability to raise additional capital may be adversely impacted by recent volatility in the equity markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic. If we are unable to raise sufficient additional capital, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

To date, we have partially relied on non-dilutive grants to cover certain of our capital requirements for our clinical trials, and we may fail to continue to receive non-dilutive funding.

To date, we have partially relied on the availability of non-dilutive grants from the NIA, or NIA Grants. Although we currently anticipate applying for and potentially receiving additional NIA Grants, we cannot be certain that our grant applications will be successful, that additional NIA Grants will be made available to support our clinical trials or that we will continue to satisfy the award criteria of prior NIA Grants that have already been awarded to us. If we fail to continue to receive NIA Grants, our ability to

continue our clinical programs for CT1812 may be impaired and delayed, and we may otherwise need to seek additional financing through dilutive methods, such as through equity or debt financings. For example, while we have partially relied on NIA Grants in the past, we have issued from time to time shares of our preferred stock, warrants to purchase our preferred stock, convertible promissory notes, and common stock, and entered into SAFEs. Upon the closing of this offering, all outstanding shares of our convertible preferred stock will convert into an aggregate of 51,452,501 shares of our common stock, shares of our common stock will be issued upon the assumed net exercise of warrants (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), and shares of our common stock will be issued issuable upon conversion of the SAFEs in the aggregate amount of $8.94 million (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus).

We could be subject to audit and repayment of our non-dilutive NIA Grants.

In addition, in connection with the NIA Grants, we may be subject to routine audits by government agencies. As part of an audit, these agencies may review our performance, cost structures and compliance with applicable laws, regulations, policies and standards and the terms and conditions of the applicable NIA Grant. If any of our expenditures are found to be unallowable or allocated improperly or if we have otherwise violated terms of such NIA Grant, the expenditures may not be reimbursed and/or we may be required to repay funds already disbursed. Any audit by the NIA could require significant financial and management resources and may result in a material adjustment to our results of operations and financial condition and harm our ability to operate in accordance with our business plan. Additionally, negative results in any of our ongoing and planned clinical trials of CT1812 that are funded with NIA Grants may result in our failure to receive additional NIA Grants to fund future clinical trials.

The NIA recently issued guidance providing extensions and flexibility for certain NIA Grant recipients conducting NIA-funded clinical trials and human subject studies that are impacted by the declared public health emergency for the COVID-19 pandemic. The ultimate impact of the COVID-19 pandemic on our clinical trials is highly uncertain and subject to change. We have not made a formal assessment with respect to the NIA's current and expanded flexibilities in light of the COVID-19 pandemic, but we continue to monitor the situation closely and are prepared to take all necessary steps to ensure the safety of all human participants and research staff involved in our clinical trials.

Due to the significant resources required for the development of our product candidates, we must prioritize development of certain product candidates and/or certain disease indications. We may expend our limited resources on candidates or indications that do not yield a successful product and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

We are currently focused on developing product candidates to address age-related degenerative diseases and disorders of the CNS and retina. We seek to maintain a process of prioritization and resource allocation among our programs to maintain a balance between aggressively advancing our lead product candidate, CT1812, in identified indications and exploring additional indications or mechanisms as well as developing future product candidates. However, due to the significant resources required for the development of our product candidates, we must focus on specific diseases and disease pathways and decide which product candidates to pursue and the amount of resources to allocate to each such product candidate.

Our decisions concerning the allocation of research, development, collaboration, management and financial resources toward particular product candidates or therapeutic areas may not lead to the development of any viable commercial product and may divert resources away from better opportunities. Similarly, any decision to delay, terminate or collaborate with third parties with respect to certain programs may subsequently also prove to be suboptimal and could cause us to miss valuable opportunities. If we make incorrect determinations regarding the viability or market potential of any of our programs or product candidates or misread trends in the market of age-related degenerative diseases and disorders of the CNS and retina or pharmaceutical, biopharmaceutical or biotechnology industry, our business, financial condition and results of operations could be materially adversely affected. As a result, we may fail to capitalize on viable commercial products or profitable market opportunities, be required to forego or delay pursuit of opportunities with other product candidates or other diseases and disease pathways that may later prove to

have greater commercial potential than those we choose to pursue, or relinquish valuable rights to such product candidates through collaboration, licensing or other royalty arrangements in cases in which it would have been advantageous for us to invest additional resources to retain development and commercialization rights.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations.

Our quarterly and annual operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control and may be difficult to predict, including:

- the timing and cost of, and level of investment in, research, development and, if approved, commercialization activities relating to our product candidates, which may change from time to time;
- the timing and status of enrollment for our clinical trials;
- the cost of manufacturing our product candidates, as well as building out our supply chain, which may vary depending on the quantity of production and the terms of our agreements with manufacturers;
- the availability, timing, and receipt of any future NIA grants;
- expenditures that we may incur to acquire, develop or commercialize additional product candidates and technologies;
- timing and amount of any milestone, royalty or other payments due under any collaboration or license agreement;
- future accounting pronouncements or changes in our accounting policies;
- the timing and success or failure of preclinical studies and clinical trials for our product candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners;
- the timing of receipt of approvals for our product candidates from regulatory authorities in the United States and internationally;
- coverage and reimbursement policies with respect to our product candidates, if approved, and potential future drugs that compete with our products; and
- the level of demand for our product candidates, if approved, which may vary significantly over time.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if any forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue or earnings guidance we may provide.

Our business has been and could continue to be adversely affected by the evolving and ongoing COVID-19 global pandemic in regions where we or third parties on which we rely have significant manufacturing facilities, concentrations of clinical trial sites or other business operations. The COVID-19 pandemic could adversely affect our business and our financial results and could cause a disruption to the development of our product candidates, as well as the business or operations of our manufacturers or other third parties with whom we conduct business.

Our business has been and could continue to be adversely affected by the effects of the evolving and ongoing COVID-19 pandemic, which was declared by the World Health Organization as a global pandemic.

As COVID-19 continues to spread, we may experience ongoing disruptions that could severely impact our business and clinical trials, including:

- delays or difficulties in enrolling and retaining patients in our clinical trials;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- delays in clinical sites receiving the supplies and materials needed to conduct our clinical trials, interruption of, or delays in receiving, supplies of our product candidates from our contract manufacturing organizations due to staffing shortages, production slowdowns, or stoppages and disruptions in materials and reagents or interruptions in global shipping that may affect the transport of clinical trial materials;
- changes in federal and local regulations as part of a response to the COVID-19 outbreak which may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- the diversion of healthcare resources away from the conduct of clinical trials, including the diversion of healthcare professionals and other staff involved in our clinical trials and healthcare facilities serving as clinical trial sites;
- the interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others, or interruption of clinical trial subject visits and study procedures, the occurrence of which could affect the integrity of clinical trial data;
- limitations on employee resources that would otherwise be focused on the conduct of our preclinical studies and clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people, an increased reliance on working from home, school closures, or mass transit disruptions;
- limitations on maintaining our corporate culture that facilitates the transfer of institutional knowledge within our organization and fosters innovation, teamwork, and a focus on execution;
- interruption of or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines;
- delays in necessary interactions with regulators, ethics committees, and other important agencies and contractors due to limitations in employee resources or forced furlough of government or contractor personnel;
- additional delays, difficulties or interruptions as a result of current or future shutdowns due to the COVID-19 pandemic in countries where we or our third-party service providers operate; and
- the risk that participants enrolled in our clinical trials or study staff conducting the clinical trial visits will acquire COVID-19 while the clinical trial is ongoing, which could impact the results of the clinical trial, including by increasing the number of observed adverse events, or the ability to complete study visits and collect data.

These and other disruptions in our operations and the global economy could negatively impact our business, operating results and financial condition.

Our clinical trials have been, and may in the future be, affected by the COVID-19 pandemic. For example, the COVID-19 pandemic may impact patient enrollment in our ongoing and future clinical trials of CT1812. In particular, some sites have in the past or may in the future pause enrollment to focus on, and direct resources to, COVID-19, while at other sites, patients may choose not to enroll or continue participating in the clinical trial as a result of the pandemic. In addition, patient visits to medical providers in the United States have slowed as a result of the COVID-19 pandemic. Further, according to the Centers for Disease Control and Prevention, people who have serious chronic medical conditions are at higher risk of getting very sick from COVID-19. As a result, potential patients in our ongoing and future clinical trials of CT1812 may choose to not enroll, not participate in follow-up clinical visits or drop out of the trial as a

precaution against contracting COVID-19. Further, some patients may not be able or willing to comply with clinical trial protocols if quarantines impede patient movement or interrupts healthcare services.

We are unable to predict with confidence the duration of such patient enrollment delays and difficulties. If patient enrollment is delayed for an extended period of time, our ongoing or future clinical trials could be delayed or otherwise adversely affected. Similarly, our ability to recruit and retain principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19, may be adversely impacted.

Ongoing or planned clinical trials may also be impacted by interruptions or delays in the operations of the FDA and comparable foreign regulatory authorities. For example, we have made certain adjustments to the operation of our trials in an effort to ensure the monitoring and safety of patients and minimize risks to trial integrity during the pandemic in accordance with the guidance issued by the FDA, and may need to make further adjustments in the future. We have also initiated our clinical trial protocols to enable remote visits to mitigate any potential impacts as a result of the COVID-19 pandemic. Many of these adjustments are new and untested, may not be effective, may affect the integrity of data collected, and may have unforeseen effects on the progress and completion of our clinical trials and the findings from such clinical trials.

In addition, we may encounter a shortage in supplies of, or in delays in shipping, our study drug or other components of the clinical trial vital for successful conduct of the trial. Further, the successful conduct of our ongoing and future clinical trials depends on retrieving laboratory, imaging and other data from patients. Any failure by the vendors with which we work with to send us such data could impair the progress of such clinical trials. These events could delay our clinical trials, increase the cost of completing our clinical trials and negatively impact the integrity, reliability or robustness of the data from our clinical trials.

Furthermore, quarantines, shelter-in-place and similar government orders, or the perception that such orders, shutdowns or other restrictions on the conduct of business operations could occur, related to COVID-19 or other infectious diseases, could impact personnel at our study sites or third-party manufacturing facilities upon which we rely, or the availability or cost of materials, which could disrupt the supply chain for our drug and combination therapy candidates. To the extent our suppliers and service providers are unable to comply with their obligations under our agreements with them or they are otherwise unable to deliver or are delayed in delivering goods and services to us due to the COVID-19 pandemic, our ability to continue meeting clinical supply demand for our product candidates or otherwise advancing development of our product candidates may become impaired.

The spread of COVID-19 and actions taken to reduce its spread may also materially affect us economically. While the potential economic impact brought by, and the duration of, the COVID-19 pandemic may be difficult to assess or predict, there could be a significant disruption of global financial markets, reducing our ability to access capital, which could in the future negatively affect our liquidity and financial position. In addition, the trading prices for other pharmaceutical companies have been highly volatile as a result of the COVID-19 pandemic. As a result, we may face difficulties raising capital through sales of our common stock or such sales may be on unfavorable terms.

COVID-19 and actions taken to reduce its spread continue to rapidly evolve. The extent to which COVID-19 may impede the development of our product candidates, reduce the productivity of our employees, disrupt our supply chains, delay our clinical trials, reduce our access to capital or limit our business development activities, will depend on future developments, which are highly uncertain and cannot be predicted with confidence.

To the extent the ongoing COVID-19 pandemic adversely affects our business and results of operations, it may also have the effect of heightening many of the other risks and uncertainties described in this “Risk Factors” section.

Risks Related to Discovery, Development and Regulatory Approval of Our Product Candidates

Our business is heavily dependent on the successful development, regulatory approval and commercialization of CT1812 and any future product candidates that we may develop or acquire.

We currently have no products approved for sale, and our lead product candidate is in early stages of clinical development. The success of our business, including our ability to finance our company and generate

revenue in the future, will primarily depend on the successful development, regulatory approval and commercialization of our product candidates and, in particular, the advancement of CT1812, currently our only clinical-stage product candidate. However, given our stage of development, it may be many years, if we succeed at all, before we have demonstrated the safety and efficacy of a product candidate sufficient to warrant approval for commercialization. We cannot be certain that our product candidates will receive regulatory approval or be successfully commercialized even if we receive regulatory approval.

The clinical and commercial success of CT1812 and any future product candidates that we may develop or acquire will depend on a number of factors, including the following:

- our ability to raise any additional required capital on acceptable terms, or at all;
- our ability to complete an investigational new drug application, or IND, enabling studies and successfully submit INDs or comparable applications;
- timely completion of our preclinical studies and clinical trials, which may be significantly slower or cost more than we currently anticipate and will depend substantially upon the performance of third-party contractors;
- delays or difficulties in enrolling and retaining patients in our clinical trials;
- whether we are required by the U.S. Food and Drug Administration, or FDA, or similar foreign regulatory agencies to conduct additional clinical trials or other studies beyond those planned to support the approval and commercialization of our product candidates or any future product candidates;
- acceptance of our proposed indications and primary endpoint assessments relating to the proposed indications of our product candidates by the FDA and similar foreign regulatory authorities;
- our ability to demonstrate to the satisfaction of the FDA and similar foreign regulatory authorities the safety, efficacy and acceptable risk to benefit profile of our product candidates or any future product candidates;
- the prevalence, duration and severity of potential side effects or other safety issues experienced with our product candidates or future approved products, if any;
- achieving and maintaining, and, where applicable, ensuring that our third-party contractors achieve and maintain, compliance with our contractual obligations and with all regulatory requirements applicable to our product candidates or any future product candidates or approved products, if any;
- the ability of third parties with whom we contract to manufacture adequate clinical trial and commercial supplies of our product candidates or any future product candidates remain in good standing with regulatory agencies and develop, validate and maintain commercially viable manufacturing processes that are compliant with current good manufacturing practices, or cGMPs;
- the convenience of our treatment or dosing regimen;
- the timely receipt of necessary marketing approvals from the FDA and similar foreign regulatory authorities;
- acceptance by physicians, payors and patients of the benefits, safety and efficacy of our product candidates or any future product candidates, if approved, including relative to alternative and competing treatments;
- the willingness of physicians, operators of clinics and patients to utilize or adopt any of our product candidates or any future product candidates, if approved;
- our ability to achieve sufficient market acceptance, coverage and adequate reimbursement from third-party payors and adequate market share and revenue for any approved products;
- the COVID-19 pandemic, which may result in clinical site closures, delays to patient enrollment, patients discontinuing their treatment or follow up visits or changes to trial protocols;
- our ability to successfully develop a commercial strategy and thereafter commercialize our product candidates or any future product candidates in the United States and internationally, if approved for

marketing, reimbursement, sale and distribution in such countries and territories, whether alone or in collaboration with others;

- patient demand for our product candidates, if approved, including patients' willingness to pay out-of-pocket for any approved products in the absence of coverage and/or adequate reimbursement from third-party payors;
- our ability to establish and enforce intellectual property rights in and to our product candidates or any future product candidates; and
- our ability to avoid third-party patent interference, intellectual property challenges or intellectual property infringement claims.

In addition, the FDA or other regulatory agencies may not agree with our clinical development plan and require that we conduct additional clinical trials to support our regulatory submissions. We have not yet conducted an end of Phase 2 meeting with the FDA to discuss the registration pathway for CT1812, and our current clinical development plans for CT1812 in mild-to-moderate AD may change as a result of future interactions with the FDA. For example, the FDA may not accept the results of the ongoing CT1812 clinical trials and may require that we conduct additional trials, including more than one pivotal trial, in order to gain approval in AD. Furthermore, any approval of CT1812 for AD may be limited to CT1812 in combination with the existing standard of care.

These factors, many of which are beyond our control, could cause us to experience significant delays or an inability to obtain regulatory approvals or commercialize our product candidates. Even if regulatory approvals are obtained, we may never be able to successfully commercialize any of our product candidates. Accordingly, we cannot provide assurances that we will be able to generate sufficient revenue through the sale of our product candidates or any future product candidates to continue our business or achieve profitability.

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.

Our recurring losses from operations raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements for the years ended December 31, 2020 and 2019 with respect to this uncertainty. While we believe that the net proceeds from this offering, together with our existing cash and cash equivalents and the income from non-dilutive grants, will be sufficient for us to fund our operating expenses and capital expenditures requirements through at least , we have based these estimates on assumptions that may prove to be wrong, and we may need to raise additional funds. If we are unable to raise capital when needed or on acceptable terms, we could be forced to delay, reduce or eliminate the development and commercialization of our product candidates.

We may not successfully expand our pipeline of product candidates, including by pursuing additional indications for CT1812 or by in-licensing or acquiring additional product candidates for other diseases.

A key element of our strategy is to build and expand our pipeline of product candidates, including by developing CT1812 for the treatment of dry AMD and age-related degenerative diseases and disorders of the CNS beyond indications in AD, and by identifying other product candidates using our NICE platform. In addition, we may in-license or acquire additional product candidates for other diseases. We may not be able to identify or develop additional product candidates that are safe, tolerable and effective. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify, in-license or acquire may not be suitable for clinical development. For example, our research methodology may be unsuccessful in identifying potential drug candidates or those we identify may be shown to have harmful side effects or other characteristics that make them unmarketable or unlikely to receive regulatory approval. We have devoted significant resources to discovery efforts through our proprietary NICE platform, and we cannot guarantee that we will be successful in identifying additional potential drug candidates, or that we will be able to successfully identify and in-license new and valuable product candidates from other parties.

Research and development of pharmaceuticals is inherently risky. We cannot give any assurance that any of our product candidates will receive regulatory approval.

We are at an early stage of clinical development of our only clinical stage product candidate, CT1812. Our future success is dependent on our ability to successfully develop, obtain regulatory approval for and then successfully commercialize our product candidates, and we may fail to do so for many reasons, including the following:

- our product candidates may not successfully complete preclinical studies or clinical trials;
- a product candidate may on further study be shown to have harmful side effects or other characteristics that indicate it does not meet applicable regulatory criteria;
- our competitors may develop therapeutics that render our product candidates obsolete or less attractive;
- the market for a product candidate may change so that the continued development of that product candidate is no longer reasonable or commercially attractive;
- a product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all;
- if a product candidate obtains regulatory approval, we may be unable to establish sales and marketing capabilities, or successfully market such approved product candidate; and
- a product candidate may not be accepted as safe and effective by patients, the medical community or third-party payors.

If any of these events occur, we may be forced to abandon our development efforts for a product candidate or candidates, which would have a material adverse effect on our business and could potentially cause us to cease operations. Failure of a product candidate may occur at any stage of preclinical or clinical development, and we may never succeed in developing marketable products or generating product revenue.

We may not be successful in our efforts to further develop our current and future product candidates. Each of our product candidates will require significant clinical development, management of preclinical, clinical and manufacturing activities, regulatory approval, adequate manufacturing supply, a commercial organization and significant marketing efforts before we generate any revenue from product sales, if at all. Any clinical studies that we may conduct may not be acceptable to the FDA or other regulatory authorities or demonstrate the efficacy and safety necessary to obtain regulatory approval to market our product candidates. If the results of our ongoing or future clinical studies are inconclusive with respect to the efficacy of our product candidates, if we do not meet the clinical endpoints with statistical significance or if there are safety concerns or adverse events associated with our product candidates, we may be prevented or delayed in obtaining marketing approval for our product candidates.

In addition, to obtain regulatory approval in countries outside the United States, we must comply with numerous and varying regulatory requirements of such other countries regarding safety, efficacy, chemistry, manufacturing and controls, clinical trials, commercial sales, pricing and distribution of our product candidates. We may also rely on collaborators or partners to conduct the required activities to support an application for regulatory approval and to seek approval for one or more of our product candidates. We cannot be sure that any such collaborators or partners will conduct these activities successfully or do so within the timeframe we desire. Even if we or any future collaborators or partners are successful in obtaining approval in one jurisdiction, we cannot ensure that we will obtain approval in any other jurisdictions. If we are unable to obtain approval for our product candidates in multiple jurisdictions, our revenue and results of operations could be negatively affected.

We may encounter substantial delays in our preclinical studies and clinical trials or may not be able to conduct or complete our preclinical studies or clinical trials on the timelines we expect, if at all.

Clinical trials are expensive and can take many years to complete, and the outcome is inherently uncertain. We cannot guarantee that any clinical trials will be conducted as planned or completed on

schedule, if at all. A failure of one or more clinical trials can occur at any stage and our future clinical trials may not be successful. Clinical trials can be delayed or terminated for a variety of reasons, including delays or failures related to:

- the COVID-19 pandemic, which may result in clinical site closures, delays to patient enrollment, patients discontinuing their treatment or follow up visits or changes to trial protocols;
- the FDA or comparable foreign regulatory authorities disagreeing as to the design or implementation of our clinical trials;
- delays in obtaining, or failure to obtain, regulatory authorization to commence a trial;
- imposition of a temporary or permanent clinical hold by the FDA or comparable foreign regulatory authorities;
- reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- identifying, recruiting and training suitable clinical investigators;
- obtaining institutional review board, or IRB, approval at each trial site;
- new safety findings that present unreasonable risk to clinical trial participants;
- a negative finding from an inspection of our clinical trial operations or study sites;
- recruiting an adequate number of suitable patients to participate in a trial;
- having subjects complete a trial or return for post-treatment follow-up;
- clinical sites deviating from trial protocol or dropping out of a trial;
- addressing subject safety concerns that arise during the course of a trial;
- adding a sufficient number of clinical trial sites; or
- obtaining sufficient supply of product candidates for use in preclinical studies or clinical trials from third-party suppliers.

We may experience numerous adverse or unforeseen events during, or as a result of, preclinical studies and clinical trials which could delay or prevent our ability to receive marketing approval or commercialize our product candidates, including:

- we may receive feedback from regulatory authorities that requires us to modify the design of our clinical trials or require that we submit additional data or information before allowing a clinical trial to be initiated or continue;
- clinical studies of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon drug development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements, fail to maintain adequate quality controls or be unable to provide us with sufficient product supply to conduct and complete preclinical studies or clinical trials of our product candidates in a timely manner, or at all;
- we or our investigators might have to suspend or terminate clinical trials of our product candidates for various reasons, including non-compliance with regulatory requirements, a finding that our product candidates have undesirable side effects or other unexpected characteristics or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical trials of our product candidates may be greater than we anticipate;

- the quality of our product candidates or other materials necessary to conduct preclinical studies or clinical trials of our product candidates may be insufficient or inadequate;
- regulators may revise the requirements for approving our product candidates or such requirements may not be as we anticipate; and
- any future collaborators may conduct clinical trials in ways they view as advantageous to them but that are suboptimal for us.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only moderately positive or if there are safety concerns, we may:

- incur unplanned costs;
- be delayed in obtaining marketing approval for our product candidates or not obtain marketing approval at all;
- obtain marketing approval in some countries and not in others;
- obtain marketing approval for indications or patient populations that are not as broad as intended or desired;
- obtain marketing approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings;
- be subject to additional post-marketing testing requirements; or
- have the product removed from the market after obtaining marketing approval.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

We may not be able to initiate or continue clinical trials on a timely basis or at all for any product candidates we identify or develop if we are unable to locate and enroll a sufficient number of eligible patients to participate in the trials as required by applicable regulations or as needed to provide appropriate statistical power for a given trial. The timely completion of clinical trials in accordance with their protocols depends on, among other things, our ability to enroll a sufficient number of patients who remain in the study until its conclusion. The enrollment of patients depends on many factors, including:

- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating; the severity and difficulty of diagnosing the disease under investigation;
- the patient eligibility and exclusion criteria defined in the protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to trial sites;
- competition with other companies for clinical trial sites or patients;
- the design of the trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- the existing body of safety and efficacy data with respect to the study drug and safety concerns;
- patient referral practices of physicians;
- risk that enrolled subjects will drop out before completion of the trial, including as a result of contracting COVID-19 or other health conditions or being forced to quarantine;
- ability to monitor patients adequately during and after treatment;

- availability and efficacy of approved medications or therapies, or other clinical trials, for the disease or condition under investigation;
- our ability to obtain and maintain patient consents.

In addition, our clinical trials may compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our product candidates.

Our product candidates may cause undesirable and unforeseen side effects or have other properties that could halt their clinical development, delay or prevent their regulatory approval, limit their commercial potential or result in significant negative consequences.

Adverse events or other undesirable side effects caused by our product candidates or related to procedures conducted as part of the clinical trials could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. Results of our planned clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. If unacceptable side effects arise in the development of our product candidates, we, the FDA, the IRBs at the institutions in which our studies are conducted or the Data Safety Monitoring Board, or DSMB, could suspend or terminate our clinical trials or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. Treatment-related side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our product candidates to understand the side effect profiles for our clinical trials and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient injury or death. Any of these occurrences may materially and adversely affect our business, financial condition, results of operations and prospects.

In addition, early clinical trials may only include a limited number of subjects and limited duration of exposure to our product candidates. In particular, we are pursuing a new approach to inhibiting the synaptic binding and signaling of soluble Aβ oligomers through the use of small molecule receptor antagonists, like CT1812. As a result, our product candidates may cause unforeseen safety events when evaluated in larger patient populations. Further, clinical trials may not be sufficient to determine the effect and safety consequences of taking our product candidates over a multi-year period.

If any of our product candidates receives marketing approval, and we or others later identify undesirable and unforeseen side effects caused by such product, a number of potentially significant negative consequences could result, including but not limited to:

- regulatory authorities may suspend, limit or withdraw approvals of such product, or seek an injunction against its manufacture or distribution;
- we may be required to conduct additional clinical trials or post-approval studies;
- we may be required to recall a product or change the way such product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;
- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication, or issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings or other safety information about the product;
- we may be required to implement a Risk Evaluation and Mitigation Strategy, or REMS, or create a Medication Guide outlining the risks of such side effects for distribution to patients, a communication plan for healthcare providers and/or other elements to assure safe use;

- we could be sued and held liable for harm caused to patients;
- we may be subject to fines, injunctions or the imposition of criminal penalties;
- the product may become less competitive; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and result in the loss of significant revenues to us, which would materially and adversely affect our business, financial condition, results of operations and prospects.

Preclinical and clinical development involves a lengthy and expensive process with an uncertain outcome, and the results of preclinical studies and early clinical trials are not necessarily predictive of future results. We have not tested any of our product candidates in pivotal clinical trials and our product candidates may not have favorable results in future clinical trials.

Preclinical and clinical development is expensive and can take many years to complete, and its outcome is inherently uncertain. We cannot guarantee that any preclinical studies or clinical trials will be conducted as planned or completed on schedule, if at all, and failure can occur at any time during the preclinical study or clinical trial process. Despite promising preclinical or clinical results, any product candidate can unexpectedly fail at any stage of preclinical or clinical development. The historical failure rate for product candidates in our industry is high.

The results from preclinical studies or clinical trials of a product candidate may not predict the results of later clinical trials of the product candidate, and interim, topline, or preliminary results of a clinical trial are not necessarily indicative of final results. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy characteristics despite having progressed through preclinical studies and initial clinical trials. In particular, while we have conducted certain Phase 2 clinical trials of CT1812 targeting mild-to-moderate AD, we do not know whether CT1812 will perform in future clinical trials as it has performed in these prior trials. The positive results we have observed for CT1812 in past clinical trials may not be predictive of our ongoing and future clinical trials in humans. It is not uncommon to observe results in clinical trials that are unexpected based on preclinical studies and early clinical trials, and many product candidates fail in clinical trials despite very promising early results. Moreover, preclinical and clinical data may be susceptible to varying interpretations and analyses. In addition, changes to the design of our current or future clinical trials may be necessary if there are new developments in the field of Alzheimer's research. A number of companies in the biopharmaceutical, pharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier studies.

For the foregoing reasons, we cannot be certain that any of our ongoing and planned preclinical studies or clinical trials will be successful or acceptable to FDA or other regulatory authorities.

Interim "top-line" and preliminary data from studies or trials that we announce or publish from time to time may change as more data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim "top-line" or preliminary data from preclinical studies or clinical trials. Interim data are subject to the risk that one or more of the outcomes may materially change as more data become available. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data when we publish such data. As a result, the "top-line" results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results once additional data have been received and fully evaluated. Preliminary or "top-line" data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data are available. Additionally, interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment

continues and more patient data become available. Adverse differences between preliminary or interim data and final data could significantly harm our business, financial condition, results of operations and prospects.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure. Any information we determine not to disclose may ultimately be deemed significant by you or others with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. If the top-line data that we report differ from final results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, product candidates may be harmed, which could significantly harm our business, financial condition, results of operations and prospects.

We have initially concentrated our research and development efforts on the treatment of AD, a disease that has seen limited success in drug development.

Efforts by biopharmaceutical and pharmaceutical companies in treating AD have seen limited success in drug development, and there are no FDA-approved disease modifying therapeutic options available for patients with AD. We cannot be certain that our approach will lead to the development of approvable or marketable products. The only drugs approved by the FDA to treat AD to date address the diseases' symptoms. No new treatments have been approved for AD since 2003. Since 2003, over 500 clinical studies have been completed and no compound has been approved by the FDA, compared to a success rate of 50% to 80% for all other drug candidates. As a result, the FDA has a limited set of products to rely on in evaluating CT1812. This could result in a longer than expected regulatory review process, increased expected development costs or the delay or prevention of commercialization of CT1812 for the treatment of AD.

We have never conducted pivotal clinical trials, and we may be unable to do so for any product candidates we may develop.

We will need to successfully complete pivotal clinical trials in order to obtain the approval of the FDA, EMA or other regulatory agencies to market CT1812 or any future product candidate. Carrying out pivotal clinical trials is a complicated process that requires significant financial resources. As an organization, we have not previously conducted any later stage or pivotal clinical trials. In order to do so, we will need to expand our clinical development and regulatory capabilities, and we may be unable to recruit and train qualified personnel. We also expect to continue to rely on third parties to conduct our pivotal clinical trials. Consequently, we may be unable to successfully and efficiently execute and complete necessary clinical trials in a way that leads to NDA submission and approval of CT1812 or future product candidates. We may require more time and incur greater costs than our competitors and may not succeed in obtaining regulatory approvals of product candidates that we develop. Failure to commence or complete, or delays in, our planned clinical trials, could prevent us from or delay us in commercializing our product candidates.

A Breakthrough Therapy designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.

We may seek a Breakthrough Therapy designation for our product candidates if the clinical data support such a designation for one or more product candidates. A breakthrough therapy is defined as a drug or biologic that is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug, in our case, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For product candidates that have been designated as breakthrough therapies, interaction and communication between

the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a Breakthrough Therapy designation for a product candidate may not result in a faster development process, review or approval compared to drugs considered for approval under non-expedited FDA review procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

A Fast Track designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development or regulatory review or approval process, and does not increase the likelihood that our product candidates will receive marketing approval.

The FDA granted CT1812 Fast Track designation in October 2017 for the treatment of mild-to-moderate AD, and, in the future, we may seek Fast Track designation for other of our product candidates. If a drug is intended for the treatment of a serious or life-threatening condition and the drug demonstrates the potential to address unmet medical needs for this condition, the drug sponsor may apply for Fast Track designation. The FDA has broad discretion whether or not to grant this designation. Even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Fast Track designation may not result in a faster development process, review or approval compared to conventional FDA procedures. The FDA may withdraw Fast Track designation if it believes that the designation is no longer supported by data from our clinical development program. Many small molecule product candidates that have received Fast Track designation have failed to obtain marketing approval.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to review and/or approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the FDA have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. On March 18, 2020, the FDA announced its intention to temporarily postpone routine surveillance inspections of domestic manufacturing facilities. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

We have conducted, and in the future plan to conduct, clinical trials for product candidates outside the United States, and the FDA and comparable foreign regulatory authorities may not accept data from such trials.

We have conducted clinical trials of our product candidates outside the United States, and plan to continue to do so in the future. For example, we initially conducted our Phase 1b SNAP clinical trial of CT1812 in collaboration with the Karolinska Institute in Sweden. In addition, the Phase 1 single and multiple ascending dose studies of CT1812 in healthy volunteers (COG0101) as well as the first-in-patient study

(COG0102) were conducted in Australia. The acceptance of study data from clinical trials conducted outside the United States or another jurisdiction by the FDA, any comparable foreign regulatory authority may be subject to certain conditions or may not be accepted at all. In cases where data from foreign clinical trials are intended to serve as the basis for marketing approval in the United States, the FDA will generally not approve the application on the basis of foreign data alone unless:

- the data are applicable to the U.S. population and U.S. medical practice;
- the trials were performed pursuant to good clinical practice, or GCP, requirements; and
- if necessary, the FDA is able to validate the data through an on-site inspection.

Many foreign regulatory authorities have similar requirements. In addition, foreign trials are subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the FDA or any comparable foreign regulatory authority will accept data from trials conducted outside of the United States or the applicable jurisdiction. If the FDA or any comparable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in product candidates that we may develop not receiving approval or clearance for commercialization in the applicable jurisdiction.

If we are not successful in identifying, developing and commercializing additional product candidates, our ability to expand our business and achieve our strategic objectives would be impaired.

Although a substantial amount of our effort will focus on the continued development and potential approval of our current product candidates, a key element of our strategy is to identify, develop and commercialize a portfolio of products that help restore normal cellular damage responses in age-related degenerative diseases and disorders of the CNS and retina. A component of our strategy is to evaluate our product candidates in multiple indications based, in part, on our evaluation of certain biomarkers in a disease area. For example, we intend to evaluate CT1812 and other product candidates discovered through our NICE platform in other diseases beyond indications in AD, such as dry AMD, geographic atrophy, or GA, and synucleinopathies, including PD and DLB. However, we have not yet evaluated CT1812 in these patient populations and we may find that while we have seen promising results in one neurodegenerative disease, that effect is not replicated across other indications with promising similarities. Even if we successfully identify additional product candidates, we may still fail to yield additional product candidates for development and commercialization for many reasons, including the following:

- the research methodology used may not be successful in identifying potential product candidates;
- we may be unable to identify viable product candidates through our NICE platform;
- competitors may develop alternatives that render our additional product candidates obsolete;
- additional product candidates we develop may be covered by third parties' patents or other exclusive rights;
- an additional product candidate may be shown to have harmful side effects or other characteristics that indicate it is unlikely to be effective or otherwise does not meet applicable regulatory criteria;
- an additional product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- an additional product candidate may not be accepted as safe and effective by physicians and patients.

We therefore cannot provide any assurance that we will be able to successfully identify or acquire additional product candidates, advance any of these additional product candidates through the development process, successfully commercialize any such additional product candidates, if approved, or assemble sufficient resources to identify, acquire, develop or, if approved, commercialize additional product candidates. If we are unable to successfully identify, acquire, develop and commercialize additional product candidates, our commercial opportunities may be limited.

Even if the product candidates that we develop receive regulatory approval in the United States or another jurisdiction, they may never receive approval in other jurisdictions, which would limit market opportunities for our product candidates and adversely affect our business.

Approval of a product candidate in the United States by the FDA or by the requisite regulatory agencies in any other jurisdiction does not ensure approval of such product candidate by regulatory authorities in other countries or jurisdictions. The approval process varies among countries and may limit our or any future collaborators' ability to develop, manufacture, promote and sell product candidates internationally. Failure to obtain marketing approval in international jurisdictions would prevent the product candidates from being marketed outside of the jurisdictions in which regulatory approvals have been received. In order to market and sell product candidates in the European Union, or EU, and many other jurisdictions, we and any future collaborators must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and may involve additional preclinical studies or clinical trials both before and after approval. In many countries, any product candidate for human use must be approved for reimbursement before it can be approved for sale in that country. In some cases, the intended price for such product is also subject to approval. Further, while regulatory approval of a product candidate in one country does not ensure approval in any other country, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory approval process in others. If we or any future collaborators fail to comply with the regulatory requirements in international markets or to obtain all required marketing approvals, the target market for a particular potential product will be reduced, which would limit our ability to realize the full market potential for the product and adversely affect our business.

Risks Related to Our Business and Industry

We are heavily dependent on the success of CT1812, our lead product candidate, which is still under clinical development, and if CT1812 does not receive regulatory approval or is not successfully commercialized, our business may be harmed.

The success of our business, including our ability to finance our company and generate revenue in the future, will primarily depend on the successful development, regulatory approval and commercialization of CT1812, currently our only clinical-stage product candidate. To date, we have invested a significant portion of our efforts and financial resources in the development of CT1812 for the treatment of AD. Our future success is substantially dependent on our ability to successfully complete clinical development for, obtain regulatory approval for and successfully commercialize CT1812, which may never occur. We expect that a substantial portion of our efforts and expenditures over the next few years will be devoted to CT1812, which will require additional clinical development, management of clinical and manufacturing activities, regulatory approval in multiple jurisdictions, obtaining manufacturing supply, building of a commercial organization, substantial investment and significant marketing efforts before we can generate any revenues from any commercial sales. We cannot be certain that we will be able to successfully complete any of these activities.

Furthermore, while inhibition of Aβ oligomers has been validated as a therapeutic approach, the use of small molecule receptor antagonists, such as CT1812, to inhibit the synaptic binding and signaling of soluble Aβ oligomers is an innovative therapeutic approach, which exposes us to certain risks. For example, we may discover unforeseen safety events or that CT1812 does not possess certain properties required for therapeutic effectiveness. Even if found to be effective in one type of disease, CT1812, or the associated therapeutic approach, may not be effective in other diseases. In addition, given our therapeutic approach, designing preclinical studies and clinical trials to demonstrate its effect is complex and exposes us to risks.

The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of drug products are subject to extensive regulation by the FDA and comparable regulatory authorities in other countries. We are not permitted to market CT1812 in the United States until we receive approval of an NDA from the FDA, or in any foreign countries until we receive the requisite approval from such countries. We have not submitted an NDA to the FDA or comparable applications to other regulatory authorities for CT1812 and may not be in a position to do so for several years, if ever. If we are unable to obtain the necessary regulatory approvals for CT1812, we will not be able to commercialize CT1812 in AD, dry AMD, PD and

DLB or other age-related degenerative diseases and disorders of the CNS and retina, and our financial position will be materially adversely affected and we may not be able to generate sufficient revenue to continue our business.

We will need to increase the size of our organization, and we may experience difficulties in managing growth.

As of March 31, 2021, we had 20 full-time and 2 part-time employees. We will need to continue to expand our managerial, operational, finance and other resources in order to manage our operations and clinical trials, continue our development activities and commercialize CT1812, our lead product candidate, or any future product candidates. Our management and personnel, systems and facilities currently in place may not be adequate to support this future growth. Our need to effectively execute our growth strategy requires that we:

- manage our clinical trials effectively;
- identify, recruit, retain, incentivize and integrate additional employees, including personnel focused on research and development and, if our product candidates receive marketing approval, sales;
- manage our internal development and operational efforts effectively while carrying out our contractual obligations to third parties; and
- continue to improve our operational, financial and management controls, reports systems and procedures.

Our future financial performance and our ability to develop, manufacture and commercialize CT1812 and our product candidates, if approved, will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert financial and other resources, and a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time, to managing these growth activities.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize CT1812, if approved, and our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

If we fail to attract and retain senior management and key scientific personnel, our business may be materially and adversely affected.

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management and clinical and scientific personnel. We are highly dependent upon members of our senior management, particularly our President and Chief Executive Officer, Lisa Ricciardi, as well as our senior scientists and other members of our management team. The loss of services of any of these individuals could delay or prevent the successful development of our product pipeline, initiation or completion of our planned clinical trials or the commercialization of our product candidates or any future product candidates.

Competition for qualified personnel in the biopharmaceutical field is intense due to the limited number of individuals who possess the skills and experience required by our industry. We will need to hire additional personnel as we expand our clinical development and if we initiate commercial activities. We may not be able to attract and retain quality personnel on acceptable terms, or at all. In addition, to the extent we hire personnel from competitors, we may be subject to allegations that they have been improperly solicited or that they have divulged proprietary or other confidential information, or that their former employers own their research output.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our current or future product candidates.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in

manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability and breach of warranty. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even a successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our current or future product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- regulatory investigations, product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue; and
- the inability to commercialize our current or any future product candidates.

If we are unable to obtain and maintain sufficient product liability insurance at an acceptable cost and scope of coverage to protect against potential product liability claims, the commercialization of our current or any future product candidates we develop could be inhibited or prevented. We currently carry product liability insurance covering our clinical trials. Although we maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. Our insurance policies also have various exclusions and deductibles, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient funds to pay such amounts. Moreover, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. If and when we obtain approval for marketing any of our product candidates, we intend to expand our insurance coverage to include the sale of such product candidate; however, we may be unable to obtain this liability insurance on commercially reasonable terms or at all.

We may explore strategic collaborations that may never materialize or may fail.

We may attempt to broaden the global reach of our platform by selectively collaborating with leading therapeutic companies and other organizations. As a result, we may periodically explore a variety of possible additional strategic collaborations in an effort to gain access to additional product candidates or resources. At the current time, we cannot predict what form such a strategic collaboration might take. In the event we do form such collaborations, we intend to retain significant economic and commercial rights to our programs in key geographic areas that are core to our long-term strategy. We are likely to face significant competition in seeking appropriate strategic collaborators, and strategic collaborations can be complicated and time consuming to negotiate and document. We may not be able to negotiate strategic collaborations on acceptable terms, or at all. We are unable to predict when, if ever, we will enter into any additional strategic collaborations because of the numerous risks and uncertainties associated with establishing them.

We may seek to grow our business through acquisitions of complementary businesses, and the failure to manage acquisitions, or the failure to integrate them with our existing business, could harm our financial condition and operating results.

From time to time, we may consider opportunities to acquire other companies, products or technologies that may enhance our manufacturing capabilities, expand the breadth of our markets or customer base, or advance our business strategies. Potential acquisitions involve numerous risks, including: problems assimilating

the acquired service offerings, products or technologies; issues maintaining uniform standards, procedures, quality control and policies; unanticipated costs associated with acquisitions; diversion of management's attention from our existing business; risks associated with entering new markets in which we have limited or no experience; increased legal and accounting costs relating to the acquisitions or compliance with regulatory matters; and unanticipated or undisclosed liabilities of any target.

We have no current commitments with respect to any acquisition. We do not know if we will be able to identify acquisitions we deem suitable, whether we will be able to successfully complete any such acquisitions on favorable terms or at all, or whether we will be able to successfully integrate any acquired service offerings, products or technologies. Our potential inability to integrate any business, products or technologies effectively may adversely affect our business, results of operations and financial condition.

Significant disruptions of information technology systems, breaches of data security and other incidents could materially adversely affect our business, results of operations and financial condition.

We collect and maintain information in digital and other forms that is necessary to conduct our business, and we are increasingly dependent on information technology systems and infrastructure to operate our business. In the ordinary course of our business, we collect, store and transmit large amounts of confidential information, including intellectual property, proprietary business information and personal information. It is critical that we do so in a secure manner to maintain the privacy, security, confidentiality and integrity of such confidential information. We have established physical, electronic and organizational measures designed to safeguard and secure our systems to prevent a data compromise, and rely on commercially available systems, software, tools and monitoring to provide security for our information technology systems and the processing, transmission and storage of digital information. We have also outsourced elements of our information technology infrastructure, and as a result a number of third-party vendors may have access to our confidential information. Our internal information technology systems and infrastructure, and those of any future collaborators and our contractors, consultants, vendors and other third parties on which we rely, are vulnerable to damage or unauthorized access or use resulting from computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures, cyber-attacks or cyber-intrusions over the Internet, denial or degradation of service attacks, ransomware, hacking, phishing and other social engineering attacks, attachments to emails, persons inside our organization or persons with access to systems inside our organization.

The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. The prevalent use of mobile devices that access confidential information also increases the risk of lost or stolen devices, security incidents and data security breaches, which could lead to the loss of confidential information or other intellectual property. As a result of the COVID-19 pandemic, we may face increased risks of a security breach or disruption due to our reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities. The costs to us to investigate, mitigate and remediate security incidents, breaches, disruptions, network security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and while we have implemented security measures to protect our data security and information technology systems, our efforts to address these problems may not be successful, and these problems could result in unexpected interruptions, delays, cessation of service, negative publicity and other harm to our business and our competitive position. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our product development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Any security compromise affecting us, our partners or our industry, whether real or perceived, could harm our reputation, erode confidence in the effectiveness of our security measures and lead to regulatory scrutiny. Moreover, if a computer security breach affects our systems or results in the unauthorized access to or unauthorized use, disclosure, release or other processing of personally identifiable information or clinical trial data, it may be necessary to notify individuals, governmental authorities, supervisory bodies, the media and other parties pursuant to privacy and security laws, and our reputation could be materially damaged. We would also be exposed to a risk of loss, governmental

investigations or enforcement, or litigation and potential liability, which could materially adversely affect our business, results of operations and financial condition.

Failure to comply with health and data protection laws and regulations could lead to government enforcement actions and civil or criminal penalties, private litigation or adverse publicity and could negatively affect our operating results and business.

We are subject to or affected by federal, state and foreign data protection laws and regulations which address privacy and data security. In the United States, numerous federal and state laws and regulations, including the U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, or HITECH, state data breach notification laws, state health information privacy laws and federal and state consumer protection laws, including Section 5 of the Federal Trade Commission Act, which govern the collection, use, disclosure and protection of health-related and other personal information, may apply to our operations and the operations of any future collaborators. In addition, we may obtain health information from third parties, including research institutions from which we obtain clinical trial data, that are subject to privacy and security requirements under HIPAA, as amended by HITECH, and other privacy and data security laws. Depending on the facts and circumstances, we could be subject to significant administrative, civil and criminal penalties if we obtain, use or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA. Further, various states have implemented similar privacy laws and regulations. For example, California also recently enacted the California Consumer Privacy Act of 2018, or CCPA. The CCPA gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used. The CCPA also provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. The CCPA went into effect on January 1, 2020 and grants the California Attorney General the power to bring enforcement actions for violations beginning July 1, 2020. The CCPA has been amended from time to time, and it remains unclear what, if any, further modifications will be made to this legislation or how it will be interpreted. As currently written, the CCPA may impact our business activities and as a result may increase our compliance costs and potential liability. Many similar privacy laws have been proposed at the federal level and in other states.

Foreign data protection laws, including Regulation 2016/679, known as the General Data Protection Regulation, or GDPR, may also apply to health-related and other personal information data subjects in the EU or the United Kingdom, or UK. The GDPR went into effect on May 25, 2018. Companies that must comply with the GDPR face increased compliance obligations and risk, including robust regulatory enforcement of data protection requirements as well as potential fines for noncompliance of up to €20 million or 4% of annual global revenue of the noncompliance company, whichever is greater. The GDPR imposes numerous requirements for the collection, use, storage and disclosure of personal information of EU or UK data subjects, including requirements relating to providing notice to and obtaining consent from data subjects, personal data breach notification, cross-border transfers of personal information, and honoring and providing for the rights of EU or UK individuals in relation to their personal information, including the right to access, correct and delete their data.

Compliance with U.S. and foreign data protection laws and regulations could require us to take on more onerous obligations in our contracts, require us to engage in costly compliance exercises, restrict our ability to collect, use and disclose data, or in some cases, impact our or our partners' or suppliers' ability to operate in certain jurisdictions. Failure to comply with U.S. and foreign data protection laws and regulations could result in government investigations and/or enforcement actions, fines, civil or criminal penalties, private litigation or adverse publicity and could negatively affect our operating results and business.

Moreover, clinical trial subjects about whom we or any of our potential collaborators obtain information, as well as the providers who share this information with us, may contractually limit our ability to use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend and could result in adverse publicity that could materially and adversely affect our business, financial condition, results of operations and prospects.

Our employees and independent contractors, including principal investigators, consultants, any future commercial collaborators, service providers and other vendors, may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have an adverse effect on our results of operations.

We are exposed to the risk that our employees and independent contractors, including principal investigators, consultants, any future commercial collaborators, service providers and other vendors may engage in misconduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or other unauthorized activities that violate the laws and regulations of the FDA and other similar regulatory bodies, including those laws that require the reporting of true, complete and accurate information to such regulatory bodies; manufacturing standards; U.S. federal and state healthcare fraud and abuse, data privacy laws and other similar non-U.S. laws; or laws that require the true, complete and accurate reporting of financial information or data. Activities subject to these laws also involve the improper use or misrepresentation of information obtained in the course of clinical trials, the creation of fraudulent data in our preclinical studies or clinical trials, or illegal misappropriation of product, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with such laws or regulations. In addition, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and financial results, including, without limitation, the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgements, possible exclusion from participation in Medicare, Medicaid and other U.S. healthcare programs, other sanctions, imprisonment, contractual damages, reputational harm, diminished profits and future earnings and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain patent protection for our technology and product candidates including our lead product candidate, CT1812, or if the scope of the patent protection obtained is not sufficiently broad, we may not be able to compete effectively in our markets.

We rely, and will continue to rely, upon a combination of patents, trademarks, trade secret protection and confidentiality agreements with employees, consultants, collaborators, advisors and other third parties to protect the intellectual property related to our current and future drug development programs and product candidates. Our success depends in large part on our ability to obtain and maintain patent protection in the United States and other countries with respect to our technology and product candidates. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our current and future drug development programs and product candidates, successfully defend our intellectual property rights against third-party challenges and successfully enforce our intellectual property rights to prevent third-party infringement. The patent prosecution process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner.

It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. We may choose not to seek patent protection for certain innovations or products and may choose not to pursue patent protection in certain jurisdictions, and under the laws of certain jurisdictions, patents or other intellectual property rights may be unavailable or limited in scope and, in any event, any patent protection we obtain may be limited. As a result, some of our product candidates are not, and in the future may not be, protected by patents. We generally apply for patents in those countries where we intend to make, have made, use, offer for sale, or sell products and where we assess the risk of infringement to justify the cost of seeking patent protection. However, we do not seek protection in all countries where we intend to sell products and we may not accurately predict all the countries where patent protection would ultimately be desirable. If we fail to timely file a patent application in any such country, we may be precluded from doing so at a later date. The patent applications that we own may

fail to result in issued patents with claims that cover any of our product candidates in the United States or in other foreign countries. We may also inadvertently make statements to regulatory agencies during the regulatory approval process that may be inconsistent with positions that have been taken during prosecution of our patents, which may result in such patents being narrowed, invalidated or held unenforceable, and vice versa that may affect the regulatory approval process.

The patents and patent applications that we own may fail to result in issued patents with claims that protect any of our product candidates in the United States or in other foreign countries. We cannot guarantee any current or future patents will provide us with any meaningful protection or competitive advantage. There is no assurance that all of the potentially relevant prior art relating to our patents and patent applications has been found, which can prevent a patent from issuing from a pending patent application, or be used to invalidate a patent. The examination process may require us to narrow our claims, which may limit the scope of patent protection that we may obtain. Even if patents do successfully issue based on our patent applications, and even if such patents cover our product candidates, uses of our product candidates, or other aspects related to our product candidates, third parties may challenge their validity, enforceability or scope, which may result in such patents being narrowed, invalidated or held unenforceable, any of which could limit our ability to prevent competitors and other third parties from developing and marketing similar products or limit the length of terms of patent protection we may have for our products and technologies. Other companies may also design around technologies we have patented or developed. Any successful opposition to these patents or any other patents owned by us in the future could deprive us of rights necessary for the successful commercialization of any of our product candidates, if approved. Further, if we encounter delays in regulatory approvals, the period of time during which we could market a product candidate under patent protection could be reduced. If any of our patents are challenged, invalidated, circumvented by third parties or otherwise limited or expire prior to the commercialization of our products, and if we do not own or have exclusive rights to other enforceable patents protecting our products or other technologies, competitors and other third parties could market products and use processes that are substantially similar to, or superior to, ours and our business would suffer.

If the patent applications we hold with respect to our development programs and product candidates fail to issue, if their breadth or strength of protection is threatened, or if they fail to provide meaningful exclusivity for any of our product candidates, it could dissuade companies from collaborating with us to develop product candidates, and threaten our ability to commercialize, future products. Our pending applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications. Any such outcome could harm our business.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions, and has in recent years been the subject of much litigation. The standards that the USPTO and its foreign counterparts use to grant patents are not always applied predictably or uniformly. In addition, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. For example, European patent law restricts the patentability of methods of treatment of the human body more than U.S. law does. Publications of discoveries in scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned patents or pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued which protect our technology or product candidates, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

Patent reform legislation in the United States, including the Leahy-Smith America Invents Act, or the Leahy-Smith Act, could increase those uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. The Leahy-Smith Act was signed into law on September 16, 2011 and includes a number of significant changes to U.S. patent law. These include

provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. After March 15, 2013, under the Leahy-Smith Act, the United States transitioned to a first inventor to file system in which, assuming that the other statutory requirements are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. The Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications, our ability to obtain future patents, and the enforcement or defense of our issued patents, all of which could harm our business, financial condition, results of operations and prospects.

Moreover, we may be subject to a third-party pre-issuance submission of prior art to the USPTO or become involved in opposition, derivation, reexamination, *inter partes* review, post-grant review or interference proceedings challenging our owned patent rights. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. Moreover, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after it is filed. Various extensions may be available; however, the life of a patent, and the protection it affords, is limited. Without patent protection for our current or future product candidates, we may be open to competition from generic versions of such products. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on our product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. The requirements for patentability may differ in certain countries, particularly developing countries, and the breadth of patent claims allowed can be inconsistent. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and may also export infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

We do not have patent rights in certain foreign countries in which a market may exist. Moreover, in foreign jurisdictions where we do have patent rights, proceedings to enforce such rights could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, and our patent applications at risk of not issuing. Additionally, such proceedings could provoke third parties to assert claims against us. We may not prevail in

any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Thus, we may not be able to stop a competitor from marketing and selling in foreign countries products and services that are the same as or similar to our products and services, and our competitive position in the international market would be harmed.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop.

Patent terms may be inadequate to protect our competitive position on our product candidates including our lead product candidate, CT1812 for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the U.S. Patent and Trademark Office, or USPTO, in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed patent. Even if patents covering our product candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including generics or biosimilars.

Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. We expect to seek extensions of patent terms in the United States and, if available, in other countries where we are prosecuting patents.

Depending upon the timing, duration and specifics of FDA marketing approval of our drug candidates, one or more of our U.S. patents may be eligible for limited patent term extension, or PTE, under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years beyond the normal expiration of the patent as compensation for patent term lost during development and the FDA regulatory review process, which is limited to the approved indication (and potentially additional indications approved during the period of extension) covered by the patent. This extension is limited to only one patent that covers the approved product, the approved use of the product, or a method of manufacturing the product. However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. We may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time-period or the scope of patent protection afforded could be less than we request. Even if we are able to obtain an extension, the patent term may still expire before or shortly after we receive FDA marketing approval.

If we are unable to extend the expiration date of our existing patents or obtain new patents with longer expiry dates, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data to obtain approval of competing products following our patent expiration and launch their product earlier than might otherwise be the case.

If we do not obtain protection under the Hatch-Waxman Amendments by obtaining data exclusivity, our business may be harmed.

Our commercial success will largely depend on our ability to obtain market exclusivity in the United States and other countries with respect to our drug candidates and their target indications. Depending upon the timing, duration and specifics of FDA marketing approval of our drug candidates, certain of our product candidates may be eligible for marketing exclusivity. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to obtain approval of an NDA for a new chemical entity, or NCE. A drug is an NCE if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. If market exclusivity is granted for an NCE, during the exclusivity period, the FDA may not accept for review or approve an abbreviated new drug application, or ANDA, or a 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed in the FDA's publication *Approved Drug Products with Therapeutic Equivalence Evaluations*, which we refer to as the Orange Book, with the FDA by the innovator NDA holder. The FDCA also provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages, dosage forms or strengths of an existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and prohibits the FDA from approving an ANDA, or a 505(b)(2) NDA submitted by another company with overlapping conditions associated with the new clinical investigations for the three-year period. Clinical investigation exclusivity does not prohibit the FDA from approving ANDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of an NDA for the same drug. However, an applicant submitting an NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

If we are unable to obtain such marketing exclusivity for our product candidates, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data to obtain approval of competing products and launch their product earlier than might otherwise be the case.

The validity, scope and enforceability of any patents listed in the Orange Book that cover our product candidates including our lead product candidate CT1812 can be challenged by third parties.

If one of our product candidates is approved by the FDA, one or more third parties may challenge the current patents, or patents that may issue in the future, within our portfolio which could result in the invalidation of, or render unenforceable, some or all of the relevant patent claims or a finding of non-infringement. For example, if a third party files an application under Section 505(b)(2) or an ANDA for a generic drug containing any of our product candidates, and relies in whole or in part on studies conducted by or for us, the third party will be required to certify to the FDA that either: (1) there is no patent information listed in the Orange Book with respect to our NDA for the applicable approved drug candidate; (2) the patents listed in the Orange Book have expired; (3) the listed patents have not expired, but will expire on a particular date and approval is sought after patent expiration; or (4) the listed patents are invalid or will not be infringed by the manufacture, use or sale of the third party's generic drug. A certification that the new drug will not infringe the Orange Book-listed patents for the applicable approved drug candidate, or that such patents are invalid, is called a paragraph IV certification. If the third party submits a paragraph IV certification to the FDA, a notice of the paragraph IV certification must also be sent to us once the third party's ANDA is accepted for filing by the FDA. We may then initiate a lawsuit to defend the patents identified in the notice. The filing of a patent infringement lawsuit within 45 days of receipt of the notice automatically prevents the FDA from approving the third party's ANDA until the earliest of 30 months or the date on which the patent expires, the lawsuit is settled, or the court reaches a decision in the infringement lawsuit in favor of the third party. If we do not file a patent infringement lawsuit within the required 45-day period, the third party's ANDA will not be subject to the 30-month stay of FDA approval.

Moreover, a third party may challenge the current patents, or patents that may issue in the future, within our portfolio which could result in the invalidation of some or all of the patents that might otherwise be eligible for listing in the Orange Book for one of our products. If a third party successfully challenges all of the patents that might otherwise be eligible for listing in the Orange Book for one of our products, we will not be entitled to the 30-month stay of FDA approval upon the filing of an ANDA for a generic drug containing any of our product candidates, and relies in whole or in part on studies conducted by or for us.

Litigation or other proceedings to enforce or defend intellectual property rights are often very complex in nature, may be very expensive and time-consuming, may divert our management's attention from our core business, and may result in unfavorable results that could limit our ability to prevent third parties from competing with our drug candidates.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for noncompliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and other foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign national or international patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of patent rights include, but are not limited to, failure to timely file national and regional stage patent applications based on our international patent application, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to maintain the patents and patent applications covering any of our product candidates, our competitors might be able to enter the market earlier than anticipated, which would harm our business.

We may need to license intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

The issuance of a patent does not give us the right to practice the patented invention. A third party may hold intellectual property, including patent rights, that are important or necessary to the development of our product candidates. Third parties may also have blocking patents that could prevent us from marketing our products or practicing our own patented technology. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our drug candidates, in which case we would be required to obtain a license from these third parties on commercially reasonable terms. Such a license may not be available, or it may not be available on commercially reasonable terms, in which case our business would be harmed.

The risks described elsewhere pertaining to our intellectual property rights also apply to any intellectual property rights that we may in-license, and any failure by us or our potential licensors to obtain, maintain, defend and enforce these rights could harm our business. In some cases we may not have control over the prosecution, maintenance or enforcement of the patents that we may license, and may not have sufficient ability to provide input into the patent prosecution, maintenance and defense process with respect to such patents, and our potential licensors may fail to take the steps that we believe are necessary or desirable in order to obtain, maintain, defend and enforce the licensed patents.

Third-party claims or litigation alleging infringement of patents or other proprietary rights, or seeking to invalidate patents or other proprietary rights, may delay or prevent the development and commercialization of any of our product candidates including our lead product candidate, CT1812.

Our commercial success depends in part on our avoiding infringement and other violations of the patents and proprietary rights of third parties. However, while certain research, development and commercialization activities may be protected by the safe harbor provision of the Hatch Waxman Act, other activities may subject to claims that we infringe or otherwise violate patents or other intellectual

property rights owned or controlled by third parties. There is a substantial amount of litigation, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interferences, derivation and administrative law proceedings, *inter partes* review and post-grant review before the USPTO, as well as oppositions and similar processes in foreign jurisdictions. Numerous United States and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we and our collaborators are developing product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, and as we gain greater visibility and market exposure as a public company, the risk increases that our product candidates or other business activities may be subject to claims of infringement of the patent and other proprietary rights of third parties. Third parties may assert that we are infringing their patents or employing their proprietary technology without authorization.

There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of any of our product candidates, any molecules formed during the manufacturing process or any final product itself, the holders of any such patents may be able to block our ability to commercialize such product candidate unless we obtained a license under the applicable patents, or until such patents expire. Similarly, if any third-party patent was to be held by a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture or methods of use, including combination therapy, the holders of any such patent may be able to block our ability to develop and commercialize the applicable product candidate unless we obtained a license or until such patent expires. In either case, such a license may not be available on commercially reasonable terms or at all. In addition, we may be subject to claims that we are infringing other intellectual property rights, such as trademarks or copyrights, or misappropriating the trade secrets of others, and to the extent that our employees, consultants or contractors use intellectual property or proprietary information owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize one or more of our product candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful infringement or other intellectual property claim against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our affected products, which may be impossible or require substantial time and monetary expenditure. We cannot predict whether any such license would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates, and we have done so from time to time. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize one or more of our product candidates, which could harm our business significantly. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

Some of our competitors may be able to sustain the costs of complex intellectual property litigation more effectively than we can because they have substantially greater resources. In addition, intellectual property litigation, regardless of its outcome, may cause negative publicity, adversely impact prospective customers, cause product shipment delays, or prohibit us from manufacturing, marketing or otherwise commercializing our products, services and technology. Any uncertainties resulting from the initiation and continuation of any litigation could adversely impact our ability to raise additional funds or otherwise harm our business, results of operation, financial condition or cash flows.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by

disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments, which could adversely impact the price of our common shares. If securities analysts or investors perceive these results to be negative, it could adversely impact the price of our common shares. The occurrence of any of these events may harm our business, results of operation, financial condition or cash flows.

We cannot provide any assurances that third-party patents do not exist which might be enforced against our drugs or product candidates, resulting in either an injunction prohibiting our sales, or, with respect to our sales, an obligation on our part to pay royalties or other forms of compensation to third parties.

We may not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might harm our ability to develop and market our products.

We cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending application in the United States and abroad that is or may be relevant to or necessary for the commercialization of our product candidates in any jurisdiction. Patent applications in the United States and elsewhere are not published until approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. In addition, U.S. patent applications filed before November 29, 2000 and certain U.S. patent applications filed after that date that will not be filed outside the United States remain confidential until patents issue. Therefore, patent applications covering our products could have been filed by others without our knowledge. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our product candidates or the use of our products.

The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect, which may negatively impact our ability to market our products. We may incorrectly determine that our products are not covered by a third-party patent or may incorrectly predict whether a third party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, and our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products.

If we fail to identify and correctly interpret relevant patents, we may be subject to infringement claims. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we fail in any such dispute, in addition to being forced to pay damages, we may be temporarily or permanently prohibited from commercializing any of our products that are held to be infringing. We might, if possible, also be forced to redesign products or services so that we no longer infringe the third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

We may become involved in lawsuits to protect or enforce our patents or our other intellectual property rights, which could be expensive, time consuming and unsuccessful.

Competitors may infringe or otherwise violate our patents or our other intellectual property rights. To counter infringement or unauthorized use, we may be required to file legal claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. As a result, we cannot predict with certainty how much protection, if any, will be given to our patents if we attempt to enforce them and they are challenged in court. Further, even if we prevail against an infringer in U.S. district court, there is always the risk that the infringer will file an appeal and the district court judgment will be overturned at the appeals court and/or that an adverse decision will be issued by the appeals court relating to the validity or enforceability of our patents. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly and could put our patent applications

at risk of not issuing. The initiation of a claim against a third party may also cause the third party to bring counter claims against us such as claims asserting that our patents are invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, non-enablement or lack of written description or statutory subject matter. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant material information from the USPTO, or made a materially misleading statement, during prosecution. Third parties may also raise similar validity claims before the USPTO in post-grant proceedings such as ex parte reexaminations, *inter partes* review, or post-grant review, or oppositions or similar proceedings outside the United States, in parallel with litigation or even outside the context of litigation. The outcome following legal assertions of invalidity and unenforceability is unpredictable. We cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of any future patent protection on our current or future product candidates.

We may not be able to detect or prevent misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States. Our business could be harmed if in litigation the prevailing party does not offer us a license on commercially reasonable terms. Any litigation or other proceedings to enforce our intellectual property rights may fail, and even if successful, may result in substantial costs and distract our management and other employees.

Even if we establish infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could harm the price of our common shares.

Because of the expense and uncertainty of litigation, we may not be in a position to enforce our intellectual property rights against third parties.

Because of the expense and uncertainty of litigation, we may conclude that even if a third party is infringing our issued patent, any patents that may be issued as a result of our pending or future patent applications or other intellectual property rights, the risk-adjusted cost of bringing and enforcing such a claim or action may be too high or not in the best interest of our company or our shareholders. In such cases, we may decide that the more prudent course of action is to simply monitor the situation or initiate or seek some other non-litigious action or solution.

Changes in U.S. patent law or the patent law of other countries or jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our product including our lead product candidate, CT1812.

The United States has recently enacted and implemented wide-ranging patent reform legislation. In addition, patent reform legislation may pass in the future that could lead to additional uncertainties and increased costs surrounding the prosecution, enforcement and defense of our patents and pending patent applications. The United States Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on actions by the United States Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce patents that we own or that we might obtain in the future. Similarly, changes in patent law and regulations in other countries or jurisdictions or changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent laws or regulations may weaken our ability to obtain new patents or to enforce patents that we own or that we may

obtain in the future. We cannot predict future changes in the interpretation of patent laws or changes to patent laws that might be enacted into law by United States and foreign legislative bodies. Those changes may materially affect our patents or patent applications and our ability to obtain additional patent protection in the future. The United States federal government retains certain rights in inventions produced with its financial assistance under the Bayh-Dole Act. The federal government retains a "nonexclusive, nontransferable, irrevocable, paid-up license" for its own benefit. The Bayh-Dole Act also provides federal agencies with "march-in rights." March-in rights allow the government, in specified circumstances, to require the contractor or successors in title to the patent to grant a "nonexclusive, partially exclusive, or exclusive license" to a "responsible applicant or applicants." If the patent owner refuses to do so, the government may grant the license itself.

We may not be able to protect our intellectual property rights throughout the world, which could impair our business.

Filing, prosecuting and defending patents covering any of our product candidates throughout the world would be prohibitively expensive. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we may obtain patent protection, but where patent enforcement is not as strong as that in the United States. These products may compete with our products in jurisdictions where we do not have any issued patents and any future patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing. We do not have patent rights in certain foreign countries in which a market may exist. Moreover, many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of some countries do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. Additionally, such proceedings could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Thus, we may not be able to stop a competitor from marketing and selling in foreign countries products and services that are the same as or similar to our products and services, and our competitive position in the international market would be harmed.

Many countries, including European Union countries, India, Japan and China, have compulsory licensing laws under which a patent owner may be compelled under specified circumstances to grant licenses to third parties. In those countries, we may have limited remedies if patents are infringed or if we are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we expect to rely on third parties to manufacture our product candidates, and we expect to continue to collaborate with third parties on the development of our product candidates, we must, at times, share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, consulting agreements or other similar agreements with our advisors, employees, third-party contractors and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Any disclosure, either intentional or unintentional, by our employees, the employees of third parties with whom we share our facilities or third-party consultants and vendors that we engage to perform research,

clinical trials or manufacturing activities, or misappropriation by third parties (such as through a cybersecurity breach) of our trade secrets or proprietary information could enable competitors to duplicate or surpass our technological achievements, thus eroding our competitive position in our market. Further, adequate remedies may not exist in the event of unauthorized use or disclosure. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may harm our business and results of operations.

In addition, these agreements typically restrict the ability of our advisors, employees, third-party contractors and consultants to publish data potentially relating to our trade secrets, although our agreements may contain certain limited publication rights. Policing unauthorized use of our intellectual property is difficult, expensive and time-consuming, and we may be unable to determine the extent of any unauthorized use. Moreover, enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. Despite our efforts to protect our trade secrets, our competitors may discover our trade secrets, either through breach of our agreements with third parties, independent development or publication of information by any of our third-party collaborators. A competitor's discovery of our trade secrets would impair our competitive position and have an adverse impact on our business.

We may be subject to claims that our employees, consultants, independent contractors or we have wrongfully used or disclosed confidential information of their former employers or other third parties.

We do and may employ individuals who were previously employed at universities or other biotechnology or pharmaceutical companies, competitors or potential competitors. Although we seek to protect our ownership of intellectual property rights by ensuring that our agreements with our employees, collaborators and other third parties with whom we do business include provisions requiring such parties to assign rights in inventions to us and to not use the confidential information of their former employer, we may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of our employees' former employers or other third parties. Litigation may be necessary to defend against these claims. There is no guarantee of success in defending these claims, and if we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or product candidates. Such a license may not be available on commercially reasonable terms or at all. Even if we are successful, litigation could result in substantial cost and be a distraction to our management and other employees. Moreover, any such litigation or the threat thereof may harm our reputation, our ability to form strategic alliances or sublicense our rights to collaborators, engage with scientific advisors or hire employees or consultants, each of which would harm our business, results of operations and financial condition.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may be subject to claims that former employees, collaborators or other third parties have an interest in our patents, trade secrets, or other intellectual property as an inventor or co-inventor. For example, we may have inventorship disputes arise from conflicting obligations of employees, consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship or our ownership of our patents, trade secrets or other intellectual property. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property that is important to our product candidates. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees. Any of the foregoing could harm our business, financial condition, results of operations and prospects.

In addition, while it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we

may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities, and have a harmful effect on the success of our business.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could adversely impact the price of our common shares. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property. In addition, the uncertainties associated with litigation could compromise our ability to raise the funds necessary to continue our clinical trials and internal research programs. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could compromise our ability to compete in the marketplace, including compromising our ability to raise the funds necessary to continue our clinical trials, continue our research programs, license necessary technology from third parties, or enter into development collaborations that would help us commercialize our product candidates, if approved.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patents for our product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect our trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Monitoring unauthorized uses and disclosures of our intellectual property is difficult, and we do not know whether the steps we have taken to protect our intellectual property will be effective. In addition, we may not be able to obtain adequate remedies for any such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

Any trademarks we have obtained or may obtain may be infringed or successfully challenged, resulting in harm to our business.

We expect to rely on trademarks as one means to distinguish any of our drug candidates that are approved for marketing from the products of our competitors. Once we select new trademarks and apply to register them, our trademark applications may not be approved. Third parties may oppose or attempt to

cancel our trademark applications or trademarks, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our drugs, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks and we may not have adequate resources to enforce our trademarks. If we attempt to enforce our trademarks and assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

Our intellectual property agreements with third parties may be subject to disagreements over contract interpretation, which could narrow the scope of our rights to the relevant intellectual property or technology.

Certain provisions in our intellectual property agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could affect the scope of our rights to the relevant intellectual property or technology, or affect financial or other obligations under the relevant agreement, either of which could harm our business, financial condition, results of operations and prospects. For example, the NIA has provided grants to fund certain of our preclinical activities and clinical trials. If the United States or another jurisdiction decides that the NIA grant bestows rights to our patent applications, that could affect our ability to obtain valid and enforceable patent claims protecting our rights as they relate to our lead product candidate, CT1812, our other product candidates and our NICE platform. As a consequence of these and other factors, our patent applications may fail to result in issued patents with claims that cover our product candidates in the United States or in other countries. Such a loss of patent protection could harm our business.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

Once granted, patents may remain open to invalidity challenges including opposition, interference, re-examination, post-grant review, *inter partes* review, nullification or derivation action in court or before patent offices or similar proceedings for a given period after allowance or grant, during which time third parties can raise objections against such grant. In the course of such proceedings, which may continue for a protracted period of time, the patent owner may be compelled to limit the scope of the allowed or granted claims thus attacked, or may lose the allowed or granted claims altogether.

In addition, the degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business, provide a barrier to entry against our competitors or potential competitors, or permit us to maintain our competitive advantage. Moreover, if a third party has intellectual property rights that cover the practice of our technology, we may not be able to fully exercise or extract value from our intellectual property rights. The following examples are illustrative:

- others may be able to make product that is similar to product candidates we intend to commercialize that is not covered by the patents that we own;
- we, or any collaborators might not have been the first to make or reduce to practice the inventions covered by the issued patents or pending patent applications that we own;
- we or any collaborators might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own may not provide us with any competitive advantages, or may be held invalid or unenforceable as a result of legal challenges;
- our competitors might conduct research and development activities in the United States and other countries that provide a safe harbor from patent infringement claims for certain research and development activities, as well as in countries where we do not have patent rights, and then use the

information learned from such activities to develop competitive products for sale in our major commercial markets; and we may not develop additional proprietary technologies that are patentable;

- third parties performing manufacturing or testing for us using our products or technologies could use the intellectual property of others without obtaining a proper license;
- parties may assert an ownership interest in our intellectual property and, if successful, such disputes may preclude us from exercising exclusive rights over that intellectual property;
- we may not develop additional proprietary technologies that are patentable;
- we may not be able to obtain and maintain necessary licenses on commercially reasonable terms, or at all; and
- the patents of others may harm our business.

Should any of these events occur, they could significantly harm our business and results of operations.

Risks Related to Commercialization, Manufacturing and Reliance on Third Parties

Even if our current or future product candidates obtain regulatory approval, they may fail to achieve the broad degree of adoption and use by physicians, patients, hospitals, healthcare payors and others in the medical community necessary for commercial success.

Even if one or more of our product candidates receive FDA or other regulatory approvals, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, healthcare payors and others in the medical community. Most of our product candidates target mechanisms for which there are limited or no currently approved products, which may result in slower adoption by physicians, patients and payors. If our product candidates do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the clinical indications for which the product is approved and patient demand for approved products that treat those indications;
- the safety and efficacy of our product as compared to other available therapies;
- the availability of coverage and adequate reimbursement from governmental healthcare plans or third party payors for any of our product candidates that may be approved;
- acceptance by physicians, operators of clinics and patients of the product as a safe and effective treatment;
- physician and patient willingness to adopt a new therapy over other available therapies to treat approved indications;
- overcoming any biases physicians or patients may have toward particular therapies for the treatment of approved indications;
- proper training and administration of our product candidates by physicians and medical staff;
- public misperception regarding the use of our therapies, if approved for commercial sale;
- patient satisfaction with the results and administration of our product candidates and overall treatment experience, including, for example, the convenience of any dosing regimen;
- the cost of treatment with our product candidates in relation to alternative treatments and reimbursement levels, if any, and willingness to pay for the product, if approved, on the part of insurance companies and other third-party payors, physicians and patients;
- the revenue and profitability that our products may offer a physician as compared to alternative therapies;
- limitations or warnings contained in the FDA-approved labeling for our products;
- any FDA requirement to undertake a REMS;

- the effectiveness of our sales, marketing and distribution efforts;
- adverse publicity about our products or favorable publicity about competitive products; and
- potential product liability claims.

We cannot assure you that our current or future product candidates, if approved, will achieve broad market acceptance among physicians, patients, healthcare payors and others in the medical community. Even if we receive regulatory approval to market any of our product candidates, we cannot assure you that any such product candidate will be more effective than other commercially available alternatives or successfully commercialized. Any approval we may obtain could be for indications or patient populations that are not as broad as intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We may also be required to perform additional or unanticipated clinical trials to obtain approval or be subject to additional post-marketing testing requirements to maintain approval. In addition, regulatory authorities may withdraw their approval of a product or impose restrictions on its distribution, such as in the form of a REMS. Any failure by our product candidates that obtain regulatory approval to achieve market acceptance or commercial success would adversely affect our reputation, ability to raise additional capital, financial condition, results of operations and business prospects.

The market opportunities for CT1812, if approved, may be smaller than we anticipate.

We expect to initially seek approval for CT1812 for AD, dry AMD, PD and DLB and other age-related degenerative diseases and disorders of the CNS and retina. Our estimates of market potential have been derived from a variety of sources, including scientific literature, patient foundations and market research and may prove to be incorrect. Even if we obtain significant market share for CT1812 after FDA approval, the potential target populations may be too small to consistently generate revenue, and we may never achieve profitability without obtaining marketing approval for additional indications.

We rely on third-party suppliers to manufacture our product candidates, and we intend to rely on third parties to produce commercial supplies of any approved product. The loss of these suppliers, or their failure to comply with applicable regulatory requirements or to provide us with sufficient quantities at acceptable quality levels or prices, or at all, would materially and adversely affect our business, financial condition, results of operations and prospects.

We do not currently have nor do we plan to build or acquire the infrastructure or capability internally to manufacture supplies of our product candidates or the materials necessary to produce our product candidates for use in the conduct of our preclinical studies or clinical trials, and we lack the internal resources and the capability to manufacture any of our product candidates on a preclinical, clinical or commercial scale. The facilities used by our contract manufacturers to manufacture our product candidates are subject to various regulatory requirements and may be subject to the inspection of the FDA or other regulatory authorities. We do not control the manufacturing processes of, and are completely dependent on, our contract manufacturing partners for compliance with the regulatory requirements, known as cGMPs. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or comparable regulatory authorities in foreign jurisdictions, we may not be able to rely on their manufacturing facilities for the manufacture of our product candidates. In addition, we have limited control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority finds these facilities inadequate for the manufacture of our product candidates or if such facilities are subject to enforcement action in the future or are otherwise inadequate, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates.

We currently rely on third parties at key stages in our supply chain. For instance, the supply chains for our lead product candidate involves several manufacturers that specialize in specific operations of the manufacturing process, specifically, raw materials manufacturing, drug substance manufacturing and drug product manufacturing. As a result, the supply chain for the manufacturing of our product candidates is complicated, and we expect the logistical challenges associated with our supply chain to grow more complex as our product candidates are further developed.

We do not have any control over the process or timing of the acquisition or manufacture of materials by our manufacturers. We generally do not begin preclinical or clinical trials unless we believe we have access to a sufficient supply of a product candidate to complete such study. In addition, any significant delay in, or quality control problems with respect to, the supply of a product candidate, or the raw material components thereof, for an ongoing study could considerably delay completion of our preclinical or clinical trials, product testing and potential regulatory approval of our product candidates.

We have not yet engaged any manufacturers for the commercial supply of our product candidates. Although we intend to enter into such agreements prior to commercial launch of any of our product candidates, we may be unable to enter into any such agreement or do so on commercially reasonable terms, which could have a material adverse impact upon our business. Moreover, if there is a disruption to one or more of our third-party manufacturers' or suppliers' relevant operations, or if we are unable to enter into arrangements for the commercial supply of our product candidates, we will have no other means of producing our product candidates until they restore the affected facilities or we or they procure alternative manufacturing facilities or sources of supply. Our ability to progress our preclinical and clinical programs could be materially and adversely impacted if any of the third-party suppliers upon which we rely were to experience a significant business challenge, disruption or failure due to issues such as financial difficulties or bankruptcy, issues relating to other customers such as regulatory or quality compliance issues, or other financial, legal, regulatory or reputational issues. Additionally, any damage to or destruction of our third-party manufacturers' or suppliers' facilities or equipment may significantly impair our ability to manufacture our product candidates on a timely basis.

In addition, to manufacture our product candidates in the quantities which we believe would be required to meet anticipated market demand, our third-party manufacturers would likely need to increase manufacturing capacity and we may need to secure alternative sources of commercial supply, which could involve significant challenges and may require additional regulatory approvals. In addition, the development of commercial-scale manufacturing capabilities may require us and our third-party manufacturers to invest substantial additional funds and hire and retain the technical personnel who have the necessary manufacturing experience. Neither we nor our third-party manufacturers may successfully complete any required increase to existing manufacturing capacity in a timely manner, or at all. If our manufacturers or we are unable to purchase the raw materials necessary for the manufacture of our product candidates on acceptable terms, at sufficient quality levels or in adequate quantities, if at all, the commercial launch of our product candidates would be delayed or there would be a shortage in supply, which would impair our ability to generate revenues from the sale of such product candidates, if approved.

Our product candidates have never been manufactured on a commercial scale, and there are risks associated with scaling up manufacturing to commercial scale. In particular, we will need to develop a larger scale manufacturing process that is more efficient and cost-effective to commercialize our potential products, which may not be successful.

Our product candidates have never been manufactured on a commercial scale, and there are risks associated with scaling up manufacturing to commercial scale including, among others, cost overruns, potential problems with process scale-up, process reproducibility, stability issues, lot consistency and timely availability of raw materials. There is no assurance that our third-party manufacturers will be successful in establishing a larger-scale commercial manufacturing process for our product candidates which achieves our objectives for manufacturing capacity and cost of goods. In addition, there is no assurance that our third-party manufacturers will be able to manufacture our product candidates to specifications acceptable to the FDA or other regulatory authorities, to produce it in sufficient quantities to meet the requirements for the potential launch of such products or to meet potential future demand. Our failure to properly or adequately scale scaling up manufacturing for commercial scale would adversely affect our business, results of operations and financial condition.

We rely on third parties in the conduct of all of our clinical trials. If these third parties do not successfully carry out their contractual duties, fail to comply with applicable regulatory requirements or meet expected deadlines, we may be unable to obtain regulatory approval for our product candidates.

We currently do not have the ability to independently conduct clinical trials that comply with the regulatory requirements known as good laboratory practice, or GLP, requirements or GCP requirements,

respectively. The FDA and regulatory authorities in other jurisdictions require us to comply with GCP requirements for conducting, monitoring, recording and reporting the results of clinical trials, in order to ensure that the data and results are scientifically credible and accurate and that the trial subjects are adequately informed of the potential risks of participating in clinical trials. We rely on medical institutions, clinical investigators, contract laboratories and other third parties, such as CROs, to conduct GLP-compliant preclinical studies and GCP-compliant clinical trials on our product candidates properly and on time. While we have agreements governing their activities, we control only certain aspects of their activities and have limited influence over their actual performance. The third parties with whom we contract for execution of our GLP-compliant preclinical studies and our GCP-compliant clinical trials play a significant role in the conduct of these studies and the subsequent collection and analysis of data. These third parties are not our employees and, except for restrictions imposed by our contracts with such third parties, we have limited ability to control the amount or timing of resources that they devote to our programs. Although we rely on these third parties to conduct our GLP-compliant preclinical studies and GCP-compliant clinical trials, we remain responsible for ensuring that each of our preclinical studies and clinical trials is conducted in accordance with its investigational plan and protocol and applicable laws and regulations, and our reliance on the CROs does not relieve us of our regulatory responsibilities.

Many of the third parties with whom we contract may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting preclinical studies, clinical trials or other drug development activities that could harm our competitive position. If the third parties conducting our preclinical studies or our clinical trials do not adequately perform their contractual duties or obligations, experience significant business challenges, disruptions or failures, do not meet expected deadlines, terminate their agreements with us or need to be replaced, or if the quality or accuracy of the data they obtain is compromised due to their failure to adhere to our protocols or to GLPs or GCPs, or for any other reason, we may need to enter into new arrangements with alternative third parties. This could be difficult, costly or impossible, and our preclinical studies or clinical trials may need to be extended, delayed, terminated or repeated. As a result we may not be able to obtain regulatory approval in a timely fashion, or at all, for the applicable product candidate, our business, financial results and the commercial prospects for our product candidates would be harmed, our costs could increase, and our ability to generate revenues could be delayed.

We face significant competition in an environment of rapid technological and scientific change, and there is a possibility that our competitors may achieve regulatory approval before us or develop therapies that are safer, more advanced or more effective than ours, which may negatively impact our ability to successfully market or commercialize any product candidates we may develop and ultimately harm our financial condition.

The development and commercialization of new drug products is highly competitive. Moreover, the neurodegenerative field is characterized by strong and increasing competition, and a strong emphasis on intellectual property. We may face competition with respect to any of our product candidates that we seek to develop or commercialize in the future from major pharmaceutical companies, specialty pharmaceutical companies, and biotechnology companies worldwide. Potential competitors also include academic institutions, government agencies, and other public and private research organizations that conduct research, seek patent protection, and establish collaborative arrangements for research, development, manufacturing, and commercialization.

There are a number of large pharmaceutical and biotechnology companies that are currently pursuing the development of product candidates for the treatment of the diseases and disorders for which we have research programs, including AD, dry AMD, PD and DLB. Companies developing therapeutics for similar indications include large companies with significant financial resources, such as AbbVie, AstraZeneca, Biogen, Celgene, Eli Lilly, GlaxoSmithKline, Johnson & Johnson, Novartis, Pfizer, Roche, Sanofi and Takeda. In addition to competition from other companies targeting neurodegenerative indications, any products we may develop may also face competition from other types of therapies.

Many of our current or potential competitors, either alone or with their strategic partners, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals, and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may

result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient, or are less expensive than any products that we may develop. Furthermore, currently approved products could be discovered to have application for treatment of age-related degenerative diseases and disorders, which could give such products significant regulatory and market timing advantages over any of our product candidates. Our competitors also may obtain FDA, EMA or other regulatory approval for their products more rapidly than we may obtain approval for ours and may obtain orphan product exclusivity from the FDA for indications our product candidates are targeting, which could result in our competitors establishing a strong market position before we are able to enter the market. Additionally, products or technologies developed by our competitors may render our potential product candidates uneconomical or obsolete, and we may not be successful in marketing any product candidates we may develop against competitors.

In addition, we could face litigation or other proceedings with respect to the scope, ownership, validity and/or enforceability of our patents relating to our competitors' products and our competitors may allege that our products infringe, misappropriate or otherwise violate their intellectual property. The availability of our competitors' products could limit the demand, and the price we are able to charge, for any products that we may develop and commercialize. See "Risks Related to Our Intellectual Property." The successful commercialization of our product candidates will depend in part on the extent to which governmental authorities and health insurers establish adequate coverage, reimbursement levels and pricing policies. Failure to obtain or maintain coverage and adequate reimbursement for our product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The successful commercialization of our product candidates will depend in part on the extent to which governmental authorities and health insurers establish adequate coverage, reimbursement levels and pricing policies. Failure to obtain or maintain coverage and adequate reimbursement for our product candidates, if approved, could limit our ability to market those drugs and decrease our ability to generate revenue.

The availability and adequacy of coverage and reimbursement by governmental healthcare programs such as Medicare and Medicaid, private health insurers and other third-party payors are essential for most patients to be able to afford prescription medications such as our product candidates, if approved. Our ability to achieve acceptable levels of coverage and reimbursement for products by governmental authorities, private health insurers and other organizations will have an effect on our ability to successfully commercialize our product candidates. Even if we obtain coverage for our product candidates by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. We cannot be sure that coverage and reimbursement in the United States, the European Union or elsewhere will be available for our product candidates or any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

Third-party payors increasingly are challenging prices charged for biopharmaceutical products and services, and many third-party payors may refuse to provide coverage and reimbursement for particular drugs or biologics when an equivalent generic drug, biosimilar or a less expensive therapy is available. It is possible that a third-party payor may consider our product candidates as substitutable and only offer to reimburse patients for the cost of the less expensive product. Even if we show improved efficacy or improved convenience of administration with our product candidates, pricing of existing third-party therapeutics may limit the amounts we will be able to charge for our product candidates. These payors may deny or revoke the reimbursement status of a given product or establish prices for new or existing marketed products at levels that are too low to enable us to realize an appropriate return on our investment in our product candidates. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize our product candidates and may not be able to obtain a satisfactory financial return on our investment in the development of product candidates.

There is significant uncertainty related to the insurance coverage and reimbursement of newly-approved products. In the United States, third-party payors, and governmental healthcare plans, such as the

Medicare and Medicaid programs, play an important role in determining the extent to which new drugs and biologics will be covered. The Medicare and Medicaid programs increasingly are used as models in the United States for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs and biologics. Some third-party payors may require pre-approval of coverage for new or innovative devices or drug therapies before they will reimburse healthcare providers who use such therapies. We cannot predict at this time what third-party payors will decide with respect to the coverage and reimbursement for our product candidates.

No uniform policy for coverage and reimbursement for products exists among third-party payors in the United States. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Furthermore, rules and regulations regarding reimbursement change frequently, in some cases on short notice, and we believe that changes in these rules and regulations are likely.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe and other foreign jurisdictions have and will continue to put pressure on the pricing and usage of our product candidates. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. Other countries allow companies to fix their own prices for medical products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amounts that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our product candidates may be reduced compared with the United States and may be insufficient to generate commercially-reasonable revenue and profits.

Moreover, increasing efforts by governmental and third-party payors in the United States and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products, and, as a result, they may not cover or provide adequate payment for our product candidates. We expect to experience pricing pressures in connection with the sale of our product candidates due to the trend toward managed health care, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs and biologics and surgical procedures and other treatments, has become intense. As a result, increasingly high barriers are being erected to the entry of new products.

We currently have no sales organization. If we are unable to establish sales capabilities on our own or through third parties, we may not be able to market and sell our product candidates, if approved, effectively in the United States and foreign jurisdictions or generate product revenue.

We currently do not have a marketing or sales organization. In order to commercialize our product candidates in the United States and foreign jurisdictions, we must build our marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, and we may not be successful in doing so. If any of our product candidates receive regulatory approval, we expect to establish a sales organization with technical expertise and supporting distribution capabilities to commercialize each such product candidate, which will be expensive and time consuming. We have no prior experience in the marketing, sale and distribution of biopharmaceutical products, and there are significant risks involved in building and managing a sales organization, including our ability to hire, retain and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel and effectively manage a geographically dispersed sales and marketing team. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of these products. We may choose to collaborate with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems. If we are unable to enter into such arrangements on acceptable terms or at all, we may not be able to successfully commercialize our product candidates. If we are not successful in commercializing our product candidates or any future product candidates, either on our own or through arrangements with one or more third parties, we may not be able to generate any future product revenue and we would incur significant additional losses.

Risks Related to Government Regulation

Even if we obtain regulatory approval for a product candidate, our products will remain subject to regulatory scrutiny.

If our product candidates are approved, they will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies and submission of safety, efficacy and other post-market information, including both federal and state requirements in the United States and requirements of comparable foreign regulatory authorities.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMPs and adherence to commitments made in any approved marketing application. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

We will have to comply with requirements concerning advertising and promotion for any future products. Promotional communications with respect to prescription drugs and biologics are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. We may not promote products for indications or uses for which they do not have approval. The holder of an approved application must submit new or supplemental applications and obtain approval for certain changes to the approved product, product labeling or manufacturing process. We could also be asked to conduct post-marketing clinical trials to verify the safety and efficacy of our products in general or in specific patient subsets. An unsuccessful post-marketing study or failure to complete such a study could result in the withdrawal of marketing approval.

If a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, such regulatory agency may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other things:

- issue warning letters;
- impose civil or criminal penalties;
- suspend or withdraw regulatory approval;
- suspend any of our clinical trials;
- refuse to approve pending applications or supplements to approved applications submitted by us;
- impose restrictions on our operations, including closing our contract manufacturers' facilities; or
- seize or detain products, or require a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response, and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from any future products. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

Healthcare legislation, including potentially unfavorable pricing regulations or other healthcare reform initiatives, may increase the difficulty and cost for us to obtain marketing approval of and commercialize our product candidates.

We operate in a highly regulated industry. The commercial potential for our approved products, if any, could be affected by changes in healthcare spending and policy in the United States and abroad. New laws,

regulations or judicial decisions or new interpretations of existing laws, regulations or decisions, related to healthcare availability, the method of delivery or payment for healthcare products and services could adversely affect our business, operations and financial condition. The United States and many foreign jurisdictions have enacted or proposed legislative and regulatory changes affecting the healthcare system that may affect our ability to profitably sell our product and product candidates, if approved. The United States government, state legislatures and foreign governments also have shown significant interest in implementing cost-containment programs to limit the growth of government-paid healthcare costs, including price controls, restrictions on reimbursement and requirements for substitution of generic products for branded prescription drugs and biologics.

The Affordable Care Act was intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. There have been significant ongoing administrative, executive and legislative efforts to modify or eliminate the Affordable Care Act. For example, the Tax Act enacted on December 22, 2017 repealed the shared responsibility payment for individuals who fail to maintain minimum essential coverage under section 5000A of the Internal Revenue Code, commonly referred to as the individual mandate. The Trump administration issued executive orders which sought to reduce burdens associated with the Affordable Care Act and modified how it was implemented. Other legislative changes have been proposed and adopted since passage of the Affordable Care Act. The Affordable Care Act has also been subject to challenges in the courts. On December 14, 2018, a Texas U.S. District Court Judge ruled that the Affordable Care Act is unconstitutional in its entirety because the "individual mandate" was repealed by Congress. On December 18, 2019, the Fifth Circuit U.S. Court of Appeals held that the individual mandate is unconstitutional and remanded the case to the Texas District Court to reconsider its earlier invalidation of the entire Affordable Care Act. An appeal was taken to the U.S. Supreme Court which heard oral arguments in the case on November 10, 2020. A ruling is expected in 2021.

Further changes to and under the Affordable Care Act remain possible, although the new Biden administration has signaled that it plans to build on the Affordable Care Act and expand the number of people who are eligible for subsidies under it. President Biden indicated that he intends to use executive orders to undo changes to the Affordable Care Act made by the Trump administration and would advocate for legislation to build on the Affordable Care Act. It is unknown what form any such changes or any law proposed to replace the Affordable Care Act would take, and how or whether it may affect our business in the future. We expect that changes to the Affordable Care Act, the Medicare and Medicaid programs, changes allowing the federal government to directly negotiate drug and biologic prices and changes stemming from other healthcare reform measures, especially with regard to healthcare access, financing or other legislation in individual states, could have a material adverse effect on the healthcare industry.

The Budget Control Act of 2011 has resulted in reductions in spending on certain government programs, including aggregate reductions to Medicare payments to healthcare providers of up to 2.0% per fiscal year. These reductions have been extended until 2030 unless additional Congressional action is taken.

Any reduction in reimbursement from Medicare, Medicaid, or other government programs may result in a similar reduction in payments from private payers. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain and maintain profitability of our product and product candidates, if approved.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we or any related third parties are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or any related third parties are not able to maintain regulatory compliance, CT1812 or any future product candidates may lose any marketing approval that may have been obtained and we may not achieve or sustain profitability, which would materially affect our business, financial condition and results of operations.

If we develop a small molecule product candidate that obtains regulatory approval, additional competitors could enter the market with generic versions of such drugs, which may result in a material decline in sales of affected products.

Under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, a pharmaceutical manufacturer may file an abbreviated new drug application, or ANDA, seeking

approval of a generic version of an approved, small molecule innovator product. Under the Hatch-Waxman Act, a manufacturer may also submit an NDA, under section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act that references the FDA's prior approval of the small molecule innovator product. A 505(b)(2) NDA product may be for a new or improved version of the original innovator product. The Hatch-Waxman Act also provides for certain periods of regulatory exclusivity, which preclude FDA approval (or in some circumstances, FDA filing and review) of an ANDA or 505(b)(2) NDA. In addition to the benefits of regulatory exclusivity, an innovator NDA holder may have patents claiming the active ingredient, product formulation or an approved use of the drug, which would be listed with the product in the FDA publication, "Approved Drug Products with Therapeutic Equivalence Evaluations," known as the Orange Book. If there are patents listed in the Orange Book for a product, a generic or 505(b)(2) applicant that seeks to market its product before expiration of the patents must include in their applications what is known as a "Paragraph IV" certification, challenging the validity or enforceability of, or claiming non-infringement of, the listed patent or patents. Notice of the certification must be given to the patent owner and NDA holder and if, within 45 days of receiving notice, either the patent owner or NDA holder sues for patent infringement, approval of the ANDA or 505(b)(2) NDA is stayed for up to 30 months.

Accordingly, if we choose to develop a small molecule product candidate, and the product is approved, competitors could file ANDAs for generic versions of our small molecule drug products or 505(b)(2) NDAs that reference our small molecule drug products. If there are patents listed for our small molecule drug products in the Orange Book, those ANDAs and 505(b)(2) NDAs would be required to include a certification as to each listed patent indicating whether the ANDA applicant does or does not intend to challenge the patent. We cannot predict which, if any, patents in our current portfolio or patents we may obtain in the future will be eligible for listing in the Orange Book, how any generic competitor would address such patents, whether we would sue on any such patents, or the outcome of any such suit.

We may not be successful in securing or maintaining proprietary patent protection for products and technologies we develop or license. Moreover, if any of our owned or in-licensed patents that are listed in the Orange Book are successfully challenged by way of a Paragraph IV certification and subsequent litigation, the affected product could immediately face generic competition and its sales would likely decline rapidly and materially.

Our business operations and current and future relationships with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers will be subject to applicable healthcare regulatory laws, which could expose us to penalties.

Our business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations. These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our product candidates, if approved. Such laws include, without limitation:

- the U.S. federal civil and criminal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under U.S. federal and state healthcare programs such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the U.S. federal false claims laws, including the False Claims Act, which can be enforced through whistleblower actions, and civil monetary penalties laws, which, among other things, impose criminal and civil penalties against individuals or entities for knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. In addition, the government may assert that

a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;

- HIPAA, which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services; similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the HITECH and its implementing regulations, which also imposes certain obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information without appropriate authorization by covered entities, such as health plans, healthcare clearinghouses and healthcare providers, as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers;
- the U.S. Physician Payments Sunshine Act and its implementing regulations, which require certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid or the Children's Health Insurance Program to report annually to the government information related to certain payments and other transfers of value to physicians, as defined by such law, and teaching hospitals, as well as ownership and investment interests held by the physicians described above and their immediate family members. Effective January 1, 2022, the U.S. federal physician transparency reporting requirements will extend to include transfers of value made during the previous year to certain non-physician providers such as physician assistants and nurse practitioners;
- analogous U.S. state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state and local laws that require the registration of pharmaceutical sales representatives; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; and state laws governing the privacy, security and disposal of personal information and health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts;
- the U.S. Foreign Corrupt Practices Act of 1977, as amended, which prohibits, among other things, U.S. companies and their employees and agents from authorizing, promising, offering or providing, directly or indirectly, corrupt or improper payments or anything else of value to foreign government officials, employees of public international organizations and foreign government owned or affiliated entities, candidates for foreign political office and foreign political parties or officials thereof; and
- similar data protection and healthcare laws and regulations in the European Union and other jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers and laws governing the privacy and security of personal data, including the GDPR, which imposes obligations and restrictions on the collection and use of personal data relating to individuals located in the European Union and European Economic Area (including with regard to health data).

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations,

agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, disgorgement, imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations. Further, defending against any such actions can be costly and time-consuming and may require significant personnel resources. Even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

Changes in tax laws and regulations may have a material adverse effect on our business, financial condition and results of operations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could affect the tax treatment of any of our future domestic and foreign earnings. Any new taxes could adversely affect our domestic and international business operations, and our business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. For example, the U.S. government enacted significant tax reforms in the past, and certain provisions of any new laws may adversely affect us. Changes in recent years include, but are not limited to, a federal corporate tax rate decrease to 21% for tax years beginning after December 31, 2017, a reduction to the maximum deduction allowed for net operating losses generated in tax years after December 31, 2017, eliminating carrybacks of net operating losses, and providing for indefinite carryforwards for losses generated in tax years after December 31, 2017. The legislation is unclear in many respects and could be subject to potential amendments and technical corrections, and will be subject to interpretations and implementing regulations by the Treasury and Internal Revenue Service, any of which could mitigate or increase certain adverse effects of the legislation. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation. Generally, future changes in applicable U.S. tax laws and regulations, or their interpretation and application could have an adverse effect on our business, financial conditions and results of operations.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations, which can harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, or FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors and other collaborators from authorizing, promising, offering or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties to sell our products outside the United States, to conduct clinical trials and/or to obtain necessary permits, licenses, patent registrations and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

Risks Related to Our Common Stock and this Offering

Our stock price may be volatile and you may not be able to resell shares of our common stock at or above the price you paid.

The trading price of our common stock following this offering could be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. In

particular, the trading prices for biopharmaceutical companies have been highly volatile as a result of the COVID-19 pandemic. These factors include those discussed in this "Risk Factors" section of this prospectus and others such as:

- results from, and any delays in, our current and future clinical trials with CT1812 or any other future clinical development programs, including any delays related to the COVID-19 pandemic;
- announcements of regulatory approval or disapproval of CT1812 or any future product candidates;
- failure or discontinuation of any of our research and development programs;
- the termination of any future collaborations or license agreements;
- delays in the commercialization of CT1812 or any future product candidates;
- public misperception regarding the use of our product candidates;
- acquisitions and sales of new products or product candidates, technologies or businesses;
- manufacturing and supply issues related to our product candidates for clinical trials or future product candidates for commercialization;
- quarterly variations in our results of operations or those of our competitors;
- changes in coverage and recommendations by securities analysts;
- announcements by us or our competitors of new products or product candidates, significant contracts, commercial relationships, acquisitions or capital commitments;
- developments with respect to intellectual property rights;
- our commencement of, or involvement in, litigation;
- changes in financial estimates or guidance;
- any major changes in our board of directors or management;
- new legislation or regulation in the United States relating to the sale or pricing of pharmaceuticals;
- FDA or other U.S. or foreign regulatory actions affecting us or our industry;
- product liability claims or other litigation or public concern about the safety of our product candidates;
- market conditions in the biopharmaceutical sectors; and
- general economic conditions in the United States and abroad.

In addition, the stock markets in general, and the markets for biopharmaceutical stocks in particular, have experienced extreme volatility that may have been unrelated to the operating performance of the issuer. These broad market fluctuations may adversely affect the trading price or liquidity of our common stock.

An active, liquid and orderly market for our common stock may not develop, and you may not be able to resell your common stock at or above the public offering price.

Prior to this offering, there has been no public market for shares of our common stock. Although we intend to apply to have our common stock listed on the Nasdaq Global Market, an active public market for our shares may not develop or be sustained after this offering. We and the representatives of the underwriters will determine the initial public offering price of our common stock through negotiation. This price will not necessarily reflect the price at which investors in the market will be willing to buy and sell our shares following this offering. In addition, an active trading market may not develop following the consummation of this offering or, if it is developed, may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. An inactive market may also impair our ability to raise capital by selling shares and may impair our ability to acquire other product candidates, businesses or technologies using our shares as consideration.

We are an "emerging growth company" and a "smaller reporting company" and, as a result of the reduced disclosure and governance requirements applicable to emerging growth companies and smaller reporting companies, our common stock may be less attractive to investors.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and we intend to take advantage of some of the exemptions from reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- not being required to hold a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the closing of our initial public offering, (b) in which we have total annual gross revenue of at least $1.07 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Under Section 107(b) of the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. Even after we no longer qualify as an emerging growth company, we may, under certain circumstances, still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements, including reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements.

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The initial public offering price of our common stock is substantially higher than the pro forma net tangible book value per share of our common stock before giving effect to this offering. Accordingly, if you purchase our common stock in this offering, you will incur immediate substantial dilution of approximately $ per share, based on an assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover of this prospectus, and our pro forma as adjusted net tangible book value as of December 31, 2020. In addition, following this offering, purchasers in this offering will have contributed approximately % of the total gross consideration paid by stockholders to us to purchase shares of our common stock through December 31, 2020, but will own only approximately % of the shares of common stock outstanding immediately after this offering. Furthermore, if the underwriters exercise their option to purchase additional shares or outstanding options are exercised, you could experience further dilution. For a further description of the dilution that you will experience immediately after this offering, see the section titled "Dilution."

If we sell shares of our common stock in future financings, stockholders may experience immediate dilution and, as a result, our stock price may decline.

Because we expect our expenses to increase significantly in the foreseeable future and because, based on our current business plans, we believe that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will be insufficient for us to fund our operating and

capital expenditures beyond the date that is months after the date of this offering, we may from time to time issue additional shares of common stock. These issuances may be at a discount from the current trading price of our common stock. As a result, our stockholders would experience immediate dilution upon the purchase of any shares of our common stock sold at such discount. In addition, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt securities, preferred stock or common stock. If we issue common stock or securities convertible into common stock, our common stockholders will experience additional dilution and, as a result, our stock price may decline.

Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Our executive officers, directors and current beneficial owners of 5% or more of our common stock and their respective affiliates are expected to beneficially own % of our outstanding common stock following the consummation of this offering. As a result, these persons, acting together, would be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors, any merger, consolidation, sale of all or substantially all of our assets, or other significant corporate transactions.

Some of these persons or entities may have interests different than yours. For example, because many of these stockholders purchased their shares at prices substantially below the current market price of our common stock and have held their shares for a longer period, they may be more interested in selling our company to an acquirer than other investors, or they may want us to pursue strategies that deviate from the interests of other stockholders.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based upon the number of shares outstanding as of December 31, 2020, including 51,452,501 shares of our common stock issuable upon conversion of our preferred stock, shares of common stock upon the assumed net exercise of warrants (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), shares of our common stock issuable upon the conversion of the SAFEs upon the closing of in the aggregate amount of $8.94 million (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), we will have outstanding a total of shares of common stock, assuming no exercise of the underwriters' option to purchase additional shares. Of these shares, substantially all of the shares of our common stock sold in this offering (excluding any shares sold to our director or officers in the directed share program), plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable, without restriction, in the public market immediately following this offering.

The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. Based upon the number of shares outstanding as of December 31, 2020, plus 51,452,501 shares of our common stock issuable upon conversion of our preferred stock, shares of common stock upon the assumed net exercise of warrants (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus); shares of our common stock issuable upon the conversion of the SAFEs upon the closing of in the aggregate amount of $8.94 million (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), after the lock-up agreements expire, up to approximately additional shares of common stock will be eligible for sale in the public market, approximately of which shares are held by directors, executive officers and other affiliates and will be subject to Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. National Securities Corporation may, however, in their sole discretion, permit our officers, directors and other stockholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

In addition, promptly following the closing of this offering, we intend to file one or more registration statements on Form S-8 under the Securities Act of 1933, as amended, or the Securities Act, registering the

issuance of shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and the restrictions of Rule 144 in the case of our affiliates.

After this offering, the holders of approximately shares of our common stock, or approximately % of our total outstanding shares of common stock, will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the lock-up agreements described above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares purchased by affiliates. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

We have broad discretion to determine how to use the funds raised in this offering, and may use them in ways that may not enhance our operating results or the price of our common stock.

Our management will have broad discretion over the use of proceeds from this offering, and we could spend the proceeds from this offering in ways our stockholders may not agree with or that do not yield a favorable return, if at all. We currently expect to use the net proceeds from this offering to fund research and development of our product candidates and development programs, including our planned Phase 2 trials of CT1812 for the treatment of mild-to-moderate AD, our planned Phase 2 proof of concept trials of CT1812 for the dry AMD, our IND-enabling studies of compounds in our library for the treatment of neurodegenerative indications such as PD, and the remainder for our other research and development activities, as well as for working capital and other general corporate purposes, including costs and expenses associated with being a public company. However, our use of these proceeds may differ substantially from our current plans. If we do not invest or apply the proceeds of this offering in ways that improve our operating results, we may fail to achieve expected financial results, which could cause our stock price to decline.

Our ability to use net operating loss carryforwards and other tax attributes may be limited.

As of December 31, 2020, we had federal net operating loss, or NOL, carryforwards of approximately $37.9 million and state NOL carryforwards of approximately $37.9 million available to offset future taxable income. If not utilized, the federal and state NOL carryforwards will begin to expire in various years beginning in 2027. As of December 31, 2020, we also had $3.7 million of federal research and development tax credit carryforwards available to reduce future income taxes. The federal research and development tax credits will begin to expire in 2027, if not utilized. The state research and development tax credits have no expiration date. Utilization of NOL carryforwards and credits may be subject to an annual limitation due to the “ownership change” provisions under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended. An “ownership change” is generally defined as a cumulative change in the ownership interest of significant stockholders over a rolling three-year period in excess of 50 percentage points. Similar provisions under state tax law may also apply. If finalized, Treasury Regulations currently proposed under Section 382 of the Code may further limit our ability to utilize our pre-change NOLs or credits if we undergo a future ownership change. We may experience an ownership change in the future as a result of subsequent shifts in our stock ownership, some of which changes are outside our control. Such ownership changes could result in the expiration of our NOL carryforwards and other tax attributes before they can be utilized and, if we are profitable, our future cash flows could be adversely affected due to our increased tax liability.

Additionally, under the Tax Cut and Jobs Act, the Tax Act, as modified by the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act”, NOL carryforwards arising in tax years beginning after December 31, 2020 are limited to 80% of taxable income. Under the Tax Act, federal NOL carryforwards arising in tax years beginning after December 31, 2017 may be carried forward indefinitely. Under the CARES Act, federal NOL carryforwards arising in tax years beginning after December 31, 2017 and before January 1, 2021 may be carried back to each of the five tax years preceding the tax year of such loss. The changes in the carryforward and carryback periods as well as the limitation on use of NOL carryforwards may significantly impact our ability to use NOL carryforwards, particularly for tax years beginning after December 31, 2020, as well as the timing of any such use, and could adversely affect our results of operations.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws, both of which will become effective immediately prior to the completion of this offering, will contain provisions that could delay or prevent changes in control or changes in our management without the consent of our board of directors. These provisions will include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy, however occurring, including by an expansion of the board of directors, which prevents stockholders from being able to fill vacancies on our board of directors;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including voting or other rights or preferences, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the ability of our board of directors to alter our amended and restated bylaws without obtaining stockholder approval;
- the required approval of at least 66 2/3% of the shares entitled to vote at an election of directors to adopt, amend or repeal our amended and restated bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction. For a description of our capital stock, see the section titled "Description of Capital Stock."

Our third amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for certain disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our third amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware (or, in the event that the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our third amended and restated certificate of incorporation or our amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine; provided that, the exclusive forum provision will not apply to suits brought

to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction; and provided further that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our third amended and restated certificate of incorporation and amended and restated bylaws will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees or agents and arising under the Securities Act. Nothing in our third amended and restated certificate of incorporation and amended and restated bylaws precludes stockholders that assert claims under the Exchange Act from bringing such claims in state or federal court, subject to applicable law.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder. Furthermore, the enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions, and there can be no assurance that such provisions will be enforced by a court in those other jurisdictions. If a court were to find the choice of forum provision that will be contained in our amended and restated certificate of incorporation and amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

We do not currently intend to pay dividends on our common stock, and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, you are not likely to receive any dividends on your common stock for the foreseeable future. Since we do not intend to pay dividends, your ability to receive a return on your investment will depend on any future appreciation in the market value of our common stock. There is no guarantee that our common stock will appreciate or even maintain the price at which our holders have purchased it.

Participation in this offering by our existing stockholders and/or their affiliated entities may reduce the public float for our common stock.

To the extent certain of our existing stockholders and their affiliated entities participate in this offering, such purchases would reduce the non-affiliate public float of our shares, meaning the number of shares of our common stock that are not held by officers, directors and controlling stockholders. A reduction in the public float could reduce the number of shares that are available to be traded at any given time, thereby adversely impacting the liquidity of our common stock and depressing the price at which you may be able to sell shares of common stock purchased in this offering.

General Risk Factors

Unfavorable global economic or political conditions could adversely affect our business, financial condition or results of operations.

Our business is susceptible to general conditions in the global economy and in the global financial markets. A global financial crisis or a global or regional political disruption could cause extreme volatility in the capital and credit markets. A severe or prolonged economic downturn, including a recession or depression resulting from the current COVID-19 pandemic, or political disruption could result in a variety of risks to our business, including weakened demand for our product candidates or any future product candidates, if approved, and our ability to raise additional capital when needed on acceptable terms, if at

all. A weak or declining economy or political disruption could also strain our manufacturers or suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our potential products. Any of the foregoing could materially and adversely affect our business, financial condition, results of operations and prospects, and we cannot anticipate all of the ways in which the political or economic climate and financial market conditions could adversely impact our business.

If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. If no or few securities or industry analysts commence coverage of us, the trading price for our stock would be negatively impacted. In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our clinical trials and operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We may be subject to securities litigation, which is expensive and could divert our management's attention.

In the past, companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Regardless of the merits or the ultimate results of such litigation, securities litigation brought against us could result in substantial costs and divert our management's attention from other business concerns.

We will incur significant costs as a result of operating as a public company, and our management will devote substantial time to new compliance initiatives. We may fail to comply with the rules that apply to public companies, including Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, which could result in sanctions or other penalties that could materially and adversely affect our business, financial condition, results of operations and prospects.

We will incur significant legal, accounting and other expenses as a public company, including costs resulting from public company reporting obligations under the Exchange Act and regulations regarding corporate governance practices. The listing requirements of the Nasdaq Global Market and the rules of the Securities and Exchange Commission, or SEC, require that we satisfy certain corporate governance requirements relating to director independence, filing annual and interim reports, stockholder meetings, approvals and voting, soliciting proxies, conflicts of interest and a code of conduct. Our management and other personnel will need to devote a substantial amount of time to ensure that we comply with all of these requirements. Moreover, the reporting requirements, rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. Any changes we make to comply with these obligations may not be sufficient to allow us to satisfy our obligations as a public company on a timely basis, or at all. These reporting requirements, rules and regulations, coupled with the increase in potential litigation exposure associated with being a public company, could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors or board committees or to serve as executive officers, or to obtain certain types of insurance, including directors' and officers' insurance, on acceptable terms.

After this offering, we will be subject to Section 404 and the related rules of the SEC, which generally require our management and independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting. Beginning with the second annual report that we will be required to file with the SEC, Section 404 requires an annual management assessment of the effectiveness of our internal control over financial reporting. However, for so long as we remain an emerging growth company as defined in the JOBS Act, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404. Once we are no longer an emerging growth company or, if prior to such date, we opt to no longer

take advantage of the applicable exemption, we will be required to include an opinion from our independent registered public accounting firm on the effectiveness of our internal control over financial reporting.

During the course of our review and testing, we may identify deficiencies and be unable to remediate them before we must provide the required reports. Furthermore, if we identify any material weaknesses, we may not detect errors on a timely basis and our financial statements may be materially misstated. We or our independent registered public accounting firm may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting, which could materially and adversely affect our business, financial condition, results of operations and prospects, cause investors to lose confidence in our reported financial information and cause the trading price of our stock to fall. In addition, as a public company we will be required to file accurate and timely quarterly and annual reports with the SEC under the Exchange Act. In order to report our results of operations and financial statements on an accurate and timely basis, we will depend in part on CROs and other third parties to provide timely and accurate notice of their costs to us. Any failure to report our financial results on an accurate and timely basis could result in sanctions, lawsuits, delisting of our shares from the Nasdaq Global Market or other adverse consequences that would materially and adversely affect our business, financial condition, results of operations and prospects.

We will incur increased costs and demands upon management as a result of being a public company.

As a public company listed in the United States, we will incur significant additional legal, accounting and other costs. These additional costs could negatively affect our financial results. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and The Nasdaq Stock Market LLC, may increase legal and financial compliance costs and make some activities more time-consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Failure to comply with these rules might also make it more difficult for us to obtain some types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements concerning our business, operations and financial performance, as well as our plans, objectives and expectations for our business operations and financial performance and condition. All statements other than statements of historical or current facts included in this prospectus are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “design,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “positioned,” “potential,” “predict,” “seek,” “should,” “target,” “will,” “would” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. In addition, statements that “we believe” or similar statements reflect our beliefs and opinions on the relevant subject. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those expressed in, or implied by these, forward-looking statements and therefore, you should not unduly rely on such statements, including, but not limited to:

- our ability to raise additional capital to fund our operations and continue the development of our current and future product candidates;
- the clinical nature of our business and our ability to successfully advance our current and future product candidates through our ongoing and future clinical trials, preclinical studies and development activities;
- our ability to generate revenue from future product sales and our ability to achieve and maintain profitability;
- the accuracy of our projections and estimates regarding our expenses, capital requirements, cash utilization, and need for additional financing;
- the expected uses of the net proceeds from this offering;
- the extent to which the COVID-19 pandemic and measures taken to contain its spread ultimately impact our business, including our ongoing and future clinical trials, preclinical studies and development activities;
- our dependence on the success of CT1812, our lead product candidate;
- the novelty of our approach to targeting the S2R complex to treat age-related degenerative diseases and disorders, and the challenges we will face due to the novel nature of such approach;
- the success of competing therapies that are or become available;
- the initiation, progress, success, cost, and timing of our ongoing and future clinical trials, preclinical studies and development activities;
- our ability to obtain and maintain regulatory clearance of CT1812 for approved IND applications and any future IND applications for any of our other product candidates;
- the timing, scope and likelihood of regulatory filings and approvals, including final regulatory approval of our product candidates;
- the performance of third parties in connection with the development of our product candidates, including third parties conducting our future clinical trials as well as third-party suppliers and manufacturers;
- our ability to attract and retain strategic collaborators with development, regulatory, and commercialization expertise;
- our ability to successfully commercialize our product candidates and develop sales and marketing capabilities, if our product candidates are approved;
- the size and growth of the potential markets for our product candidates and our ability to serve those markets;
- regulatory developments and approval pathways in the United States and foreign countries for our product candidates;

- the potential scope and value of our intellectual property and proprietary rights;
- our ability, and the ability of any future licensors, to obtain, maintain, defend, and enforce intellectual property and proprietary rights protecting our product candidates, and our ability to develop and commercialize our product candidates without infringing, misappropriating, or otherwise violating the intellectual property or proprietary rights of third parties;
- our ability to recruit and retain key members of management and other clinical and scientific personnel;
- developments relating to our competitors and our industry; and
- other risks and uncertainties, including those described under the caption “Risk Factors” in this prospectus.

We have based these forward-looking statements largely on our current expectations, estimates, forecasts and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. You should refer to the section titled “Risk Factors” and elsewhere in this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements.

USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately $ million (or $ million if the underwriters exercise their option to purchase additional shares in full), assuming an initial offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting underwriting discounts and commissions and offering expenses payable by us.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share would increase or decrease, as applicable, the net proceeds to us from this offering by $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase or decrease of 1.0 million shares in the number of shares offered by us would increase or decrease, as applicable, the net proceeds to us from this offering by $ million, assuming that the assumed initial public offering price remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We do not expect that a change in the initial public offering price or the number of shares by these amounts would have a material effect on our uses of the proceeds from this offering, although it may accelerate the time when we need to seek additional capital.

The principal purposes of this offering are to increase our capitalization and financial flexibility, establish a public market for our common stock and to facilitate future access to the public equity markets by us, our employees and our stockholders, obtain additional capital to support our operations and increase our visibility in the marketplace. We currently intend to use the net proceeds from this offering together with our existing cash and cash equivalents as follows:

- approximately $ million to fund our planned Phase 2 trials of CT1812 for the treatment of mild-to-moderate AD;
- approximately $ million to fund our planned Phase 2 proof of concept trials of CT1812 for the dry AMD;
- approximately $ million to fund our IND-enabling studies of compounds in our library for the treatment of neurodegenerative indications such as PD; and
- the remainder for our other research and development activities, as well as for working capital and other general corporate purposes.

The expected use of the net proceeds from this offering represents our intentions based on our current plans and business conditions, which could change in the future as our plans and business conditions evolve. Further, due to the uncertainties inherent in the small molecule development process, it is difficult to estimate with certainty the exact amounts of the net proceeds from this offering that may be used for the above purposes. We may also use a portion of our net proceeds to acquire or invest in complementary products, technologies, or businesses. However, we currently have no agreements or commitments to do so. As a result, our management will have broad discretion over the use of the net proceeds from this offering, and our investors will be relying on the judgment of our management regarding the application of the net proceeds of this offering. The amounts and timing of our expenditures will depend upon numerous factors including the results of our research and development efforts, the timing, number, scope and success of our nonclinical studies and clinical trials, and the timing and success of any regulatory submissions.

Based on our current business plans, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents and the income from non-dilutive grants, will be sufficient for us to fund our operating expenses and capital expenditures requirements through at least . In particular, we expect that the net proceeds from this offering will fund us through receipt of topline data readouts for our planned Phase 2 trials of CT1812 for the treatment of mild-to-moderate AD, Phase 2 proof of concept trials or CT1812 for dry AMD as well as IND-enabling studies and IND applications for compounds in our library for the treatment of neurodegenerative indications such as PD. The expected net proceeds from this offering will not be sufficient for us to fund any of our product candidates through regulatory approval and commercialization, and we will need to raise substantial additional capital to complete the development and commercialization of our product candidates. We have based these estimates on assumptions that may

prove to be incorrect or require adjustment as a result of business decisions, and we could utilize our available capital resources sooner than we currently expect. For additional information regarding our potential capital requirements, including factors that could cause actual costs to vary from the estimates set forth above, see the section of this prospectus titled “Risk Factors.”

As of the date of this prospectus, we intend to invest the net proceeds in short-term interest-bearing investment-grade securities, certificates of deposit or government securities. The goal with respect to the investment of these net proceeds is capital preservation and liquidity so that such funds are readily available to fund our operations.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock, and we do not currently intend to pay any cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. Any future determination to pay dividends will be made at the discretion of our board of directors subject to applicable laws and will depend upon, among other factors, our results of operations, financial condition, contractual restrictions and capital requirements. Our future ability to pay cash dividends on our common stock may be limited by any future debt instruments or preferred securities.

CAPITALIZATION

The following table sets forth our cash, cash equivalents, short term investments and our capitalization as of December 31, 2020:

- on an actual basis;
- on a pro forma basis to give effect to (i) the filing and effectiveness of our third amended and restated certificate of incorporation immediately prior to the closing of this offering, (ii) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 51,452,501 shares of our common stock upon the closing of this offering, (iii) the issuance of shares of our common stock upon the assumed net exercise of warrants that otherwise expire upon or prior to the closing of this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), and (iv) the issuance of shares of our common stock issuable upon conversion of the SAFEs upon the closing of this offering in the aggregate amount of $8.94 million (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus); and
- on a pro forma as adjusted basis to give effect to (i) the pro forma adjustments described above and (ii) the issuance and sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma as adjusted information set forth in the table below is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table together with the sections of this prospectus captioned “Selected Consolidated Financial Data,” “Use of Proceeds,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Description of Capital Stock” and our financial statements and related notes included elsewhere in this prospectus.

	As of December 31, 2020		
	Actual	Pro Forma[1]	Pro Forma as Adjusted[2]
	(in thousands except share and per share data)		
Cash and cash equivalents	$ 5,189	$	$
Convertible notes	12,409		
Accrued interest	1,622		
Derivative liability	2,209		
SAFE notes	—		
Series A convertible preferred stock, par value $0.001 per share, 3,067,519 shares authorized at December 31, 2019 and 2020, 2,819,027 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $4,766 as of December 31, 2020	4,616		
Series A-1 convertible preferred stock, par value $0.001 per share, 3,970,776 shares authorized at December 31, 2019 and 2020, 3,730,366 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $5,572 as of December 31, 2020	5,398		
Series A-2 convertible preferred stock, par value $0.001 per share, 3,565,063 shares authorized at December 31, 2019 and 2020, 3,565,063 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $5,997 as of December 31, 2020	5,809		
Series B convertible preferred stock, par value $0.001 per share, 30,450,000 shares authorized at December 31, 2019 and 2020, 30,409,890 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $40,826 as of December 31, 2020	39,547		
Series B-1 convertible preferred stock, par value $0.001 per share, 0 shares authorized at December 31, 2019 and 2020, 0 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $0 as of December 31, 2020	—		
Stockholders' equity (deficit):			
Common stock, $0.001 par value, 58,000,000 shares authorized at December 31, 2019 and 2020; 1,519,431 and 1,742,756 shares issued and outstanding at December 31, 2019 and 2020, respectively	2		
Additional paid-in capital	221		
Accumulated deficit	(68,220)		
Accumulated other comprehensive loss	(187)		
Total stockholders' deficit	(68,184)		
Total capitalization	$ 3,426		

(1) The pro forma as adjusted information set forth above is illustrative only, and our cash and cash equivalents and capitalization following the completion of this offering will depend on the actual initial public offering price and other terms of the offering determined at the pricing of this offering. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total

stockholders' equity and total capitalization by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) the pro forma as adjusted amounts of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(2) If the underwriters exercise in full their option to purchase additional shares of our common stock, (i) an additional shares of common stock would be issued and we would receive approximately $ in additional net proceeds, based on the assumed initial offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us; and (ii) cash and cash equivalents, additional paid-in-capital, total stockholders' equity and total capitalization would each increase by $.

The number of shares of our common stock to be outstanding after this offering reflected in the table above is based on shares of our common stock outstanding as of December 31, 2020, which gives effect to the pro forma transactions described above and excludes:

- 14,839,637 shares of our common stock issuable upon the exercise of stock options as of December 31, 2020, at a weighted-average exercise price of $0.30 per share;
- 332,625 shares of our common stock reserved for issuance pursuant to future awards as of December 31, 2020 under our 2017 Plan, which will become available under our 2021 Plan, after the closing of this offering;
- shares of our common stock reserved for future issuance under the 2021 Plan which will become effective upon the effectiveness of the Registration Statement of which this prospectus forms a part, as well any future increases in the number of shares of our common stock reserved for future issuance pursuant to the 2021 Plan; and
- shares of our common stock reserved for future issuance under our ESPP, which will become effective upon the effectiveness of the Registration Statement of which this prospectus forms a part, as well as any future increases in the number of shares of common stock reserved for issuance under the ESPP.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

Our historical net tangible book deficit as of December 31, 2020 was $(68.2) million, or $(39.12) per share of our common stock. Our historical net tangible book deficit is the amount of our total tangible assets less our total liabilities and preferred stock, which is not included within stockholders' deficit. Historical net tangible book deficit per share represents historical net tangible book deficit divided by the number of shares of our common stock outstanding as of December 31, 2020.

Our pro forma net tangible book value as of December 31, 2020, before giving effect to this offering, was $ million, or $ per share. Pro forma net tangible book value, before the issuance and sale of shares in this offering, gives effect to:

- the automatic conversion of all outstanding shares of convertible preferred stock into an aggregate of 51,452,501 shares of our common stock upon the closing of this offering;
- the issuance of shares of common stock upon the assumed net exercise of warrants that otherwise expire upon or prior to the closing of this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus); and
- the issuance of shares of our common stock issuable upon the conversion of the SAFEs upon the closing of this offering in the aggregate amount of $8.94 million (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus).

Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of December 31, 2020 after giving effect to the pro forma adjustments described above.

Net tangible book value dilution per share to new investors represents the difference between the amount per share paid by purchasers of common stock in this offering and the pro forma as adjusted net tangible book value per share of our common stock immediately following the closing of this offering. After giving effect to the pro forma transactions described above and the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2020 would have been $ million, or $ per share. This represents an immediate increase in pro forma as adjusted net tangible book value of $ per share to our existing stockholders and an immediate dilution of $ per share to new investors participating in this offering. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$
Historical net tangible book value per share as of December 31, 2020	$(39.12)	
Increase per share attributable to the pro forma adjustments described above		
Pro forma net tangible book value per share as of December 31, 2020		
Increase in pro forma net tangible book value per share attributed to new investors purchasing shares of common stock in this offering		
Pro forma as adjusted net tangible book value per share immediately after this offering		
Dilution per share to new investors purchasing shares of common stock in this offering		$

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, our pro forma as adjusted net tangible book value per share after this offering by $ per share

and the dilution per share to new investors participating in this offering by $ per share, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, an increase of 1.0 million in the number of shares of common stock offered by us would increase the pro forma as adjusted net tangible book value after this offering by $ per share and decrease the dilution per share to new investors participating in this offering by $ per share, and a decrease of 1.0 million shares of common stock offered by us would decrease the pro forma as adjusted net tangible book value by $ per share, and increase the dilution per share to new investors in this offering by $ per share, assuming that the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise in full their option to purchase additional shares of common stock from us, the pro forma as adjusted net tangible book value per share after giving effect to this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, would be $ per share, representing an immediate increase to existing stockholders of $ per share, and dilution to new investors participating in this offering of $ per share.

The following table summarizes, as of December 31, 2020, on the pro forma as adjusted basis described above, the total number of shares of common stock purchased from us on an as converted to common stock basis, the total consideration paid or to be paid, and the weighted-average price per share paid or to be paid by existing stockholders and by new investors in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. As the table shows, new investors purchasing common stock in this offering will pay an average price per share substantially higher than our existing stockholders paid.

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE PER SHARE
Number	NUMBER	PERCENT	AMOUNT	PERCENT	
Existing stockholders					
Public stockholders					
Total		100.0%		100.0%	

The table above assumes no exercise of the underwriters' option to purchase additional shares in this offering. If the underwriters' option to purchase additional shares is exercised in full, the number of shares of our common stock held by existing stockholders would be reduced to approximately % of the total number of shares of our common stock outstanding after this offering, and the number of shares of common stock held by new investors purchasing shares of common stock in this offering would be increased to approximately % of the total number of shares of our common stock outstanding after this offering.

A $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the total consideration paid by new investors by $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. An increase or decrease of 1,000,000 shares in the number of shares offered by us would increase or decrease the total consideration paid by new investors by $ million, assuming that the assumed initial public offering price remains the same.

The number of shares of our common stock to be outstanding after this offering is based on shares of our common stock outstanding as of December 31, 2020, which gives effect to the pro forma transactions described above and excludes:

- 14,839,637 shares of our common stock issuable upon the exercise of stock options as of December 31, 2020, at a weighted-average exercise price of $0.30 per share;

- 332,625 shares of our common stock reserved for issuance pursuant to future awards as of December 31, 2020 under our 2017 Plan, which will become available under our 2021 Plan, after the closing of this offering;
- shares of our common stock reserved for future issuance under the 2021 Plan which will become effective upon the effectiveness of the Registration Statement of which this prospectus forms a part, as well any future increases in the number of shares of our common stock reserved for future issuance pursuant to the 2021 Plan; and
- shares of our common stock reserved for future issuance under our ESPP, which will become effective upon the effectiveness of the Registration Statement of which this prospectus forms a part, as well as any future increases in the number of shares of common stock reserved for issuance under the ESPP.

To the extent that any outstanding stock options or warrants are exercised, new stock options are issued, or we issue additional shares of common stock in the future at per share prices below the price per share to the public in this offering, there will be further dilution to new investors. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

SELECTED CONSOLIDATED FINANCIAL DATA

The following tables set forth a summary of our historical consolidated financial data as of, and for the periods ended on, the dates indicated. We have derived the consolidated statement of operations data for the years ended December 31, 2019 and 2020 and the consolidated balance sheet data as of December 31, 2019 and 2020 from our audited consolidated financial statements appearing elsewhere in this prospectus. This selected consolidated financial data should be read in conjunction with our financial statements and the related notes included elsewhere in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future.

	Year Ended December 31,	
(in thousands, except share and per share data)	**2019**	**2020**
Consolidated Statements of Operations Data:		
Operating Expenses:		
Research and development	$ 14,379	$ 12,887
General and administrative	3,452	4,520
Total operating expenses	17,831	17,407
Loss from operations	(17,831)	(17,407)
Other income (expense):		
Grant income	13,164	10,855
Change in the fair value of the derivative liability	(231)	18
Change in the fair value of the warrant liability	(7)	181
Other income, net	1,087	394
Loss on debt extinguishment	—	(129)
Interest expense, net	(1,024)	(1,751)
Total other income (expense), net	12,989	9,568
Net loss	(4,842)	(7,839)
Cumulative preferred stock dividends	(3,920)	(4,234)
Net loss attributable to common stockholders	$ (8,762)	$ (12,073)
Net loss per share attributable to common stockholders, basic and diluted	$ (5.77)	$ (7.35)
Weighted-average common shares outstanding, basic and diluted[(1)]	1,519,285	1,643,514
Pro forma loss per share attributable to common stockholders, basic and diluted[(2)]		
Pro forma weighted-average common shares outstanding, basic and diluted[(2)]		

(1) See Note 2 to our consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the basic and diluted net loss per share and the number of shares used in the computation of the per share amounts.

(2) The calculations for the pro forma net loss per share attributable to common stockholders, basic and diluted, and the pro forma weighted-average shares of common stock outstanding, basic and diluted, assume the conversion of all our outstanding shares of preferred stock into common stock, the assumed net exercise of warrants to purchase common stock that otherwise expire upon or prior to the closing of this offering and the conversion of the SAFEs into shares of our common stock, as if the conversion or exercise had occurred at the beginning of the period presented, or the issuance date, if later.

(in thousands)	As of December 31, 2019	2020
Consolidated Balance Sheet Data:		
Cash and cash equivalents	$ 2,890	$ 5,189
Working capital[(1)]	3,477	3,658
Total assets	7,459	7,119
Derivative liability	1,493	2,209
Warrant liability	181	—
Total liabilities	12,954	19,933
Convertible preferred stock	52,927	55,370
Accumulated deficit	(58,239)	(68,220)
Total stockholders' deficit	(58,422)	(68,184)

(1) We define working capital as total current assets less total current liabilities. See our audited consolidated financial statements included elsewhere in this prospectus and related notes for further details regarding our total current assets and total current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section entitled "Summary Financial Data" and our financial statements and related notes appearing elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the section entitled "Risk Factors," our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. You should carefully read the sections entitled "Risk Factors" and "Special Note Regarding Forward-Looking Statements" to gain an understanding of the important factors that could cause actual results to differ materially from our forward-looking statements.

Overview

We are a clinical-stage biopharmaceutical company engaged in the discovery and development of innovative, small molecule therapeutics targeting age-related degenerative diseases and disorders of the central nervous system, or CNS, and retina. Currently available therapies for these diseases are limited, with many diseases having no approved therapies or treatments. Our goal is to develop disease modifying treatments for patients with these degenerative disorders by initially leveraging our expertise in the σ-2 (sigma-2) receptor, or S2R, which is expressed by multiple cell types, including neuronal synapses, and acts as a key regulator of cellular damage commonly associated with certain age-related degenerative diseases of the CNS and retina. We believe that targeting the S2R complex represents a mechanism that is functionally distinct from other current approaches in clinical development for the treatment of degenerative diseases.

Since our inception in 2007, we have incurred significant operating losses and devoted substantially all of our time and resources to developing our lead product candidate, CT1812, building our intellectual property portfolio, raising capital and recruiting management and technical staff to support these operations. As of December 31, 2020, we had an accumulated deficit of $68.2 million and we incurred net losses of $4.8 million and $7.8 million for the years ended December 31, 2019 and 2020, respectively.

To date, we have funded our operations primarily with proceeds from grants awarded by the National Institute of Aging, or NIA, a division of the National Institutes of Health and proceeds from the sales of our convertible promissory notes, convertible preferred stock, Simple Agreements for Future Equity, or SAFEs, and stock option exercises. Since our inception, we have been awarded approximately $123 million in cumulative grants from the NIA and we have raised approximately $57.5 million in net proceeds from sales of our equity securities, convertible notes, SAFEs and stock option exercises. As of December 31, 2020, we had cash and cash equivalents of $5.2 million. In March 2021, we entered into SAFEs, with various investors, pursuant to which we received gross proceeds in an aggregate amount equal to $8.94 million. We expect to continue to incur significant and increasing expenses and net losses for the foreseeable future, as we advance our current and future product candidates through preclinical and clinical development, manufacture drug product and drug supply, seek regulatory approval for our current and future product candidates, maintain and expand our intellectual property portfolio, hire additional research and development and business personnel and operate as a public company. We will not generate revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for our product candidates. In addition, if we obtain regulatory approval for our product candidates and do not enter into a third-party commercialization partnership, we expect to incur significant expenses related to developing our commercialization capability to support product sales, marketing, manufacturing and distribution activities.

As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity offerings, debt financings or other sources, such as potential collaboration agreements and strategic alliances, licensing or similar arrangements with third parties. To the extent available, we expect to continue our pursuit of non-dilutive research contributions, or grants, including additional NIA grant funding. However, we may fail to receive additional NIA grants, or we may be unable to raise additional funds or enter into such other agreements or arrangements when needed on acceptable terms, or at all. Our failure to obtain additional NIA grants or

raise capital or enter into such agreements as and when needed could have a material adverse effect on our business, results of operations and financial condition.

Because of the numerous risks and uncertainties associated with product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to raise capital, maintain our research and development efforts, expand our business or continue our operations at planned levels, and as a result we may be forced to substantially reduce or terminate our operations.

We do not own or operate manufacturing facilities. We rely, and expect to continue to rely, on third parties for the manufacture of CT1812 for preclinical studies and clinical trials, as well as for commercial manufacture if CT1812 obtains marketing approval. We also rely, and expect to continue to rely, on third parties to manufacture, package, label, store, and distribute CT1812, if marketing approval is obtained. We believe that this strategy allows us to maintain a more efficient infrastructure by eliminating the need for us to invest in our own manufacturing facilities, equipment, and personnel while also enabling us to focus our expertise and resources on the development of CT1812.

Impact of COVID-19 on Our Business

Our business has been and could continue to be adversely affected by the effects of the recent and evolving COVID-19 pandemic, which was declared by the World Health Organization as a global pandemic. Our clinical trials have been, and may in the future be, affected by the COVID-19 pandemic. For example, the COVID-19 pandemic may impact patient enrollment in our ongoing and future clinical trials of CT1812. In particular, some sites have in the past or may in the future pause enrollment to focus on, and direct resources to, COVID-19, while at other sites, patients may choose not to enroll or continue participating in the clinical trial as a result of the pandemic. In addition, patient visits to medical providers in the United States have slowed as a result of the COVID-19 pandemic. Further, according to the Centers for Disease Control and Prevention, people who have serious chronic medical conditions are at higher risk of getting very sick from COVID-19. As a result, potential patients in our ongoing and future clinical trials of CT1812 may choose to not enroll, not participate in follow-up clinical visits or drop out of the trial as a precaution against contracting COVID-19. Further, some patients may not be able or willing to comply with clinical trial protocols if quarantines impede patient movement or interrupts healthcare services.

Our ongoing or planned clinical trials may also be impacted by interruptions or delays in the operations of the FDA and comparable foreign regulatory authorities. For example, we have made certain adjustments to the operation of our trials in an effort to ensure the monitoring and safety of patients and minimize risks to trial integrity during the pandemic in accordance with the guidance issued by the FDA, and may need to make further adjustments in the future. We have also initiated our clinical trial protocols to enable remote visits to mitigate any potential impacts as a result of the COVID-19 pandemic. Many of these adjustments are new and untested, may not be effective, may affect the integrity of data collected, and may have unforeseen effects on the progress and completion of our clinical trials and the findings from such clinical trials.

The spread of COVID-19 and actions taken to reduce its spread may also materially affect us economically. While the potential economic impact brought by, and the duration of, the COVID-19 pandemic may be difficult to assess or predict, there could be a significant disruption of global financial markets, reducing our ability to access capital, which could in the future negatively affect our liquidity and financial position. In addition, the trading prices for other pharmaceutical companies have been highly volatile as a result of the COVID-19 pandemic. As a result, we may face difficulties raising capital through sales of our common stock or such sales may be on unfavorable terms.

Recent Developments

SAFE Offering

In March 2021, we entered SAFEs with various investors, pursuant to which we received gross proceeds in an aggregate amount equal to $8.94 million. The amount invested by the investors in the SAFEs

is automatically convertible into shares of our common stock upon the closing of this offering at a conversion price equal to 80% of the initial public offering price of our common stock in this offering.

Notes Conversion

From March 2018 to July 2020, we issued convertible promissory notes in the aggregate principal amount of $13.0 million with an interest rate of 8.0% per annum, pursuant to note purchase agreements entered into with certain holders of our capital stock. On May 1, 2021, the holders of all of our outstanding convertible promissory notes agreed to an acceleration of the date of the automatic conversion from June 30, 2021 to May 1, 2021 for all convertible promissory notes. Accordingly, on May 1, 2021, all of our outstanding convertible promissory notes were converted into 10,928,155 shares of our Series B-1 convertible preferred stock, at a conversion price equal to $1.385 per share. As of the date of this prospectus, no notes are outstanding. Pursuant to the terms of our Series B-1 convertible preferred stock, all shares will automatically convert into shares of our common stock upon the closing of this offering on a one-for-one basis.

Components of Our Results of Operations

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of direct and indirect costs incurred for our research activities, including development of our drug discovery efforts and the development of our product candidates. Direct costs include laboratory materials and supplies, contracted research and manufacturing, clinical trial costs, consulting fees, and other expenses incurred to sustain our research and development program. Indirect costs include personnel-related expenses, consisting of employee salaries, related benefits, and stock-based compensation expense for employees engaged in research and development activities, facilities, and other expenses consisting of direct and allocated expenses for rent and depreciation, and lab consumables.

We expense research and development costs as incurred. Non-refundable advance payments for goods and services that will be used over time for research and development are capitalized and recognized as goods are delivered or as the related services are performed. In-licensing fees and other costs to acquire technologies used in research and development that have not yet received regulatory approval and that are not expected to have an alternative future use are expensed when incurred. We track direct costs by stage of program, clinical or preclinical. However, we do not track indirect costs on a program specific basis because these costs are deployed across multiple programs and, as such, are not separately classified.

We cannot reasonably determine the nature, timing, and estimated costs of the efforts that will be necessary to complete the development of, and obtain regulatory approval for, any of our product candidates. Product candidates in later stages of development generally have higher development costs than those in earlier stages. We expect that our research and development expenses will increase substantially for the foreseeable future as we continue to invest in research and development activities related to developing our product candidates, as our product candidates advance into later stages of development, as we begin to conduct larger clinical trials, as we seek regulatory approvals for any product candidates that successfully complete clinical trials, as we expand our product pipeline, as we maintain, expand, protect and enforce our intellectual property portfolio, and as we incur expenses associated with hiring additional personnel to support our research and development efforts.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel-related costs, including employee salaries, related benefits, and stock-based compensation expense for our employees in the executive, finance and accounting, and other administrative functions. General and administrative expenses also include third-party costs such as legal costs, insurance costs, accounting, auditing and tax related fees, consulting fees and facilities and other expenses not otherwise included as research and development expenses. We expense general and administrative costs as incurred.

We expect that our general and administrative expenses will increase substantially for the foreseeable future as we increase our headcount to support our continued research activities and development of our programs. Following the completion of this offering, we also anticipate that we will incur substantially increased expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission, and those of any national securities exchange on which our securities are traded, legal, auditing, additional insurance expenses, investor relations activities, and other administrative and professional services.

Other Income (Expense)

Grant Income

Grant income relates to the grants awarded from governmental bodies that are conditional cost reimbursement grants and are recognized as grant income as allowable costs are incurred. Our clinical trials have been funded by approximately $123 million in cumulative grants awarded by the NIA, which includes an approximately $81 million grant from the NIA to fund our upcoming Phase 2 (COG0203) study of CT1812 in patients with early-stage AD.

Change in fair value of derivative liability

Change in fair value of our derivative liability consists of changes in the fair value of certain conversion and redemption features associated with our convertible notes that are required to be bifurcated and accounted for as free-standing derivative financial instruments.

Change in fair value of warrant liability

Change in fair value of our warrant liability consists primarily of the change in fair value of our unexercised Series A-1 preferred stock warrants during the applicable periods. These warrants expired unexercised in October 2020 and were derecognized at that time.

Interest expense, net

Interest expense, net primarily consists of interest expense from our convertible notes, partially offset by interest income from interest-bearing cash equivalents.

Other income, net

Other income consists primarily of research and development tax credits earned in the applicable period, as well as foreign currency transaction gains or losses.

Results of Operations

Comparison of the Years Ended December 31, 2019 and 2020

The following table summarizes our results of operations (in thousands):

	Year Ended December 31,		
	2019	2020	Change
(in thousands)			
Consolidated Statements of Operations Data:			
Operating Expenses:			
Research and development	$ 14,379	$ 12,887	$(1,492)
General and administrative	3,452	4,520	1,068
Total operating expenses	17,831	17,407	(424)
Loss from operations	(17,831)	(17,407)	(424)
Other income (expense):			
Grant income	13,164	10,855	(2,309)
Change in the fair value of the derivative liability	(231)	18	249
Change in the fair value of the warrant liability	(7)	181	188
Other income, net	1,087	394	(693)
Loss on debt extinguishment	—	(129)	(129)
Interest expense, net	(1,024)	(1,751)	(727)
Total other income (expense), net	12,989	9,568	(3,421)
Net loss	$ (4,842)	$ (7,839)	$(2,997)

Research and Development Expenses

The following table summarizes our research and development expenses (in thousands):

	Year Ended December 31,		
	2019	2020	Change
Clinical programs	$ 8,398	$ 5,263	$(3,135)
Personnel	3,039	4,026	987
Manufacturing	1,426	1,798	372
Preclinical programs	1,400	1,693	293
Facilities and other costs	116	107	(9)
	$14,379	$12,887	$(1,492)

Research and development expenses were $14.4 million for the year ended December 31, 2019, compared to $12.9 million for the year ended December 31, 2020. The decrease of $1.5 million was primarily due to the following:

- a decrease of $3.1 million in clinical programs related to delays due to COVID 19, resulting in timing and scope changes to clinical studies;
- an increase of $1.0 million in personnel costs due to increased salaries and bonus expense and increased headcount associated with expanded research and development activities; and
- an increase of $0.4 million in manufacturing expense related to costs incurred with contract manufacturing organizations for production of pre-clinical and future clinical trial materials associated with our most advanced product candidates; and
- an increase of $0.3 million in preclinical programs due to increased sponsored research spend under grants.

General and Administrative Expenses

General and administrative expenses were $3.5 million for the year ended December 31, 2019, compared to $4.5 million for the year ended December 31, 2020. The increase of $1.0 million was primarily due to the following:

- an increase of $0.6 million in salaries and bonus expense associated with increased headcount to develop our financial and administrative staff;
- an increase of $0.2 million in professional fees driven by increased audit, tax, valuation and legal services; and
- an increase of $0.2 million associated equity-based compensation.

Other Income (Expense)

Grant Income

Grant income was $13.2 million for the year ended December 31, 2019, compared to $10.9 million for the year ended December 31, 2020. The change in grant income is correlated with the decrease in eligible reimbursable costs incurred during 2020 as compared to 2019.

Change in Fair Value of Derivative Liability

Changes in the fair value derivative liability resulted in a loss of $0.2 million for the year ended December 31, 2019, compared to $.02 million gain for the year ended December 31, 2020. Overall, the change in fair value of these derivative liabilities was not significant in either period.

Change in Fair Value of Warrant Liability

Changes in the fair value of warrant liabilities resulted in an expense of $0.01 million for the year ended December 31, 2019, compared to a gain of $0.2 million for the year ended December 31, 2020. The increase of $0.2 million was due primarily to the expiration of warrants to purchase Series A-1 preferred stock in October 2020.

Other Income (Expense), Net

Other income, net was $1.1 million for the year ended December 31, 2019, compared to $0.4 million for the year ended December 31, 2020. The decrease was primarily the result of a decrease in research and development incentive income of $0.5 million.

Loss on Debt Extinguishment

Loss on debt extinguishment was $0.1 million for the year ended December 31, 2020. The loss was the result of the execution of the second amendment to the convertible notes on February 27, 2020, which resulted in an extinguishment of the existing notes for accounting purposes. There was no such amendment in the prior year.

Interest Income (Expense), Net

Interest expense, net was $1.0 million for the year ended December 31, 2019 compared to interest expense, net of $1.8 million for the year ended December 31, 2020. The change of $0.8 million in interest expense, net was the result of a higher overall convertible note balance during 2020.

Liquidity and Capital Resources

Sources of Liquidity

To date, we have funded our operations primarily with proceeds from grants awarded by the NIA, and proceeds from the sales of our convertible promissory notes, convertible preferred stock, and SAFEs, and

stock option exercises. Since our inception, we have grant awards from the NIA in the aggregate amount of approximately $123 million and have raised approximately $57.5 million in net proceeds from sales of our equity securities, convertible notes and SAFEs, and stock option exercises. As of December 31, 2020, we had $5.2 million in cash and cash equivalents and have not generated positive cash flows from operations. In addition, in March 2021, we completed a SAFE offering with various investors, pursuant to which we received gross proceeds in an aggregate amount equal to $8.94 million. Based on our current business plans, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents and income from non-dilutive grants, will be sufficient for us to fund our operating expenses and capital expenditures requirements through at least . We have based these estimates on assumptions that may prove to be incorrect or require adjustment as a result of business decisions, and we could utilize our available capital resources sooner than we currently expect.

Future Funding Requirements

We expect to continue to incur significant and increasing expenses and net losses for the foreseeable future, as we advance our current and future product candidates through preclinical and clinical development, manufacture drug product and drug supply, seek regulatory approval for our current and future product candidates, maintain and expand our intellectual property portfolio, hire additional research and development and business personnel and operate as a public company. We anticipate that we will need to raise additional funding in the future to fund our operations, including the commercialization of any approved product candidates. We are subject to the risks typically related to the development of new products, and we may encounter unforeseen expenses, difficulties, complications, delays, and other unknown factors that may adversely affect our business. Even after this offering, we will need to raise substantial additional capital to fund the development of our product candidates.

Our future funding requirements will depend on many factors, including, but not limited to:

- the scope, progress, costs and results of our ongoing and planned clinical trials of CT1812, as well as the associated costs, including any unforeseen costs we may incur as a result of preclinical study or clinical trial delays due to the COVID-19 pandemic or other delays;
- the scope, progress, costs and results of preclinical development, laboratory testing and clinical trials for any future product candidates we may decide to pursue;
- the extent to which we develop, in-license or acquire other product candidates and technologies;
- the costs and timing of process development and manufacturing scale-up activities associated with our product candidates and other programs as we advance them through preclinical and clinical development;
- the availability, timing, and receipt of any future NIA grants;
- the number and development requirements of other product candidates that we may pursue;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- our ability to establish collaborations to commercialize CT1812 or any of our other product candidates outside the United States;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims; and
- the additional costs we may incur as a result of operating as a public company, including our efforts to enhance operational systems and hire additional personnel, including enhanced internal controls over financial reporting.

Until such time as we can generate significant revenue from product sales, we expect to finance our operations through a combination of public or private equity offerings, debt financings or other sources, such as potential collaboration agreements and strategic alliances, licensing or similar arrangements with third parties. To the extent available, we expect to continue our pursuit of non-dilutive research contributions, or grants, including additional NIA grant funding. However, we may fail to receive additional NIA grants, or we may be unable to raise additional funds or enter into such other agreements or arrangements when needed on acceptable terms, or at all. Our failure to obtain additional NIA grants or raise capital or enter into such agreements as and when needed could have a material adverse effect on our business, results of operations and financial condition.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise funds through collaborations, licenses and other similar arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock. Adequate funding may not be available when needed or on terms acceptable to us, or at all. Our ability to raise additional funds may be adversely impacted by potential worsening global economic conditions and the recent disruptions to, and volatility in, the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic and otherwise. If we fail to obtain necessary capital when needed on acceptable terms, or at all, it could force us to delay, limit, reduce or terminate our product development programs, commercialization efforts or other operations. Insufficient liquidity may also require us to relinquish rights to product candidates at an earlier stage of development or on less favorable terms than we would otherwise choose. We cannot assure you that we will ever be profitable or generate positive cash flows from operating activities.

Going Concern Assessment

Our consolidated financial statements included elsewhere in this prospectus have been prepared on a basis which assumes we are a going concern. As discussed in Note 1 to those financial statements, we have suffered recurring losses from operations, do not expect to generate revenues or operating cash flows for the foreseeable future, and have stated that substantial doubt exists about our ability to continue as a going concern. Our ability to continue as a going concern may be viewed unfavorably by current and prospective investors, as well as by analysts and creditors. This may in turn make it more difficult for us to raise the additional financing necessary to continue to operate our business and we may be forced to significantly alter our business strategy, substantially curtail our current operations, or cease operations altogether. Based on our current business plans, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents and the income from non-dilutive grants, will be sufficient for us to fund our operating expenses and capital expenditures requirements through at least . This estimate is based on certain significant assumptions, which are uncertain and may turn out to be incorrect.

Cash Flows

The following table summarizes our cash flows for the periods indicated (in thousands):

	Year Ended December 31,	
	2019	2020
Cash flows used in operating activities	$(3,098)	$(3,433)
Cash flows used in investing activities	(144)	(10)
Cash flows provided by financing activities	2,794	5,765
Effect of exchange rate changes on cash and cash equivalents	(60)	(23)
Net increase (decrease) in cash and cash equivalents	$ (508)	$ 2,299

Operating Activities

Net cash used in operating activities for the year ended December 31, 2019 was $3.1 million, which consisted primarily of our net loss of $4.8 million partially offset by net non-cash charges of $1.1 million and a net change of $0.6 million in our operating assets and liabilities. The non-cash charges primarily consisted of depreciation and amortization of $0.1 million, amortization of debt discounts of $0.5 million, change in derivative liabilities of $0.2 million, and equity-based compensation of $0.4 million. The net change in our operating assets and liabilities was primarily due to a net increase in other receivables of $1.1 million, an increase in accounts payable of $0.9 million, an increase in accrued expenses of $0.9 million, and a decrease in other current liabilities of $0.1 million.

Net cash used in operating activities for the year ended December 31, 2020 was $3.4 million, which consisted primarily of our net loss of $7.8 million partially offset by net non-cash charges of $1.3 million and a net decrease of $3.1 million in our operating assets. The non-cash charges primarily consisted of depreciation and amortization of $0.1 million, amortization of debt issuances costs of $0.1 million, amortization of debt discounts of $0.8 million, change in warrant liabilities of $0.2 million, loss on debt extinguishment of $0.1 million, and equity-based compensation of $0.5 million. The net decrease in our net operating assets was primarily due to a net decrease in other receivables of $0.9 million, a decrease in accounts payable of $0.4 million, an increase in accrued expenses of $0.6 million, a decrease in grant receivables of $2.1 million, and an decrease in other current liabilities of $0.3 million.

Investing Activities

During the years ended December 31, 2019 and 2020, we used $0.1 million and $0.01 million of cash, respectively, for investing activities related to purchases of property and equipment.

Financing Activities

Net cash provided by financing activities was $2.8 million and $5.8 million for the years ended December 31, 2019 and 2020, respectively. The increase in cash provided by financing activities in 2020 relates primarily to a higher level of convertible notes issued during 2020 as compared to 2019 and the paycheck protection program loan. During the first quarter of 2021, we received forgiveness of the paycheck protection program loan in full.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements.

Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2020 (in thousands):

	Less than 1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years	Total
Operating lease obligations	$118	$177	$—	$—	$295
Total	$118	$177	$—	$—	$295

We have entered into an operating lease for office and laboratory facilities under agreements that run through June 30, 2023. The amounts reflected in the table above consist of the future minimum lease payments under the non-cancelable lease arrangement.

We enter into contracts in the normal course of business with contract research organizations and other vendors to assist in the performance of our research and development and other services and products for operating purposes. These contracts typically do not contain minimum purchase commitments and generally provide for termination on notice, and therefore are cancelable contracts and not included in the table of contractual obligations.

Critical Accounting Policies

We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Research and Development Costs, Accrued Research and Development Costs and Related Prepaid Expenses

Research and development costs are expensed as incurred. Research and development expenses consist principally of personnel costs, including salaries, stock-based compensation, and benefits for employees, third-party license fees and other operational costs related to our research and development activities, including allocated facility-related expenses and external costs of outside vendors, and other direct and indirect costs. Non-refundable advance payments for research and development costs are deferred and expensed as the related goods are delivered or services are performed. Costs for external development activities are recognized based on an evaluation of the progress to completion of specific tasks. Costs for certain research and development activities are recognized based on the pattern of performance of the individual arrangements, which may differ from the pattern of billings incurred, and are reflected in the consolidated financial statements as prepaid expenses or as accrued research and development expenses.

Equity-Based Compensation

We maintain an equity-based compensation plan as a long-term incentive for employees, non-employee directors and consultants. The plan allows for the issuance of incentive stock options, non-qualified stock options, restricted stock units, and other forms of equity awards.

We recognize equity-based compensation expense for stock options subject to time-based vesting on a straight-line basis over the requisite service period and account for forfeitures as they occur. To the extent any stock option grants are made subject to the achievement of a performance condition, management evaluates when the achievement of any such performance-based milestone is probable based on the relative satisfaction of the performance conditions as of the reporting date. Our stock-based compensation costs are based upon the grant date fair value of options estimated using the Black-Scholes option pricing model.

The Black-Scholes option pricing model utilizes inputs which are highly subjective assumptions and generally require significant judgment. These assumptions include:

- *Expected Term.* The expected term represents the period that the stock-based awards are expected to be outstanding. As we do not have sufficient historical experience for determining the expected term of the stock option awards granted, expected term has been calculated using the simplified method.
- *Risk-Free Interest Rate.* The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the date of grant for zero-coupon U.S. Treasury constant maturity notes with terms approximately equal to the stock-based awards' expected term.
- *Expected Volatility.* Because we have been privately held and do not have a trading history of common stock, the expected volatility was derived from the average historical stock volatilities of the common stock of several public companies within the industry that we consider to be comparable to our business over a period equivalent to the expected term of the stock-based awards.
- *Expected Dividend Yield.* The expected dividend yield is zero as we have not paid and do not anticipate paying any dividends in the foreseeable future.
- *Fair Value of Common Stock* — The fair value of the shares of common stock underlying the stock-based awards has historically been determined by the Board of Directors with input from management. Because there has been no public market for the common stock, the Board of Directors has determined the fair value of the common stock at the time of grant of the stock-based award by considering a number of objective and subjective factors, including having contemporaneous valuations of the common stock performed by a third-party valuation specialists.

See Note 13 to our audited financial statements for more information concerning certain of the specific assumptions we used in applying the Black-Scholes option pricing model to determine the estimated fair value of our stock options. Certain of such assumptions involve inherent uncertainties and the application of significant judgment.

As of December 31, 2020, the total unrecognized compensation expense related to unvested time-based vesting awards was $1.2 million, which is expected to be recognized over weighted-average remaining vesting period of approximately 2.2 years. As of December 31, 2020, total unrecognized compensation expense related to un-vested performance based awards was $0.3 million, which would be recognized commencing with the period in which the performance condition is deemed probable of achievement.

Based upon the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, the aggregate intrinsic value of options outstanding as of December 31, 2020 was $ million, of which $ million related to vested options and $ million related to unvested options.

Common Stock Valuations

Historically, for all periods prior to this offering, since there has been no public market of our common stock to date, the fair value of the shares of common stock underlying our share-based awards was estimated on each grant date by our board of directors. To determine the fair value of our common stock underlying option grants, our board of directors considered, among other things, input from management, valuations of our common stock prepared by unrelated third-party valuation firms in accordance with the guidance provided by the American Institute of Certified Public Accountants 2013 Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, and our board of directors' assessment of additional objective and subjective factors that it believed were relevant, and factors that may have changed from the date of the most recent valuation through the date of the grant. These factors include, but are not limited to:

- our results of operations and financial position, including our levels of available capital resources;
- our stage of development and material risks related to our business;
- progress of our research and development activities;
- our business conditions and projections;
- the valuation of publicly traded companies in the life sciences and biotechnology sectors, as well as recently completed mergers and acquisitions of peer companies;
- the lack of marketability of our common stock as a private company;
- the rights, preferences, and privileges of our convertible preferred stock relative to those of our common stock;
- the likelihood of achieving a liquidity event for our securityholders, such as an initial public offering or a sale of our company, given prevailing market conditions;
- the hiring of key personnel and the experience of management;
- trends and developments in our industry; and

In valuing our common stock as of December 31, 2019 we utilized a hybrid method of the option pricing model, or OPM, and the probability weighted expected return method, PWERM, for determining the fair value of our common stock based on our stage of development and other relevant factors. Under this method, the per share value calculated on the OPM and PWERM are weighted based on expected exit outcomes to arrive and a final estimated fair value per share of the common stock before a discount for marketability is applied. The calculation of the grant date fair values of share based payments awarded in 2020 utilized the December 31, 2019 common stock value, as there had been no significant changes in our stage of development or other relevant factors impacting the common stock value as of any of the grant dates.

Following the closing of this offering, our board of directors will determine the fair market value of our common stock based on its closing price as reported on the date of grant on the primary stock exchange on which our common stock is traded.

Convertible Instruments

We account for hybrid contracts with embedded conversion features in accordance with GAAP. ASC 815 — Derivatives and Hedging Activities, requires companies to bifurcate certain conversion options

and redemption features from their host instruments and account for them as free-standing derivative financial instruments should certain criteria be met. The features requiring bifurcation were initially recorded at fair value, with gains and losses arising from changes in fair value recognized as a component of other income (expense) in the consolidated statement of operations and comprehensive loss.

Recent Accounting Pronouncements

For a description of recent accounting pronouncements, see Note 2 of the notes to our audited financial statements for the year ended December 31, 2020 included elsewhere in this prospectus.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We are exposed to market risk related to changes in interest rates. We had cash and cash equivalents of $5.2 million as of December 31, 2020. Our exposure to interest rate risk is not significant and a hypothetical 1% change in interest rates during any of the periods presented would not have had a material impact on our financial statements included elsewhere in this prospectus.

Foreign Currency

Our functional currency is the U.S. dollar. As of the date of this prospectus, we are exposed to foreign currency rate risk related to various third-party service contracts denominated in foreign currencies. On July 14, 2015 we established an Australian subsidiary to facilitate for the purpose of conducting research and development efforts. Transaction gains and losses are included in other income (expense), net on our statements of operations and comprehensive loss and were not material for any of the periods presented. A hypothetical 10% change in exchange rates during any of the periods presented would not have had a material impact on our financial statements included elsewhere in this prospectus.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We believe that inflation has not had a material effect on our financial statements included elsewhere in this prospectus.

Emerging Growth Company Status

We are an emerging growth company, as defined in the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that we (1) are no longer an emerging growth company or (2) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

We will remain an emerging growth company until the earliest to occur of: (1) the last day of the fiscal year in which we have at least $1.07 billion in annual revenue; (2) the last day of the fiscal year in which we are deemed to be a “large accelerated filer,” as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year; (3) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (4) the last day of the fiscal year ending after the fifth anniversary of this offering.

BUSINESS

Overview

We are a clinical-stage biopharmaceutical company engaged in the discovery and development of innovative, small molecule therapeutics targeting age-related degenerative diseases and disorders of the central nervous system, or CNS, and retina. Currently available therapies for these diseases are limited, with many diseases having no approved therapies or treatments. Our goal is to develop disease modifying treatments for patients with these degenerative disorders by initially leveraging our expertise in the σ-2 (sigma-2) receptor, or S2R, which is expressed by multiple cell types, including neuronal synapses, and acts as a key regulator of cellular damage commonly associated with certain age-related degenerative diseases of the CNS and retina. We believe that targeting the S2R complex represents a mechanism that is functionally distinct from other current approaches in clinical development for the treatment of degenerative diseases.

Our lead product candidate, CT1812, is an orally delivered, small molecule antagonist designed to penetrate the blood-brain barrier and bind selectively to the S2R complex. We have initially focused on the development of CT1812 for the treatment of Alzheimer's disease, or AD, by targeting the accumulation of β-amyloid, or Aβ, oligomers, which has been linked to the disease. By displacing these Aβ oligomers from neuronal receptors in the S2R complex, we expect to demonstrate that CT1812 can slow the loss of synapses and cognitive decline observed in AD. CT1812 is the first S2R antagonist to reach clinical trials and is currently in Phase 2 development for the treatment of AD. The direct healthcare costs to care for patients with AD and other dementias in the United States is currently estimated to exceed $300 billion. Approximately 5.8 million people in the U.S. have been diagnosed with AD, and the World Health Organization estimates that AD affects as many as 35 million people globally. Among people with AD, 50.4% have mild disease, 30.3% have moderate disease and 19.3% have severe disease.

We are continuing to enroll patients in two ongoing Phase 2 clinical trials (SHINE and SEQUEL) with CT1812 in mild-to-moderate AD. Preliminary results from an interim analysis of the first 24 patients in Part A of our ongoing SHINE Phase 2 clinical trial demonstrated a statistically significant decline in the presence of Aβ and a positive trend on cognitive function as measured by the Alzheimer's Disease Assessment Scale-Cognitive Subscale, or ADAS-Cog, in patients receiving CT1812 compared to placebo with a favorable safety profile. We anticipate top-line data in 2023. Our ongoing SEQUEL Phase 2 clinical trial is also evaluating changes in brain function, as measured by electroencephalography, or EEG, in mild-to-moderate AD with top-line data expected in 2023. We have treated 164 subjects with CT1812 in our clinical trials to date including 76 patients with mild-to-moderate AD. CT1812 has continued to be generally safe and well tolerated and has been granted Fast Track designation by the U.S. Food and Drug Administration, or FDA, in this indication.

Our clinical trials have been funded by approximately $123 million in cumulative grants awarded by the National Institute of Aging, or NIA, a division of the National Institutes of Health, which includes a grant award of approximately $81 million from the NIA to fund our upcoming Phase 2 (COG0203) study of CT1812 in patients with early-stage AD. We intend to enroll 540 patients in our COG0203 clinical trial with mild cognitive impairment, or MCI, due to AD or mild AD who have elevated levels of Aβ as determined by positron emission tomography, or PET, imaging or as measured in cerebral spinal fluid, or CSF. Patients will be randomized to receive CT1812 or a placebo for 18 months. In addition to cognitive and functional measures, such as the Clinical Dementia Rating Scale, or CDR, Sum of Boxes, or SOB, and ADAS-Cog, we intend to use a variety of biomarkers to measure target and/or pathway engagement and assess changes in neurodegeneration and disease progression. We will conduct this clinical trial in collaboration with the Alzheimer's Clinical Trial Consortium, or ACTC, an NIA-funded clinical trials network designed to accelerate studies for therapeutics for AD and related dementias, and we expect to begin enrollment in the first half of 2022.

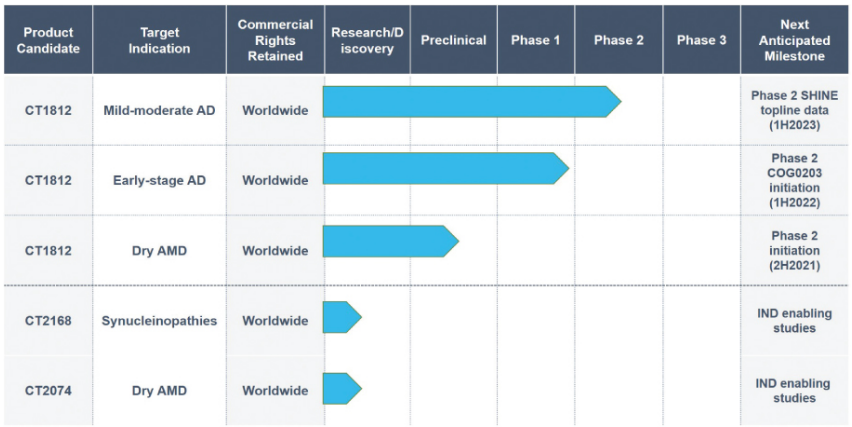
We intend to expand our CT1812 pipeline to include additional indications such as dry age-related macular degeneration, or dry AMD, a disease that results in the deterioration of the macula, causing distortion, loss of central vision and eventual blindness, for which there are currently no FDA approved treatments. The S2R complex is expressed in the retina in several cell types including the retinal pigment epithelial cells, or RPE, photoreceptors and retinal ganglion cells. We believe that an S2R antagonist, such as CT1812, may help to regulate the damage-response processes related to these cells that are impaired in dry

AMD. After the completion of our ongoing preclinical studies, we intend to advance directly into a Phase 2 clinical trial in the second half of 2021, leveraging our knowledge of CT1812's preclinical and clinical safety profile to date.

In addition, we intend to develop and advance other product candidates in the area of synucleinopathies. Synucleinopathies are a group of degenerative diseases characterized by the abnormal accumulation of the alpha-synuclein protein in neural cell bodies, including Parkinson's disease, or PD, and dementia with Lewy bodies, or DLB.

Our Pipeline

We are developing a pipeline of innovative, small molecule product candidates that are designed to target the S2R complex, a key regulator of the cellular damage response for diseases such as AD, dry AMD, geographic atrophy (an advanced form of dry AMD), or GA, and other conditions for which there is significant unmet medical need. Our current pipeline is summarized below:



Mild to Moderate AD

We are currently engaged in four ongoing clinical trials, including two Phase 2 clinical trials, designed to establish safety, dosing and efficacy for CT1812 as a treatment for mild to moderate AD. These trials include evaluations of CT1812's ability to engage with the S2R complex enabling the displacement of Aβ oligomers, its impact in synaptic density and its restoration of synaptic function. In the largest of these trials, our COG0201 SHINE study, we are assessing CT1812's ability to alter disease progression and cognition, with a target enrollment of 120 participants.

Early-stage AD

We plan to evaluate CT1812 in a 540-patient Phase 2 COG0203 clinical trial to investigate the potential for CT1812 to be effective at an earlier stage of AD. In addition to cognitive and functional measures, such as CDR, SOB and ADAS-Cog, we intend to use a variety of biomarkers to measure target and/or pathway engagement and assess changes in neurodegeneration and disease progression. We plan to initiate this clinical trial in the first half of 2022, which has been funded by a grant of approximately $81 million from the NIA.

Dry AMD

We are also evaluating the use of CT1812 to treat dry AMD. We believe that human genetic and internal proteomic pathway analyses obtained through our AD trials provides evidence of a relationship

between the S2R complex and dry AMD. We are currently engaged in preclinical development activities for this indication, including studies to elucidate the key mechanisms by which CT1812 and the S2R complex alter the biological processes that contribute to dry AMD. After the completion of our ongoing preclinical studies, we intend to initiate a Phase 2 clinical trial in the second quarter of 2021, leveraging our knowledge of CT1812's preclinical and clinical safety profile to date.

Discovery Initiatives

We are actively engaged in a number of early-stage discovery programs which are built upon our identification of five structurally distinct chemical series. We believe we have identified several structurally distinct compounds that each possess advantages for specific disease indications and patient populations. Several lead compounds in our discovery series of molecules, such as CT2168 and CT2074 are being assessed as potential IND candidates in various indications.

Our Strategy

Our objectives are to develop and advance our portfolio, beginning with our lead product candidate, CT1812, through clinical development for the treatment of age-related degenerative diseases and disorders of the CNS and retina and to leverage our understanding of the S2R complex and its regulation of pathways to pursue indications in other degenerative disorders. The key elements of our strategy include:

- ***Advance clinical development of our lead product candidate, CT1812, in mild-to-moderate AD and earlier stages of the disease***. Our lead product candidate, CT1812, has progressed through both safety and initial proof-of-concept clinical trials primarily through funding provided by the NIA. We plan to evaluate CT1812 in other AD populations as well and develop CT1812 for patients with earlier symptomatic stages of AD and Mild Cognitive Impairment, which is a slight and noticeable measurable decline in cognitive abilities due to AD. We plan to initiate this clinical trial for COG0203 in patients with mild dementia associated with early-stage AD in the first half of 2022, which has been funded by a grant of approximately $81 million awarded from the NIA.
- ***Pursue the development of CT1812 for dry AMD***. We plan to evaluate CT1812 as a potential therapy for dry AMD, a common eye disease that results in the deterioration of the macula, causing visual distortion, loss of central vision and eventual blindness. We believe that an S2R antagonist, such as CT1812, may help to regulate the damage-response processes that are impaired in dry AMD. After the completion of our ongoing preclinical studies we intend to initiate a Phase 2 clinical trial in the second half of 2021.
- ***Leverage our understanding of the S2R complex to develop product candidates for other CNS and degenerative diseases, including synucleinopathies***. We intend to develop and advance other product candidates to treat synucleinopathies, which include PD and DLB. In the second half of 2021, we anticipate initiating a study in patients with DLB. We have a series of leads from which we plan to identify a candidate for study in PD. Data published in February 2021 showed that the S2R complex may play an integral role in the pathology of PD and we believe these results merit further study.
- ***Expand our pipeline through internal development, in-licensing and acquisitions***. We intend to leverage our expertise in drug development and business development to evaluate additional product candidates as well as bring forward novel chemical matter using our library generation and Novel Improved Conditioned Extraction, or NICE, screening platform. To achieve this objective, we may supplement our internal development initiatives through selective in-licensing arrangements, as well as investments in strategic collaborations, and partnerships which complement our initiatives.
- ***Optimize the value of CT1812 and other product candidates in major markets.*** We currently retain all worldwide rights to CT1812 for all indications. We plan to develop and pursue approval of CT1812 and other future product candidates in major markets. Where appropriate, we may use strategic collaborations or partnerships to accelerate development and maximize the commercial potential of our programs. We and our key opinion leaders believe CT1812 also can be used in combination with other therapeutics targeting AD biologies and thus may have many partnering opportunities.
- ***Continue to pursue non-dilutive funding opportunities***. The majority of our clinical trials have been funded by approximately $123 million in cumulative grants awarded by the NIA, which includes an

approximately $81 million grant award from the NIA to fund our upcoming Phase 2 (COG0203) study of CT1812 in patients with early-stage AD. These grants are non-dilutive and allow us to collaborate with research institutions in pursuing the development of our product candidates for age-related degenerative diseases and disorders of the CNS and retina. We intend to continue our work with these research institutions and plan to seek additional non-dilutive funding for our clinical development when possible.

Our Team and Collaborators

We have assembled a management team with extensive experience with CNS and degenerative diseases, significant expertise in the S2R biology domain, as well as drug discovery, clinical development, general management and business development. Collectively, our management team has a track record of managing drug development programs that have received regulatory approval and been successfully commercialized. These include programs at Bristol-Myers Squibb Company, Pfizer Inc. and Roche Holding AG. In addition, our management team has built companies that have initiated innovative technologies and investigational new drug programs. We augment the strengths of our management team with an experienced board of directors and scientific and medical advisory boards. We believe our team, with its deep scientific and drug development background, positions us to become a leader in the development of therapies for age-related degenerative diseases and disorders.

Since our inception, we have collaborated and worked closely with key healthcare organizations and thought leading institutions in the field of degenerative diseases to develop and advance our therapeutic candidates. To date we have received approximately $123 million in grants and financial support from the NIA to support our clinical trials.

Our Approach to Treating Age-Related Degenerative Diseases of the CNS and Retina

Age-related degenerative diseases are defined by an age-related decline of cellular function often resulting in cell death. Neurodegenerative diseases, perhaps the most prominent of these degenerative disorders, are a variety of conditions defined by progressive degeneration of nerve cells, or neurons, which often leads to neuronal death, causing decline in cognition or other functions, resulting in decreased quality of life and shorter life span. The two most common neurodegenerative diseases are AD and PD.

To our knowledge, no other biopharmaceutical company has focused solely on stopping the synaptic binding and signaling of soluble Aβ oligomers through the use of small molecule receptor antagonists, such as CT1812. We believe our deep expertise in oligomer and synaptic biology provides us with a competitive advantage and led to the creation of (1) proprietary assays that target the critical molecular step causing memory loss and (2) proprietary chemical libraries yielding highly brain penetrant small molecule drugs.

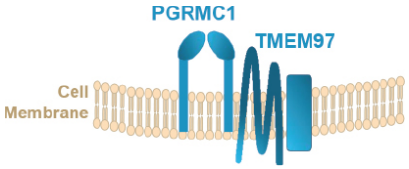
Based on this expertise, we are able to discover and optimize small molecule receptor antagonists like CT1812 that we believe represent a functionally distinct and promising approach to synaptorestorative AD therapeutics where neurons remain viable and functional. These molecules were designed to displace Aβ oligomers bound to neuronal receptors at synapses by selectively targeting and clearing Aβ oligomers from the brain into the CSF.

In addition to neurodegenerative diseases, other degenerative diseases include AMD. AMD is a common eye disease that results in the deterioration of the macula, causing visual distortion, loss of central vision and eventual blindness. It is the leading cause of blindness in people over 50 years of age and afflicts approximately 11 million Americans, including an estimated 12% of all U.S. adults over 80 years of age. We believe that human genetic and internal proteomic pathway analyses obtained through our AD trials provides evidence of a relationship between the S2R complex and dry AMD. We are currently engaged in preclinical development activities for this indication, including studies to elucidate the key mechanisms by which CT1812 and the S2R complex alter the biological processes that contribute to dry AMD. After the completion of our ongoing preclinical studies, we intend to initiate a Phase 2 clinical trial with CT1812 in the second half of 2021. Other S2R modulators are being explored, currently in lead identification studies, such as CT2074, prior to lead optimization and candidate selection for IND-enabling studies.

The Sigma-2 Receptor Complex

The S2R complex is comprised of transmembrane protein 97, or TMEM97, a four-domain transmembrane protein that forms a complex with progesterone receptor membrane component 1, or PGRMC1. The S2R complex is expressed in the CNS, the retina, as well as peripheral organs, including the pancreas, liver and kidney. Within the brain, the S2R complex is found in several areas, including the cerebellum, cortex, hippocampus and substantia nigra, and is enriched in neurons as compared to glial cells in the adult brain. In the retina, the S2R complex is expressed in several cell types including the RPE cells, photoreceptors and retinal ganglion cells.

The sigma-2 receptor (S2R) complex



Internal and third-party studies suggest that the role of PGRMC1 and TMEM97, the protein components of the S2R complex, regulate cell damage response processes, including cholesterol biosynthesis, vesicle trafficking, progesterone signaling, lipid membrane-bound protein trafficking and receptor stabilization at the cell surface. In addition, the S2R complex regulates autophagy, the cellular process by which altered cellular proteins are degraded and removed. The aberrant activity of these processes, believed to be triggered by cellular stresses, is a hallmark of the dysfunction related to degenerative diseases. The S2R complex is a key regulator of processes that have been implicated in several age-related degenerative diseases and disorders including AD, retinal diseases, such as dry AMD, and synucleinopathies, such as PD and DLB.

We believe the array of degenerative disorders which involve protein components of the S2R complex allows for the potential therapeutic use of proprietary S2R antagonists in numerous indications. While a fuller understanding of the molecular mechanisms involving the S2R complex remains to be elucidated, evidence suggests that targeting the S2R complex may provide therapeutic benefit to a wide range of age-related degenerative diseases and disorders. We believe modulating the S2R complex to normalize cellular function may provide a restoration of normal cellular processes.

Biomarker and Imaging-Driven Evidence

Biomarkers have become increasingly important in the development of treatments for neurodegenerative diseases for a number of reasons, including monitoring drug activity in patients, assessing changes in disease pathology during treatment and identifying responder populations for clinical studies. Given that biomarker-enabled therapeutics have a higher rate of success at gaining product approval, we elected to employ biomarkers in our programs to mitigate clinical development risk. To that end, in addition to a number of cognitive tests, our clinical trials use a variety of biomarkers to measure target and/or pathway engagement and assess changes in disease progression. For example, in AD, changes in cerebrospinal fluid, or CSF, concentrations of neurogranin and synaptotagmin-1 can be indicative of damage to synapses. In PD and other synucleinopathies, changes in markers such as α-synuclein species, lysosomal enzymes, markers of amyloid and tau pathology, and neurofilament light chain can indicate dysfunction in membrane trafficking and autophagy processes. Quantitative EEG and positron emission tomography, or PET, imaging agents may have utility in several neurodegenerative disorders to measure synaptic function and synaptic density, respectively.

Our Novel, Improved Conditioned Extracts (NICE) Screening Platform

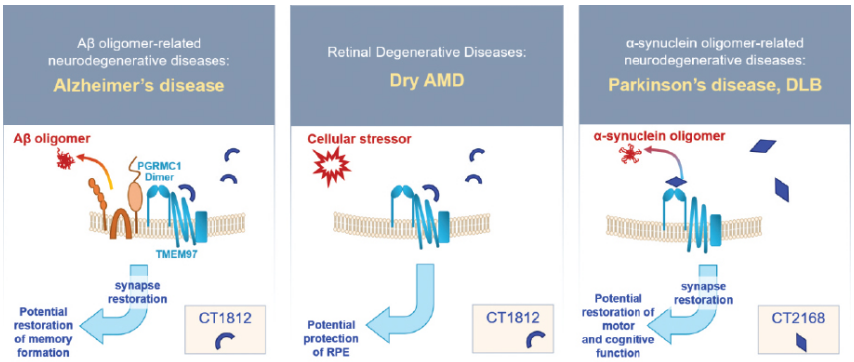
Chemical structures that we are currently evaluating as potential therapeutics for degenerative diseases originate from our NICE screening platform. The NICE screening platform allows us to generate proprietary small molecule libraries derived from natural chemical scaffolds through a proprietary process which we

refer to as conditioned extraction. Conditioned extraction, a process pioneered by our cofounder, allows us to eliminate undesirable properties of well characterized, biologically active compounds sourced from natural products, while retaining their biological activity. The resulting molecular configurations are then subjected to proprietary functional *in vitro* screening assays designed to replicate the mature brain and its intricate connections and patterns of electrical signaling. Unlike most other screening assays, such as cells lines derived from immortalized neuronal tumor cells, our use of mature primary neuronal cultures provides us with information-rich measurements more indicative of normal brain function and predicative of functional benefit. We have utilized our NICE screening platform in conjunction with these mature primary neuronal cultures to develop product candidates for our proprietary Early Alzheimer's Screening System, or EASSY.

The candidate library produced by the NICE screening platform is predisposed to compounds with attractive drug-like properties such as low molecular weight, low number of reactive hydrogen bonds, lipophilicity and relatively neutral chemistry properties. These characteristics reduce the reactivity of the molecules and related toxicities, while also enhancing their ability to cross the blood-brain barrier. As a result, the NICE screening platform is designed to accelerate drug development time while reducing development risk. We believe these characteristics provide us with a CNS screening platform that is differentiated from other discovery strategies.

Our Product Candidates

We are leveraging our expertise in the biology of the S2R complex, synaptic function and plasticity, and our understanding of the role of toxic age-related soluble proteins, to construct a pipeline of innovative, differentiated small molecule product candidates that are intended to restore normal cellular damage responses. We intend to develop therapeutics with the potential to overcome diseases associated with age-related toxic protein buildups that disrupt key cellular processes. Our initial product candidates target diseases characterized by dysfunction or dysregulation of the S2R complex that leads to cellular degeneration, as observed in age-related degenerative diseases and disorders, such as AD, dry AMD, PD and DLB.



Our Lead Product Candidate: CT1812

Our lead product candidate, CT1812, is an orally delivered, small molecule antagonist that penetrates the blood-brain barrier and binds selectively to the S2R complex; and through its modulation restores normal function of synapses, as well as critical cellular processes such as autophagy, cholesterol biosynthesis, vesicle trafficking, progesterone signaling, lipid membrane-bound protein trafficking and receptor stabilization at the cell surface. CT1812 originated from our initial efforts with our NICE screening platform which enables the generation of innovative leads. Leads identified through NICE were then evaluated using proprietary *in vitro* assays designed to better emulate the synapses *in vivo* activity. We believe the use of these assays allows us to identify functionally active structures which may impact neuronal behavior significantly faster than alternate screening approaches. We currently retain worldwide rights to CT1812 for all indications and are developing CT1812 as a potential treatment for a range of diseases including AD, dry AMD and synucleinopathies, such as PD and DLB.

CT1812 for the Treatment of Alzheimer's Disease (AD)

CT1812 was designed to selectively target and displace Aβ oligomers bound to neuronal receptors at synapses by a new and differentiated mechanism of action. CT1812 allosterically modulates (changing the conformation of) a key multiprotein regulator of oligomer receptors, the sigma-2 receptor complex. This destabilizes the Aβ oligomer binding site, increasing the off-rate and thereby displacing bound Aβ oligomers, which are then cleared into the CSF. In our preclinical studies, CT1812 has demonstrated the potential to protect synapses, facilitate their restoration and improve cognitive performance. These preclinical results are currently being validated in our ongoing Phase 2 clinical trials.

Overview of the Disease

AD is a progressive neurodegenerative disorder characterized by cognitive dysfunction, memory loss, dementia and the impairment of daily living activities, along with numerous behavioral and neuropsychiatric symptoms. In the advanced stages of the disease, an AD patient is unable to recognize faces, use or understand language and displays a lack of awareness for their surroundings. Continued functional decline ultimately results in the patient's death.

Due to the size of the affected population and the current lack of effective disease modifying therapies, we believe that AD is one of the most significant unmet medical needs of our time. Nearly six million Americans have been diagnosed with AD and disease prevalence is expected to more than double by 2050. The direct healthcare costs to care for patients with AD and other dementias in the United States is currently estimated to exceed $300 billion. Absent the development of meaningful intervention in the course of the disease, the number of people diagnosed with, and dying from, AD is anticipated to escalate appreciably as lifespans lengthen, since prevalence increases significantly with age. The Centers for Disease Control listed AD as the primary cause of death for more than 121,000 Americans in 2019. The disease is equally devastating worldwide, with the World Health Organization estimating that AD affects as many as 35 million people globally.

Currently Approved AD Therapeutics Treat Symptoms Only and are of Limited Benefit

There are only symptomatic therapies approved for AD including approved therapies for the treatment of the symptoms of AD: acetylcholinesterase inhibitors, or AChEIs, and glutamatergic modulators and an orexin receptor antagonist. AChEIs are designed to slow the degradation of the neurotransmitter acetylcholine, helping to preserve neuronal communication and function temporarily. Glutamatergic modulators are designed to block sustained, low-level activation of the N-methyl-D-aspartate, or NMDA, receptor without inhibiting the normal function of the receptor in memory and cognition. Namenda (memantine), an NMDA receptor antagonist was approved in the United States in 2003. These therapeutic products do not modify or alter the progression of the underlying disease and provide only modest efficacy in treating the symptoms. There have yet to be any disease-modifying treatments approved.

Therapeutic Approaches in Development to Treat The Underlying Disease Have Shown Little Success

Numerous therapeutic approaches have been evaluated to remedy the causes of AD. Those focused on reducing the aberrant production, or removal, of intraneuronal neurofibrillary tangles of tau protein have yielded limited clinical benefit. Development initiatives intended to inhibit hyperphosphorylation of the tau protein and related kinase activity, enhance microtubule stability or block tau aggregation have largely been discontinued due to toxicity or a lack of efficacy. Microglial activation and its role in AD-induced neuroinflammation has emerged as another potential target for therapeutic development as has the proper functioning of processes dictating synaptic plasticity, believed to be of central importance to neuronal activity and continued viability. These efforts have also not yielded meaningful clinical advance.

Among the more prevalent and targeted mechanisms implicated in AD, is the accumulation of Aβ aggregates in the neuronal synapse where disease progression leads to synaptic dysfunction and dysregulation. The accompanying deterioration in neuronal activity ultimately results in neuronal death. As a result, the reduction in the levels of Aβ aggregates at the synapse has been a prominent objective of a significant number of therapeutic candidates, including active and passive immunotherapies, designed specifically to target Aβ aggregates. As with other treatment strategies, these approaches have likewise yielded few meaningful treatment advances.

We believe the overarching issue with therapeutic interventions intended to limit Aβ aggregate concentrations in the brain is that they fail to discriminate between different forms of Aβ aggregates: fibrils, plaques and oligomers. Accordingly, these efforts may demonstrate success clearing fibrils and the largely inert plaques, but fail to address the specific neurotoxic effects of Aβ oligomers. We believe that unlike previously pursued approaches, our strategy of targeting the S2R has the potential to prevent Aβ oligomer toxicity by acting directly at the synapse, thereby preventing synaptotoxicity, a mechanism we are testing in the clinic currently.

The Role of Aβ Oligomers on Synapses and the Downstream Impact to Brain Function and AD

Synapses are specialized points of contact between neurons, where electrical signaling and communication takes place. It is well established that synapses are routinely sprouted and resorbed as part of the normal process of learning and memory. Each neuron is covered with an estimated 10,000 synapses and these synapses participate in a complex electrical circuit with other neurons. Neurons do not divide or reproduce as part of normal physiological function.

Emerging scientific evidence suggests that Aβ oligomers, formed over time through the buildup of Aβ and its aggregates, bind to specific parts of the synaptic structure and interfere with the normal process of memory formation. This ligand-like activity confers to Aβ oligomers potent synaptotoxic activity. In response, the neuron dismantles and resorbs the synaptic structure to prevent its abnormal function from interfering with what remains of the normal circuit behavior. If a large enough number of synapses are lost, the neuron dies.

Synaptic loss, however, is not necessarily permanent and synapses can be regained or sprout again once the oligomers are removed. We have observed this process in our research involving preclinical AD models. This observation leads us to believe that displacement of synaptotoxic Aβ oligomers may enable synapses to recover and potentially slow cognitive decline. We are further encouraged by the numerous precedents which exist that demonstrate the therapeutic utility of blocking ligand-receptor interactions in the brain with small molecule drugs capable of crossing the blood-brain barrier.

CT1812 Uses a Differentiated Mechanism of Action to Selectively Target Aβ Oligomers

Our proprietary CT1812 clinical candidate employs a novel and fundamentally different mechanism which through alteration of S2R activity selectively facilitates removal of neurotoxic Aβ oligomers. Experimental evidence suggests that Aβ oligomers likely occupy binding sites contiguous to the S2R complex. Binding at these locations is believed to produce structural distortions which inhibit the proper functioning of the S2R complex including its role in regulating critical signaling pathways. The preferential binding of CT1812 to the S2R complex produces conformational changes that alters the binding affinity of Aβ oligomers. CT1812 binding to the S2R complex likely modulates the conformation of the S2R complex, which in turn allosterically alters the conformation of the oligomer binding pocket on the oligomer receptors. Binding pocket destabilization leads to displacement of Aβ oligomers from the neurons and neuronal synapse. Once displaced, Aβ oligomers are unable to rebind as long as threshold concentrations of CT1812 are present and are rapidly removed from the synapse. Based on our preclinical studies, we believe that CT1812 not only prevents binding of Aβ oligomers, displacing them from the S2R complex sites at neuronal synapses, but also slows Aβ oligomer-induced loss of synapses and restores synaptic activity, which may reverse downstream alterations related to membrane trafficking.

The Use of an S2R Targeted Approach is Supported by the A673T Mutation

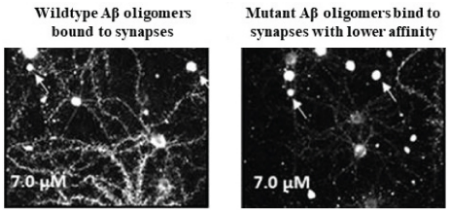
We believe the benefit of the mechanism by which CT1812 stops the toxic impact of Aβ oligomers on cellular function is further supported by an analysis of the Aβ sequence variant, A673T, which is commonly referred to as the “Icelandic” mutation. A mutation in the protein structure of Aβ, first identified through a genomic analysis of the Icelandic population, is notable in that carriers of the mutation are four-fold less likely to develop AD. The A673T mutation, which involves the substitution of the amino acid alanine for threonine at position 673 of the precursor molecule, not only produces fewer Aβ monomers, but our research indicated that the toxic Aβ oligomers generated have significantly diminished binding affinity for brain cell

synapses. This reduced binding is evidenced in the results of *in vitro* experiments the results of which are presented below. Whereas wildtype Aβ oligomer binding is pronounced, the binding of the A673T variant is much lower.

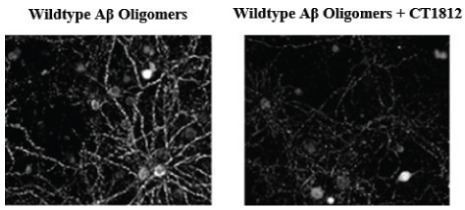
Binding affinities of wildtype versus mutant Aβ oligomers to synapses
(intensity in arbitrary fluorescent units)

	K_d (nM)	B_{max}[a]
wt Aβ (1 – 42) oligomers	Site 1:442 ± 70	$7.98 \times 10^5 \pm 0.29 \times 10^5$
A673T mutant Aβ (1 – 42) oligomers	Site 1:1,955 ± 502	$5.98 \times 10^5 \pm 0.50 \times 10^5$

Kd is a constant used to evaluate and rank the strengths of interactions for ligands and their receptors. The smaller the Kd value, the greater the binding affinity. Bmax refers to the maximum amount of a ligand that can bind specifically to a receptors. Intensity is measured in arbitrary fluorescent units.



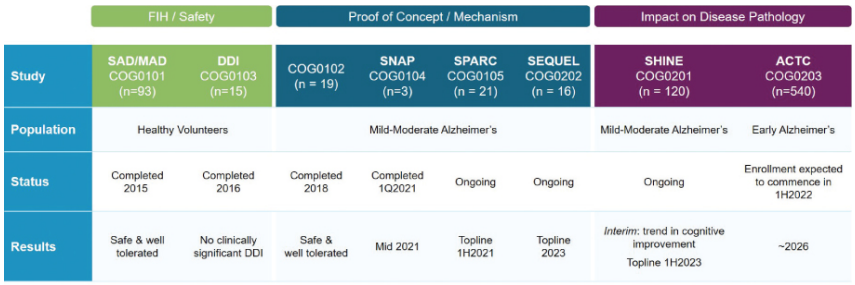
We believe that CT1812 is the only drug currently in clinical trials that mimics the effects of the A673T mutation. As the images presented below suggest, both CT1812 and the A673T mutation similarly reduce the binding of toxic Aβ oligomers to synapses. Drugs that mimic a naturally occurring protective mutation are more likely to succeed in the clinical setting.



CT1812 Clinical Results in AD

We have completed four clinical trial evaluations of CT1812, in both healthy volunteers and patients with mild-to-moderate AD, with four additional clinical trials currently ongoing. The clinical trials we have conducted to date have enabled us to ascertain the safety of CT1812, as well as validate its mechanism through proof-of-concept trials and conduct initial assessments of its clinical disease modifying efficacy. The following is the status of our completed and ongoing clinical trials.

Overview of our completed, ongoing and planned clinical studies



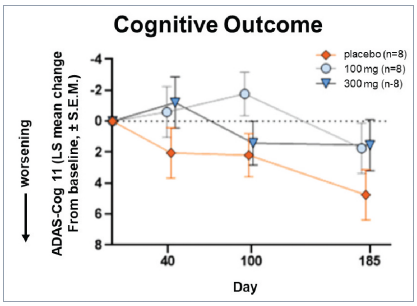
COG0201 — Phase 2 (SHINE) Clinical Trial

Our COG0201 SHINE study is a randomized, double-blind, placebo-controlled Phase 2 clinical trial designed to enroll up to a total of 120 patients with mild-to-moderate AD to evaluate the safety and efficacy of CT1812. Participants are divided in two CT1812 dose groups (100 mg or 300 mg) and one placebo group, dosed daily for six months. Endpoints include safety and biomarker evidence of disease modification as well as cognitive function, as measured by the ADAS-Cog 11-item version, or ADAS-Cog 11. ADAS-Cog 11 is a globally recognized cognitive scale that is used to assess cognition in patients with AD.

Preliminary results from an interim analysis of the first 24 patients from the COG0201 study demonstrated that CT1812 continued to be generally safe and well tolerated, and the overall safety profile did not change from prior studies. There were four serious adverse events, or SAEs, which were not drug-related and occurred in a single placebo patient. The patient was discontinued due to one of the SAEs. Treatment emergent adverse events, or TEAEs, were well balanced across all treatment groups. We observed mild and transient elevations of liver enzymes in three patients without any other indications of liver injury. These results were consistent with findings from earlier clinical studies.

The preliminary results also demonstrated a significant decline in the presence of Aβ and a three-point mean improvement in the rate of cognitive decline as measured by ADAS-Cog 11, in patients receiving CT1812 when compared to placebo. These results were observed in patients receiving CT1812 or placebo in addition to background therapies they may have already been receiving for AD. We believe these preliminary results provide promising evidence of CT1812's cognitive and biological impact on the 24 patients included in the interim analysis of the SHINE study. These results indicate that patients treated with CT1812 showed relative stability on a measure of cognitive performance compared to the placebo group. A mean difference in the rate of decline of approximately three points was observed between the CT1812 dose groups receiving either 100 mg or 300 mg versus the placebo group based on the ADAS-Cog 11 measurements. After review of these results, which are presented in the graph below, we decided to continue trial enrollment, and anticipate enrolling the remaining patients in the second half of 2021.

Results indicate a three-point improvement in cognitive decline in CT1812-treated patients.



Proteomic measurements were also performed of CSF and plasma from these patients, from which we have comprehensive datasets of whole proteome changes observed in AD patients given CT1812 versus placebo for six months. From this, we identified product candidate pharmacodynamic biomarkers that could reflect processes of target engagement, pathway engagement and/or early disease modification.

Proof-of-Concept Clinical Trials for the Mechanism of CT1812

We have conducted and are continuing to conduct a series of clinical proof-of-concept trials intended to assess target engagement and the impact of CT1812 on synaptic activity. These proof-of-concept trials are presented in more detail below.

COG0202 — Phase 2 (SEQUEL) Trial

Our COG0202 SEQUEL study is a randomized, double-blind, placebo-controlled Phase 2 clinical trial of 16 patients with mild-to-moderate AD to evaluate the efficacy of CT1812 in restoring synaptic function in patients through quantitative EEG measurement, as reflected by relative theta power. The trial is configured as a two-arm crossover trial, in which half of the participants will receive 300 mg of CT1812 daily for 29 days. After a 14-day wash out period, these participants will receive placebo for an additional 29 days. The other half of the participants receive placebo daily for 29 days. After a 14-day wash out period, these participants will receive CT1812 treatment for an additional 29 days. CSF and EEG evaluations are taken periodically throughout the duration of the trial. We anticipate reporting topline data from this trial in 2023.

COG0105 — Phase 1(SPARC) Trial

Our COG0105 SPARC study is a randomized, double-blind, placebo-controlled Phase 1 clinical trial of 21 patients with mild-to-moderate AD to evaluate the effect of CT1812 on synaptic density. Participants were randomized to receive treatment with 100 mg or 300 mg CT1812 or placebo once daily for 24 weeks, with the option to extend treatment for an additional 24 weeks.

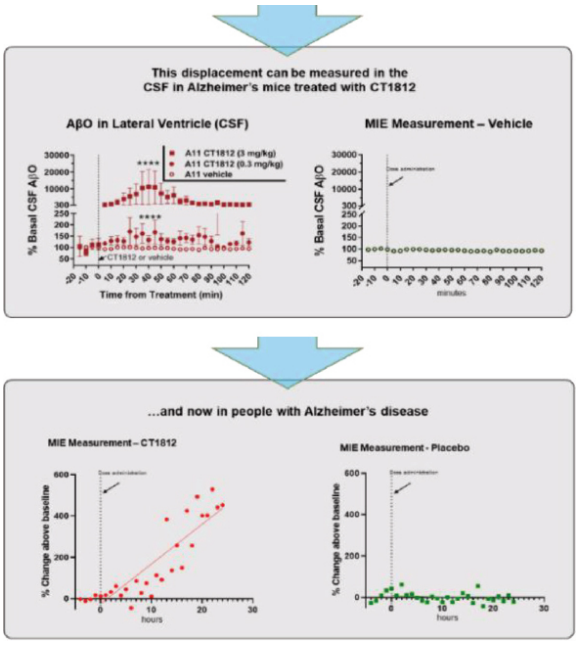
Patients enrolled in SPARC are assessed using a positron emission tomography, or PET, imaging agent to measure synaptic density. Eligible participants are given PET scans at the outset of the study using a carbon-11-labeled radioligand tracer, UCB-J, before administration of CT1812 or placebo (baseline), and at 12, 24, and for those who opt to participate in the 24-week extension period (n=12), 48 weeks. UCB-J is selective for synaptic vesicle glycoprotein 2A, or SV2A, a membrane protein expressed in most synapses. The use of this PET imaging agent is anticipated to allow us to observe changes in synapse density occurring in the brains of AD patients over time, which will be the first demonstration of longitudinal changes in this patient population. Changes observed in patients being treated with CT1812 will be compared to those in patients receiving a placebo to ascertain whether CT1812 results in a slower decline in synaptic density over time compared to placebo. Additional PET imaging, clinical outcomes and CSF biomarkers will also be assessed over the course of the study. We expect to report topline results from this trial in the first half of 2021.

COG0104 — Phase 1 (SNAP) Trial

Our COG0104 SNAP study was a randomized, double-blind, placebo-controlled Phase 1 clinical trial that enrolled three patients with mild-to-moderate AD to measure the effects of CT1812 on displacement of Aβ oligomers. Patients were randomized 2:1 to receive a single dose of CT1812 or placebo. Patients enrolled in the trial had an indwelling catheter placed in the lumbar CSF space. CSF samples were collected hourly over a 28-hour period. Five CSF samples were collected before and 24 samples collected after administration of a single 560 mg oral dose of CT1812 or placebo. CSF samples from trial participants were analyzed to measure the concentration of Aβ oligomers over the trial period.

Results of this trial revealed an increase in Aβ oligomer levels in the CSF over the 24-hour period following treatment with CT1812, but not in the patient administered placebo. These findings were observed using two independent methods, microimmunoelectrode and western blots. This effect of CT1812 was specific to Aβ oligomers, as no CT1812-related increase in Aβ 1-40 or 1-42 monomer was observed. We believe these results provide the early proof of principle of CT1812 target engagement in AD patients. Further, we believe that they corroborate our mechanism of action previously demonstrated in preclinical studies, providing the first evidence that our preclinical studies translate to patients with AD.

First evidence of target engagement in humans, which mirrors that found preclinically; and we believe this reinforces that our mechanism of action extends to patients with AD



COG0102 — Phase 1 Trial

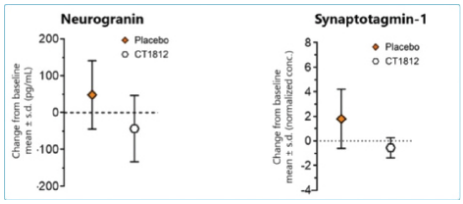
Our COG0102 study was a randomized, double-blind, placebo-controlled, Phase 1 clinical trial of 19 patients with mild-to-moderate AD. Participants were administered one of three oral doses of CT1812, either 90 mg, 280 mg or 560 mg, once daily for 28 days. The primary endpoint of the trial was safety with a secondary objective of establishing the pharmacokinetic, or PK, profile of CT1812. Also included as exploratory endpoints were measurement of CT1812 in CSF, and protein expression changes in CSF and plasma.

In order to gauge the impact of CT1812 on synaptic damage due to AD, we measured concentrations of synaptic proteins, neurogranin and synaptotagmin-1, in CSF samples from these patients using clinically validated standardized assays. Our evaluation of AD protein biomarkers in the CSF revealed that neurogranin levels, shown in the left graph below, in patients treated with CT1812 for 28 days was significantly decreased compared to levels measured in patients administered placebo ($p = 0.05$, analysis of covariance). Neurogranin is a synaptic damage marker that increases in the CSF of AD patients reflecting its decrease in the brain. The lowering of synaptic damage markers in the CSF is consistent with CT1812's mechanism of action as observed in our preclinical studies and demonstrates the potential of the drug to slow Aβ oligomer-induced synapse loss.

Another synaptic damage biomarker that is elevated in the CSF of AD patients is synaptotagmin-1. CSF levels of synaptotagmin-1 were similar at baseline and end of study in patients treated with CT1812, whereas its levels in the placebo group displayed a marked increase over the same time period. This analysis of CT1812's impact on synaptotagmin-1 levels is presented in the right graph below. Consistent with our mechanism of action preventing Aβ oligomer toxicity, we observed a reduction in neurogranin and synaptotagmin in CSF, which are measures of synaptic damage, suggesting that CT1812 may have the ability to protect synapses in AD patients.

CT1812 was well tolerated in the COG0102 study. All AEs were mild-to-moderate. Some of the participants in the highest dose group experienced lymphocytopenia or elevated liver enzymes. These laboratory abnormalities resolved in most patients with continued dosing of CT1812. One trial participant was discontinued from CT1812 prior to study completion because of elevated liver enzymes with subsequent resolution of this abnormality. Lymphocytopenia or elevated liver enzymes were not observed in either the 90 mg or 280 mg dosing cohorts. There were no SAEs.

Treatment with CT1812 was associated with lower levels of neurogranin and synaptotagmin-1 compared to placebo



Our Phase 1 Safety Trials

In addition to Phase 1 clinical trials conducted in our targeted patient population, we also conducted a series of Phase 1 clinical trials in healthy volunteers designed to establish the safety profile of CT1812, as well as determine potential drug-food or drug-drug interactions. These trials and their results, which are summarized below, indicated that CT1812 was generally safe and well-tolerated.

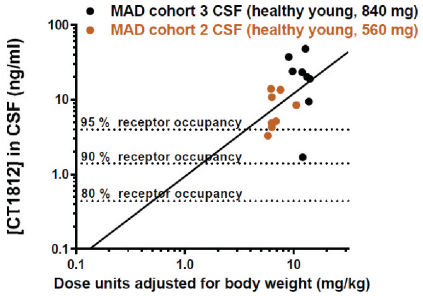
COG0101 — First in human phase 1 clinical trial

Our COG0101 study was a randomized, double-blind, placebo-controlled ascending dose Phase 1 multi-cohort clinical trial of 93 healthy volunteers to assess the safety and potential drug-food interactions of CT1812. The trial was conducted in two segments.

The first segment was structured as an ascending single dose trial, in which participants received one dose of CT1812 with increasing doses given to each of six cohorts. In this segment of the trial, eight participants were enrolled per dosing cohort with six participants receiving CT1812 and two receiving placebo. The doses evaluated were 10 mg, 30 mg, 90 mg, 180 mg, 450 mg and 1,120 mg. A seventh cohort of six patients received a single 90-mg dose after receiving a standardized meal. All doses were administered as scheduled.

The second segment was configured as a multiple ascending dose trial, that enrolled 39 healthy volunteers, divided in three cohorts of ten participants, with one additional cohort consisting of nine healthy elderly volunteers. Each participant in this segment of the trial received a single dose of CT1812 each day for 14 days. The doses evaluated in this second segment were 280 mg, 560 mg and 840 mg.

CT1812 CSF concentrations correlated to a >80% S2R predicted receptor occupancy in brain



Following completion of each trial cohort, bioanalytical evaluation of plasma CT1812 PK was conducted.

This trial demonstrated that administration of CT1812 in single doses of up to 1,120 mg, administered once, as well as up to 840 mg of CT1812 dosed for 14 consecutive days was well tolerated. Significantly, CT1812 concentrations detected in the CSF correlated to an estimated receptor occupancy in the brain of greater than 80%. There was one SAE in the multiple-dose portion of the study that was deemed unrelated to study drug. There were no SAEs related to the product candidate or TEAEs leading to withdrawal from the study.

COG0103 — Phase 1 trial

Our COG0103 study was a Phase 1 clinical trial of 15 healthy volunteers designed to evaluate the potential effects of CT1812 on select CYP isoenzymes: CYP2C19, CYP2C9, CYP2D6 and CYP3A4. This was accomplished by assessing its effects on substrates of these isoenzymes: 20 mg omeprazole, 500 mg tolbutamide, 50 mg dextromethorphan and 4 mg midazolam. The 15 healthy volunteers who participated in the trial received the substrates of these isoenzymes two days prior to the initial dose of CT1812 and PK assessments were performed. A dose of 560 mg of CT1812 was administered to each of the trial participants for the following six consecutive days. The day 6 dose of CT1812 was administered concomitantly with the four-substrate cocktail and PK assessments were repeated.

A weak drug interaction was observed between CT1812 and midazolam and dextromethorphan. A lack of any clinically meaningful interaction was observed with coadministration of omeprazole or tolbutamide. Based on the small magnitude of change in PK parameters of the probe drugs observed in this study for the isoenzymes CYP2D6 and CYP3A4, clinically meaningful interactions are unlikely.

Clinical Development Plans and Future Trials

Our Upcoming COG0203 Phase 2 Clinical Trial Fully Funded by NIA Grant of approximately $81 million

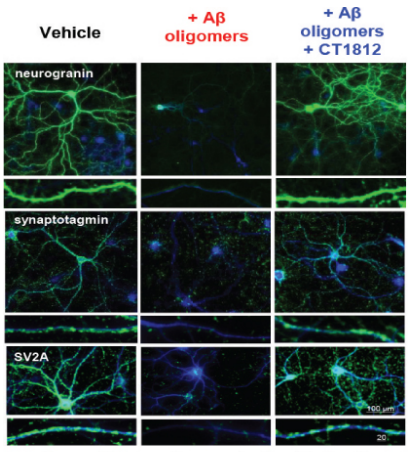
Our COG0203 study will be a randomized, double-blind, placebo-controlled Phase 2 clinical trial designed to enroll 540 patients with early-stage AD and powered to show a change in the rate of cognitive and functional decline. We intend to enroll patients with MCI, due to AD or mild AD who have elevated levels of Aβ as determined by PET imaging or as measured in CSF. The trial will be conducted in collaboration with the ACTC and will utilize up to 35 academic sites associated with the consortium. Patients will be randomized to receive CT1812 or a placebo for 18 months. In addition to a battery of cognitive measures, we

intend to use a variety of biomarkers to measure target engagement and assess changes in neurodegeneration and disease progression. We have received a grant of approximately $81 million grant from the NIA to fully fund this trial.

Preclinical Results

Prior to entering clinical trials, the therapeutic potential of CT1812 was observed in numerous preclinical studies. As is demonstrated in the images below, the addition of Aβ oligomers to neuronal cell cultures resulted in synaptotoxicity as illustrated by the reduced expression of synaptic markers neurogranin, synaptotagmin and SV2A. The lack of immunoreactivity of these three synaptic proteins can be seen in the middle column of the image below. However, the presence of CT1812 blocked the Aβ oligomer-induced loss of synapses, as reflected by the presence of synaptic protein expression displayed in the right-hand column below.

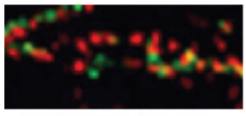
CT1812 prevents Aβ oligomer-mediated synaptic damage



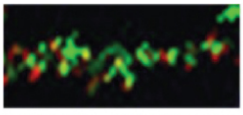
Immunofluorescent images of cultured brain cells:
green = synaptic markers; blue = neuronal MAP2

CT1812 also slows the loss of synapses that is triggered by Aβ oligomers. A higher resolution image of the cell culture exposed to Aβ oligomer is shown below, before the addition of CT1812, which is presented on the left, and after the addition of CT1812, which is presented on the right. Aβ oligomers shown in red bind to synaptic receptors and reduce numbers of synapses shown in green. The addition of CT1812 displaces Aβ oligomer binding and appears to block the effects induced by the Aβ oligomers, with the synapse numbers remaining at levels similar to normal.

CT1812 slows loss of synapse numbers in the presence of Aβ oligomers



Aβ oligomers and synapses

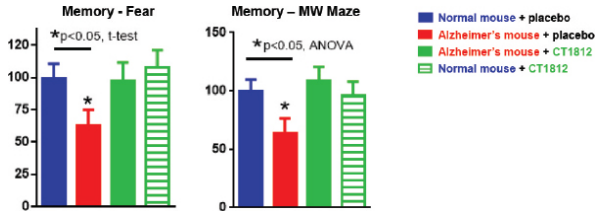


Aβ oligomers and synapses + CT1812

The protective benefits of CT1812 observed in these *in vitro* assays are supported by functional *in vivo* assessments of CT1812. In one such preclinical study, the memory of mice was tested based on the subject's ability to recall fear-inducing triggers and its performance in a maze. The mice exhibiting symptoms of AD, depicted by the red bars in the image below, performed significantly worse in both the fear and maze

tests when compared to normal, non-transgenic mice, represented by the blue bars. However, after administration of CT1812, the AD mice, represented by the solid green bars, were seen to perform at a level similar to that achieved by normal mice. We believe these results are illustrative of CT1812's ability to restore synaptic proteins and numbers to normal levels and with it, the animal's functional capabilities.

CT1812 restores functional capabilities in a mouse model of AD



CT1812 for the Treatment of Dry Age-Related Macular Degeneration (Dry AMD)

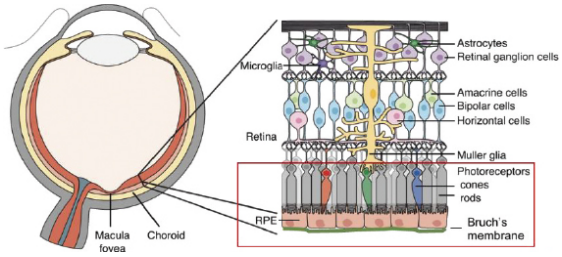
We believe that several lines of evidence suggest that modulation of the S2R complex may provide significant therapeutic utility for the treatment of dry AMD. Human genetics points to TMEM97 as a promising therapeutic target, as indicated via several large-scale, independent genome-wide association, or GWA, studies. In addition, unbiased pathway analysis of AD patient proteomic data obtained during our clinical trials provides independent evidence of a relationship between the S2R complex and dry AMD. We are currently engaged in preclinical development activities for this indication, including studies to elucidate the key mechanisms by which CT1812 and the S2R complex alter the biological processes that contribute to dry AMD. We intend to initiate a Phase 2 clinical trial in second half of 2021. We believe that well-characterized clinical endpoints and a defined regulatory path increase the attractiveness of this indication.

Overview of the Disease

AMD is the leading cause of blindness in people over 50 years of age in the United States, afflicting approximately 11 million U.S. adults, including an estimated 12% of all U.S. adults over 80 years of age. Dry AMD is a progressive condition and accounts for up to 90% of all AMD cases. Advanced dry AMD, or GA, affects approximately 2 million people in the U.S. There are no approved therapeutics available for dry AMD. Other treatments in development are primarily invasive, including intravitreal injections, stem cell replacement and gene therapy approaches. We believe the limited treatment options available for patients with dry AMD, coupled with newly implicated biochemical pathways, make dry AMD an attractive target for the development of therapeutics.

There are two types of AMD, the first of which is neovascular, or wet AMD, and non-neovascular, or dry AMD. Dry AMD, which accounts for approximately 90% of all AMD cases, is a progressive condition that involves a dysregulation of cellular processes, among which is the accumulation of lipid deposits, known as drusen, that causes a thickening of the Bruch's membrane. This thickening disrupts the cytoarchitecture of the retinal pigment epithelium, or RPE, and this disruption, coupled with oxidative stress and inflammation, leads to the diminished health and function of RPE and photoreceptor cells, with accumulated damage resulting in cell death and visual impairment.

The anatomy of the eye and the regions impacted by AMD



Limitations of Current Treatments

Treatments for dry AMD are currently limited to vitamins and over-the-counter zinc. While there are no therapeutics approved by the FDA to treat dry AMD, there is considerable development activity ongoing involving numerous targets. Among the areas of ongoing interest are efforts targeting the complement pathway and its role in inflammation, as mutations in this pathway have been associated with higher risk of dry AMD. In addition, cell and gene therapy approaches are being evaluated to regenerate RPE cells and rescue the loss of photoreceptors. Small molecule visual cycle modulators are also under evaluation to maintain retinal integrity. Most of these approaches require invasive administrations.

Rationale for S2R Mechanism of Action

Indications of S2R Involvement in Dry AMD

We believe that several lines of evidence suggest that modulation of the S2R complex may provide significant therapeutic utility for the treatment of dry AMD. First, human genetics point to TMEM97 as a promising therapeutic target, as indicated via several large-scale, independent genome-wide association, or GWA, studies. These studies indicate a genetic mutation known as a single nucleotide polymorphism, or SNP, in the TMEM-VTN locus confers decreased risk for dry AMD. It remains unknown if this mutation confers a change in TMEM97 expression levels. However, knockdown of TMEM97 in *in vitro* models of the disease partially rescues RPE cells from oxidative stress-induced cell death. Investigation of the effects of pharmacological perturbation of the S2R complex signaling is currently ongoing to determine if the rescue of cell death mediated by decreasing TMEM97 expression can be replicated by S2R antagonists, such as CT1812.

Unbiased Analysis of Clinical Trial Sample Proteomics Data: Top Disease Ontologies

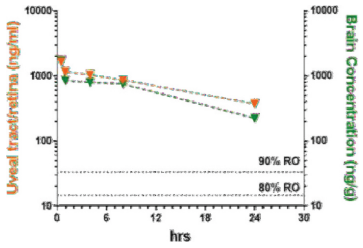
Unbiased pathway analysis of AD patient proteomic data obtained during the COG0102 and SHINE Part-A clinical trials provides independent evidence of the relationship between the S2R complex and dry AMD. Analyses of CSF were performed to ascertain which predesignated functional disease ontologies may be affected by the administration of CT1812. These analysis identified GA and macular degeneration as two of the top indications affected, with GA presenting the most significant relationship. Subsequent analyses identified several subsets of proteins altered by CT1812 that are involved in dry AMD.

In subsequent analyses examining the overlap of proteins altered in CSF and plasma biofluids of AD patients treated with CT1812 versus placebo, we identified a set of proteins, altered by CT1812 that have been previously shown by other groups to be disrupted in dry AMD or GA, compared to age-matched controls. Subsequent analysis identified several pathways in which these proteins are involved, many of which have known genetic or biological links to processes disrupted in dry AMD. We believe the collective insights provided by these analyses provide early proof of concept that an S2R modulator may be capable of altering AMD relevant proteins and pathways in an aged patient population.

Preclinical Support for Clinical Trials

We believe preclinical *in vivo* studies provide further evidence supporting a clinical trial for CT1812 as a potential treatment for dry AMD into clinical trials. PK assessment indicates that we can achieve therapeutic levels (>80% receptor occupancy) of CT1812 in retinal tissue through oral administration. Moreover, as is illustrated in the graph below, CT1812 levels recorded in the retina were similar to those in the brain, suggesting that the dose(s) used to achieve efficacy in the retina will be similar to the dose(s) for AD.

Similarities in CT1812 concentrations following oral administration in the brain and retina



We are conducting preclinical studies in RPE cell models to establish proof of concept that CT1812 and other S2R modulators from distinct chemical series may be effective in preventing RPE cell dysfunction and cell death. Additional studies are underway to elucidate the key mechanisms by which CT1812 and the S2R complex alter the biological processes that contribute to dry AMD. *In vitro* and *in vivo* preclinical studies are evaluating the utility of CT1812 to impede the death of retinal ganglion cells. Not only is it anticipated that these proof-of-concept studies will allow us to further elucidate the mechanism by which the S2R complex modulators act upon the various disease pathologies, but the learnings from this may also inform appropriate patient selection, time of intervention and clinical outcome measurements to enable a successful clinical trial design. We anticipate completing dry AMD preclinical proof-of-concept studies in the second quarter of 2021.

Proposed Phase 2 Clinical Trial Design

We intend to leverage results of our Phase 1 AD trials to accelerate clinical development of CT1812 as a treatment for dry AMD. Accordingly, we intend the first trial in this indication to be configured as a Phase 2 trial. We anticipate the design of this trial to be a double-blind, placebo-controlled, randomized trial involving three dosing groups, two active treatment dose groups and a placebo group. We plan to enroll 180 patients in this 12-month study, with equal participant numbers in each of the three dose groups, with each trial participant dosed daily. Eligibility requirements are anticipated to include individuals 50 years of age or older that have received a diagnosis of dry AMD, with a best corrected visual acuity, or BCVA, score of 24 letters or more, with GA of between 2.5 mm^2 and 17.5 mm^2. The proposed primary endpoint of the trial is change in GA lesion area using fundus autofluorescence imaging. Proposed secondary endpoints are expected to include change in the square root of the GA lesion area, low luminance visual acuity, or LLVA, and BCVA, low luminance visual acuity deficit and drusen volume as measured by optical coherence tomography. We plan on measuring these outcomes at three-month intervals.

S2R Modulators for the Treatment of Synucleinopathies

Substantial cellular and clinical biomarker evidence demonstrate that our S2R modulators, including our clinical drug candidate CT1812, have a beneficial impact on the pathways impaired in synucleinopathies, namely the localization of α-synuclein aggregates in Lewy bodies, which is a chief hallmark of PD and other synucleinopathies. More recently, human genetic evidence has linked SNCA, the gene encoding α-synuclein, to the pathology of synucleinopathies.

We have conducted preclinical studies of S2R ligands in our library, including CT1812, to explore the potential of S2R antagonists to rescue the biological processes that are impaired in synucleinopathies. We intend to conduct clinical studies in DLB, PD and potentially other synucleinopathies as outlined below.

An Overview of Synucleinopathies

Synucleinopathies are a group of neurodegenerative disorders in which the protein alpha-synuclein accumulates abnormally to form inclusions in the cell bodies or axons of neurons or oligodendrocytes. Two of the primary synucleinopathies are PD and DLB, which each involve motor and cognitive dysfunction. While the cell types and brain structures that are affected in PD and DLB vary markedly between the

disorders, synucleinopathies share a characteristic accumulation of α-synuclein aggregates into fibrils, the major constituent of the Lewy bodies that occur inside brain neurons in these diseases.

Increasing evidence suggests that α-synuclein also aggregates into oligomers, and that oligomers are more toxic than fibrils. α-synuclein oligomers contribute to neurodegeneration through a variety of mechanisms including disrupting normal autophagy, and inducing synaptic dysfunction and loss. Synaptic dysfunction and loss contribute to the cognitive and motor symptoms of these diseases.

Synucleinopathies are second only to AD in terms of neurodegenerative disease prevalence. In the United States, as many as one million people suffer from PD and an estimated 1.4 million from DLB.

Limitations of Current Treatments

Most approved therapeutic products treat the motor symptoms of the disease and are related to levodopa and other dopamine agonists. While some existing products provide meaningful symptomatic relief, they have significant side effect risks, fail to address the progression of the disease, and over time gradually lose their effectiveness in treating the symptoms of the disease. There are no currently approved disease-modifying therapeutics for PD or other synucleinopathies.

Rationale for S2R Mechanism of Action for Synucleinopathies

α-synuclein is a protein primarily found in neural tissue that plays a role in neurotransmission. In synucleinopathies such as DLB and PD, α-synuclein builds up in brain cells and forms oligomers that saturably bind to neurons where they impair critical cellular processes, causing synaptic dysfunction and eventual loss. Our decision to pursue the treatment of synucleinopathies with S2R compounds is based on internal and third-party data, indicating that the S2R components PGRMC1 and TMEM97 regulate cell pathways known to be impaired in synucleinopathies, such as autophagy, vesicle trafficking and lipid synthesis; α-synuclein oligomers bind directly to PGRMC1; and synucleinopathies share certain mechanistic similarities with AD, including pathologies related to aberrant oligomeric protein formations.

As summarized below, we believe our preclinical studies provide compelling evidence supporting the use of CT1812 as a potential therapeutic to treat synucleinopathies.

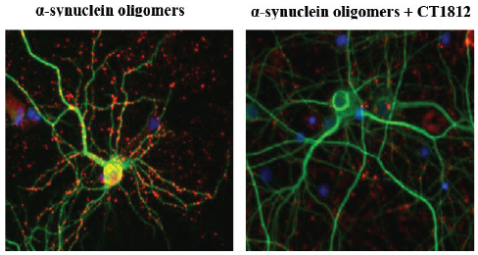
As with oligomers of the Aβ protein in AD, oligomers of α-synuclein are highly toxic when bound to brains cells and internalized. This binding causes cellular stress, including three major pathway disruptions: upregulation of the autophagy receptor LAMP2A, dysregulation of lipid metabolism and a reduction in membrane trafficking. The S2R complex components, PGRMC1 and TMEM97, directly regulate these processes, activities which are compromised by the binding and internalization of α-synuclein oligomers.

Compounds that bind to S2R and block α-synuclein binding and/or internalization are therefore expected to be disease-modifying.

Preclinical Study Support for Clinical Trials

The results of *in vitro* studies suggest that S2R antagonists, such as CT1812, may have disease modifying effect on the synucleinopathies by reversing pathway disruption and dysregulation caused by α-synuclein oligomers. In work funded by a grant from the Michael J. Fox Foundation, α-synuclein oligomers were found to bind to brain cells in culture and are internalized, indicated by the red dots in the image to the left below. With the addition of S2R antagonist CT1812, the binding and thus internalization of the α-synuclein oligomers is inhibited.

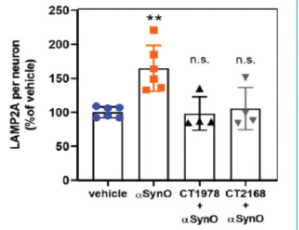
CT1812 blocks the binding and internalization of α-synuclein oligomers the neuronal synapses



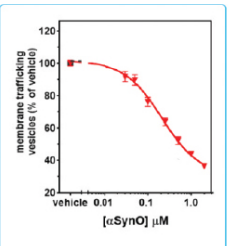
The potential for S2R antagonists to reverse the deleterious cellular effects of α-synuclein oligomers is also reflected in the *in vitro* analysis of LAMP2A expression presented below. LAMP2A is a critical component of chaperone-mediated autophagy, one of several processes that eliminate damaged cellular proteins. Its expression, noted in orange, is upregulated in the presence of the toxic α-synuclein oligomer, likely a compensatory mechanism in response to the cellular insult. S2R antagonists, which block membrane trafficking deficits caused by α-synuclein oligomers, are observed to inhibit the upregulation of LAMP2A, as evidenced by the dark and light gray in the below chart. As these antagonists are selective for the S2R complex, their ability to reverse the effects of α-synuclein on LAMP2A expression provides compelling evidence of the S2R complex's importance in the regulation of this autophagy pathway.

In vitro analysis further illustrates α-synuclein oligomers' dose-dependent inhibition of membrane trafficking. Importantly, oligomer-related inhibition was noted to be four-fold higher than that observed with high concentrations of monomeric α-synuclein, illustrative of the significantly greater toxicity of α-synuclein oligomers. The addition of CT1812 was observed to reverse the membrane trafficking deficit related to the presence of α-synuclein oligomer, while having no effect on membrane activity when dosed in its absence.

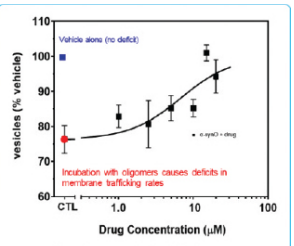
S2R antagonists reverse the effects of α-synuclein oligomers on LAMP2A expression and trafficking



Presence of α-synuclein oligomers in neuronal cultures cause increase in expression of LAMP-2A, a protein required for autophagy, by >75% (orange). Addition of S2R ligands normalize LAMP-2A expression (black and gray) to levels similar to those in vehicle-treated cultures (blue).



α-synuclein oligomers cause trafficking deficits in neuronal cultures.



α-synuclein oligomers (1.0 μM final concentration) cause deficits in membrane trafficking rates in neuronal cultures (red dot). Addition of an S2R ligand reverses this deficit to a level similar to vehicle-treated (blue dot).

Proposed Phase 2 Clinical Trial in Dementia with Lewy bodies (DLB)

We plan to initiate a Phase 2 clinical trial evaluating the use of CT1812 to treat patients diagnosed with DLB in the second half of 2021. We anticipate the design of this trial to be a double-blind, randomized trial involving three dose groups, two active treatment cohorts and a placebo group. We expect to enroll 120 patients in a six-month study, with equal participant numbers in each of the three dose groups, with daily (QD) dosing. Eligibility requirements will include individuals between 50 and 80 years of age that have received a diagnosis of DLB and have a mini-mental state exam, or MMSE, score of between 18 and 27.

Proposed clinical endpoints of the trial include safety and physical activity measurements, cognitive assessments, and PK and pharmacodynamic biomarker analyses compared to baseline measurements recorded at the beginning of the trial. In addition, CSF will be collected and analyzed for α-synuclein content and established patterns of differential protein expression.

Proposed Parkinson's Disease (PD) Clinical Program

Subject to additional funding, we plan to study several lead molecules from chemically distinct series to measure their ability to rescue cell death. We would also study α-synuclein pathology and motor deficits in two mechanistically distinct in vivo models of PD. In parallel, these studies will elucidate the mechanism of action by which S2R modulators are efficacious in PD and provide essential data to support biomarker nomination for PD.

Additional Product Candidates

Many degenerative disorders likely involve a dysfunctional cellular damage response mechanism and significant evidence is emerging which highlights the importance of the S2R complex and its components in regulating this response. The complex likely contains a number of relevant binding sites that may allow for multiple disease intervention approaches, making it an attractive therapeutic target. Accordingly, we are actively engaged in a number of earlier-stage discovery programs which are built upon our identification of five structurally distinct chemical series. From these series we have multiple leads which will be optimize each of our lead series. Each of these leads has demonstrated favorable potency with variable selectivity in early preclinical testing and each of the molecular series possesses distinct bioavailability and PK properties, including differences in half-life and blood-brain permeability.

Grant Funding

Historically, we have sought grant funding to strategically advance our programs. To date, we have secured non-dilutive funds from the NIA, the Michael J Fox Foundation, or MJFF and other groups to pursue our commonly aligned interests of developing therapeutics for neurodegenerative disorders. Taken together, the company has been awarded approximately $123 million in grants for the advancement of our pipeline programs. Of this, approximately $113 million in cumulative non-dilutive grants have been awarded by the NIA to fund development of CT1812 for the treatment of Alzheimer's disease.

Funding Org	Year	Project	Amount
National Institute on Aging (NIH)	2016	COG0101 Ph1b first-in-patient trial for CT1812	$2,410,669
National Institute on Aging (NIH)	2016	COG0102 Ph1b/2a Clinical Trial for CT1812	$2,410,669
National Institute on Aging (NIH)	2017	COG0104 Ph1 SNAP Study: CSF Catheter	$2,527,271
National Institute on Aging (NIH)	2017	COG0105 Ph1 SPARC Study: SV2a PET	$4,795,774
National Institute on Aging (NIH)	2018	COG0201 Ph2 SHINE Study	$16,848,329
National Institute on Aging (NIH)	2019	COG0202 Ph2 SEQUEL Study: qEEG	$3,300,642
National Institute on Aging (NIH)	2020	COG0203 Ph2 Study with ACTC	$80,974,766
NIH and others	2010-2018	Ten Preclinical Programs	$10,194,975
			$123,463,095

Intellectual Property

We seek to protect and enhance our proprietary technology, inventions, and improvements that are commercially important to the development of our business by seeking, maintaining, and defending patent rights, in the United States and internationally, whether developed internally or licensed from third parties. We will also seek to rely on regulatory protection afforded through inclusion in expedited development and review, data exclusivity, market exclusivity and patent term extensions where available.

Company Owned Intellectual Property

As of May 5, 2021, our intellectual property portfolio contained eight issued U.S. patents, 50 issued foreign patents as well as three pending U.S. provisional applications, three pending U.S. patent applications, one pending PCT application and 22 foreign pending patent applications directed to the composition of matter of, pharmaceutical compositions of, methods of use of, and methods for selecting subsets of patients for treatment with our chemical structures, including our lead CT1812. Our current issued patents relating to CT1812 are projected to begin to expire no earlier than 2035, with the composition of matter patent covering CT1812 set to naturally expire in 2035, subject to adjustment or extension of patent term available in a particular jurisdiction. We will likely be awarded Patent Term Extension, or PTE, when CT1812 is approved as a New Chemical Entity, or NCE, that will extend the term of the CT1812 composition of matter patent by up to five years, and we anticipate pursuing additional patents to further protect CT1812 and to further extend the patent term associated with CT1812. We expect to file additional patent applications in support of current and new product candidates as well as new platform and core technologies.

We are the exclusive owner of six patent families that include several granted U.S. patents and pending U.S. patent applications, as well as granted patents and pending patent applications in numerous foreign jurisdictions, relating to compositions of matter and pharmaceutical compositions of CT1812, analogs of CT1812, and the use of CT1812 for the treatment in certain diseases, disorders and conditions including AD, dry AMD, PD, and synucleinopathies.

The first of these patent families is directed to compositions of matter of CT1812, pharmaceutical compositions of CT1812, methods of using CT1812 for inhibiting amyloid beta effects on a neuronal cell, and methods of using CT1812 to treat AD, and we are the exclusive owner of this patent family in the United States and certain foreign jurisdictions, including Australia, Brazil, Canada, China, the European Union, Hong Kong, India, Israel, Japan, South Korea, Mexico, New Zealand, Russia, and South Africa. As of May 5, 2021, this patent family includes granted patents claiming composition of matter of CT1812, pharmaceutical compositions of CT1812, methods of using CT1812 for inhibiting amyloid beta effects on a neuronal cell, and methods of using CT1812 to treat AD in the United States (three patents), Australia, China, the European Union, Hong Kong, Israel, Japan, Mexico, Russia and South Africa. This patent family also includes a pending U.S. patent application and pending application in certain foreign jurisdictions including Brazil, Canada, the European Union, India, New Zealand, and South Korea. This patent family has a natural expiration date in 2035 subject to any adjustment or extension of patent term that may be available in in a particular jurisdiction such as PTE following NDA approval in the United States or extension of patent term via a Supplementary Protection Certificate, or SPC, following EMEA marketing authorization. Upon approval of the NDA for CT1812 in the United States, the patents in this family claiming compositions of matter of CT1812, pharmaceutical compositions of CT1812, and methods of using CT1812 for inhibiting amyloid beta effects on a neuronal cell, and methods of using CT1812 to treat AD will be eligible to be listed in the FDA's publication "*Approved Drug Products with Therapeutic Equivalence Evaluations*," which we refer to as the Orange Book. These patents complement the regulatory exclusivity by providing the basis for an additional waiting periods prior to the FDA's approval of an abbreviated new drug application, or ANDA, or 505(b)(2) applicant. If an ANDA or 505(b)(2) applicant were to file its application referencing the NDA for CT1812 before expiration of our composition of matter, pharmaceutical composition, and method of use patents and the applicant asserted that our patents identified on the Orange Book to be invalid or not be infringed, it may be subject to additional waiting periods prior to the FDA's approval (including a statutory 30-month stay if we sue for infringement, or a shorter period if the patent expires or there are certain settlements or judicial decisions in the patent litigation, starting at the end of the five-year NCE regulatory exclusivity period).

In addition to patent exclusivity, under the provisions of the Hatch-Waxman Act, upon any approval in the United States, we believe that CT1812 will be eligible for five-year NCE regulatory exclusivity, during which time no 505(b)(2) NDA or ANDA can be approved that contains the same active moiety as the chemical entity in the CT1812 NDA. When approved in Europe, CT1812 will also be eligible for 10 years of data and market exclusivity which is extendible for an additional year upon market authorization for one or more new indications during the first eight years of the data and market exclusivity period.

We also own two families of pending patent application directed to methods for selecting subsets of patients with AD for treatment with CT1812 and methods of modulating amyloid beta monomer and

oligomer levels using CT812, as well as three pending provisional patent applications that are directed to radiolabeled forms of CT1812, method of treating dry AMD with CT1812, and methods of treating various neurologic disease including Parkinson's disease and synucleinopathies with CT1812. Any of these applications, if issued, will have a natural expirations between 2038 and 2042, subject to any adjustment or extension of patent term that may be available such as PTE following NDA approval in the United States as well as any term limitations based upon earlier expiring patents.

Additional Product Candidates

We are the exclusive owner of three patent families that include several pending U.S. patent applications, as well as pending patent applications in numerous foreign jurisdictions directed to additional product candidates including CT1978 and CT2168 among others. These patent families have expirations no earlier than 2038 subject to any adjustment or extension of patent term that may be available such as PTE following NDA approval in the United States as well as any term limitations based upon earlier expiring patents.

Manufacturing Strategy

We oversee and manage third party contract manufacturing organizations to support development and manufacture of product candidates for our clinical trials, and, if we receive marketing approval, we will rely on such manufacturers to meet commercial demand. We expect this strategy will enable us to maintain a more efficient infrastructure, avoiding dependence on our own manufacturing facility and equipment, while simultaneously enabling us to focus our expertise on the clinical development and future commercialization of our products. Currently, we rely on and have agreements with a single third-party contract manufacturer to supply the drug substance for CT1812 and with a single third-party contract manufacturer to manufacture clinical trial supplies of CT1812, and we expect to enter into commercial supply agreements with such manufacturers prior to any potential approval of CT1812. We continue to develop a commercial route for CT1812 API and to meet all requirements for our planned clinical trials. We plan to transfer the API manufacture to a larger third-party manufacturer once the commercial route is developed. The current API manufacturer is able to supply all of our needs for the planned clinical studies.

CT1812 drug product is manufactured via conventional pharmaceutical processing procedures, employing commercially available excipients and packaging materials. The procedure and equipment employed for manufacture and analysis are consistent with standard organic synthesis or pharmaceutical production, and are transferable to a range of manufacturing facilities, if needed. We have selected a larger third-party drug product manufacturer and will be executing technology transfer of drug product manufacture to a larger manufacturer. We will also maintain the current drug substance and product manufacturer as part of our supply chain strategy.

Commercialization Strategy

We currently have no marketing, sales or distribution capabilities. In order to commercialize any products that are approved for commercial sale, we must either develop a sales and marketing infrastructure or collaborate with third parties that have sales and marketing experience.

We may to seek third-party support from established pharmaceutical and biotechnology companies for those products that would benefit from the promotional support of a large sales and marketing force. In these cases, we might seek to promote our products in collaboration with marketing partners or rely on relationships with one or more companies with large established sales forces and distribution systems.

We may elect to establish our own sales force to market and sell a product for which we obtain regulatory approval if we expect that the geographic market for a product we develop on our own is limited or that the prescriptions for the product will be written principally by a relatively small number of physicians. If we decide to market and sell any products ourselves, we do not expect to establish direct sales capability until shortly before the products are approved for commercial sale.

Competition

We face substantial competition from multiple sources, including large and specialty biotechnology and pharmaceutical companies, academic research institutions and governmental agencies and public and private

research institutions. Our competitors compete with us on the level of the technologies employed, or on the level of development of product candidates. In addition, many small biotechnology companies have formed collaborations with large, established companies to (i) obtain support for their research, development and commercialization of products or (ii) combine several treatment approaches to develop longer lasting or more efficacious treatments that may potentially directly compete with our current or future product candidates. We anticipate that we will continue to face increasing competition as new therapies and combinations thereof, technologies, and data emerge.

In addition to the current standard of care treatments for patients with neurodegenerative diseases, numerous commercial and academic preclinical studies and clinical trials are being undertaken by a large number of parties to assess technologies and product candidates in the CNS field.

Many of our competitors, either alone or in combination with their respective strategic partners, have significantly greater financial resources and expertise in research and development, manufacturing, the regulatory approval process, and marketing than we do. Mergers and acquisition activity in the biopharmaceutical sector is likely to result in greater resource concentration among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through sizeable collaborative arrangements with established companies. These competitors also compete with us in recruiting and retain qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if one or more of our competitors develop and commercialize products that are safer, more effective, better tolerated, or of greater convenience or economic benefit than our proposed product offering. Our competitors also may be in a position to obtain FDA or other regulatory approval for their products more rapidly, resulting in a stronger or dominant market position before we are able to enter the market. The key competitive factors affecting the success of all of our programs are likely to be product safety, efficacy, convenience and treatment cost.

Employees and Human Capital Resources

As of December 31, 2020, we had 20 employees, 18 of whom were full-time and nine of whom were engaged in research and development activities. Six of our employees hold Ph.D. or M.D. degrees. None of our employees are represented by a labor union. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Facilities

Our corporate headquarters is located in the greater New York City area with laboratories in Pittsburgh, PA, where we currently lease approximately 6,068 square feet of laboratory and office space. We believe that our current facilities are adequate to meet our ongoing needs, and that, if we require additional space, we will be able to obtain additional facilities on commercially reasonable terms.

Government Regulation

Government authorities in the United States, at the federal, state, and local level, and other countries extensively regulate, among other things, the research, development, nonclinical and clinical testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing, and export and import of products such as those we are developing. Generally, before a new drug can be marketed, considerable data must be generated, which demonstrate the drug’s quality, safety, and efficacy. Such data must then be organized into a format specific for each regulatory authority, submitted for review and approved by the regulatory authority.

U.S. Drug Development Process

In the United States, the FDA regulates drugs under the federal Food, Drug, and Cosmetic Act, or FDCA, and its implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, the approval process or after approval may subject an applicant to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement, or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests, animal studies, and formulation studies in accordance with FDA's good laboratory requirements and other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval by an independent IRB ethics committee, either centralized or with respect to each clinical site, before each clinical trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with GCP requirements to establish the safety and efficacy of the proposed drug for its intended use;
- submission to the FDA of an NDA after completion of all pivotal trials;
- determination by the FDA within 60 days of its receipt of an NDA to accept the filing for substantive review;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with cGMP requirements to ensure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality, and purity, and of selected clinical investigation sites to assess compliance with GCPs;
- FDA review and approval of the NDA to permit commercial marketing of the product for particular indications for use in the United States;
- compliance with any post-approval requirements, including potential requirements to conduct any post-approval studies required by FDA or the potential requirement to implement a REMS; and
- compliance with the Pediatric Research Equity Act, or PREA, which requires either exemption from the requirements or may require conducting clinical research in a pediatric population.

Prior to beginning the first clinical trial with a product candidate in the United States, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, PK, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the clinical trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which may review data and endpoints at designated check points, make recommendations and/or halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

Phase One: The product candidate is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism, and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing;

Phase Two: The product candidate is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages, and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning;

Phase Three: The product candidate is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk.

Post-approval clinical trials, sometimes referred to as Phase 4 studies, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of an NDA.

The FDA or the sponsor may place a clinical trial on a full or partial clinical hold at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk or concerns related to chemistry, manufacturing and controls. A clinical hold is an order issued by the FDA to delay or suspend an investigation Following the issuance of a clinical hold or a partial clinical hold, a clinical trial may only proceed after FDA has notified the sponsor that any deficiencies have been corrected and FDA is authorizing the trial to proceed. In addition, an IRB representing each institution participating in the clinical trial must review and approve the plan for any clinical trial before it commences at that institution, and the IRB must conduct continuing review and reapprove the study at least annually. The IRB must review and approve, among other things, the study protocol and informed consent information to be provided to study subjects. An IRB must operate in compliance with FDA regulations. An IRB can suspend or terminate approval of a clinical trial at its institution, or an institution it represents, if the clinical trial is not being conducted in accordance with the IRB’s requirements or if the product candidate has been associated with unexpected serious harm to patients. Finally, some clinical trials are overseen by an independent group of qualified experts organized by the sponsor, known as a data safety monitoring board

or committee. Depending on its charter, this group may determine whether a clinical trial may move forward at designated check points based on access to certain data from the clinical trial.

During the development of a new drug, sponsors are given opportunities to meet with the FDA at certain points. These points may be prior to submission of an IND, at the end of Phase 2, and before an NDA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and the FDA to reach agreement on the next phase of development. Sponsors typically use the meetings at the end of the Phase 2 clinical trial to discuss Phase 2 clinical results and present plans for the pivotal Phase 3 clinical trials that they believe will support approval of the new drug.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the manufacturer must develop methods for testing the identity, strength, quality, and purity of the final drug. In addition, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

While the IND is active and before approval, progress reports summarizing the results of the clinical trials and nonclinical studies performed since the last progress report must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the same or similar drugs, findings from animal or *in vitro* testing suggesting a significant risk to humans, and any clinically important increased incidence of a serious suspected adverse reaction compared to that listed in the protocol or investigator brochure.

NDA Review and Approval Process

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development nonclinical and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product. The submission of an NDA is subject to the payment of substantial user fees; a waiver of such fees may be obtained under certain limited circumstances. Additionally, no user fees are assessed on NDAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacturing is cGMP-compliant to assure and preserve the product's identity, strength, quality, and purity. Under the Prescription Drug User Fee Act, or PDUFA, guidelines that are currently in effect, the FDA has a goal of ten months from the date of "filing" of a standard NDA for a new molecular entity to review and act on the submission. This review typically takes 12 months from the date the NDA is submitted to FDA because the FDA has approximately two months to make a "filing" decision after the application is submitted. The FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review The FDA may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing

processes and facilities are in compliance with cGMP and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCPs. If the FDA determines that the application, manufacturing process, or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates an NDA, it will issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the drug with prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete, and the application will not be approved in its present form. A Complete Response Letter usually describes the specific deficiencies in the NDA identified by the FDA and may require additional clinical data, such as an additional pivotal Phase 3 clinical trial or other significant and time-consuming requirements related to clinical trials, nonclinical studies, or manufacturing. If a Complete Response Letter is issued, the sponsor must resubmit the NDA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the NDA does not satisfy the criteria for approval.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the NDA with a REMS to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a medicine and to enable patients to have continued access to such medicines by managing their safe use. It could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries, and other risk minimization tools. The FDA also may offer conditional approval subject to, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may also require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies. In addition, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could impact the timeline for regulatory approval or otherwise impact ongoing development programs.

Expedited Development and Review Programs

The FDA has a fast track designation program that is intended to expedite or facilitate the process for reviewing new drug products that meet certain criteria. Specifically, new drugs are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. With regard to a fast track product, the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA. CT1812 was awarded Fast Track designation by the FDA in 2016.

Any product submitted to the FDA for approval, including a product with a fast track designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis, or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug designated for priority review in an effort to facilitate the review. The FDA endeavors to review applications with priority review designations within six months of the filing date as compared to ten months for review of new molecular entity NDAs under its current PDUFA review goals.

In addition, a product may be eligible for accelerated approval. Drug products intended to treat serious or life-threatening diseases or conditions may be eligible for accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. In addition, the FDA currently requires pre-approval of promotional materials as a condition for accelerated approval, which could adversely impact the timing of the commercial launch of the product.

The Food and Drug Administration Safety and Innovation Act established a category of drugs referred to as "breakthrough therapies" that may be eligible to receive breakthrough therapy designation. A sponsor may seek FDA designation of a product candidate as a "breakthrough therapy" if the product is intended, alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance. The breakthrough therapy designation is a distinct status from both accelerated approval and priority review, which can also be granted to the same drug if relevant criteria are met. If a product is designated as breakthrough therapy, the FDA will work to expedite the development and review of such drug.

Fast track designation, priority review, accelerated approval, and breakthrough therapy designation do not change the standards for approval, but may expedite the development or approval process. Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened. We may explore some of these opportunities for our product candidates as appropriate.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There are continuing, annual program fees for any marketed products. Drug manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters, or untitled letters;

- clinical holds on post-approval or Phase IV clinical studies, if applicable;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment, or exclusion from federal healthcare programs; and
- mandated modification of promotional materials and labeling and the issuance of corrective information.

Under the Pediatric Research Equity Act (PREA) an NDA must contain data to assess the safety and efficacy of the applicant product for indications in applicable pediatric populations. It must also contain information to support dose administration for pediatric populations where the drug may be utilized. FDA has the ability to grant complete waivers, partial waivers, or deferrals for compliance with PREA. PREA requirements may be waived for applications for approval of drug candidates intended to treat, mitigate, prevent, diagnose or cure diseases and other conditions that do not occur in pediatric populations. Generally PREA does not apply for drug candidates which have obtained an orphan designation, unless otherwise regulated by FDA. Despite this, separate PREA compliance or waivers may still be required for each product indication. Although noncompliance with PREA will generally not be considered for withdrawal of an approval it may be considered by FDA as the sole basis for enforcement action such as injunction or seizure as non-compliance and may render the drug misbranded.

The FDA closely regulates the marketing, labeling, advertising, and promotion of drug products. A company can make only those claims relating to safety and efficacy that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising, and potential civil and criminal penalties. Physicians may prescribe, in their independent professional medical judgment, legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products. The federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined companies from engaging in off-label promotion. The FDA and other regulatory agencies have also required that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA-approved labelling.

Marketing Exclusivity

Market exclusivity provisions authorized under the FDCA can delay the submission and approval of certain marketing applications for products containing the same active ingredient. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to obtain approval of an NDA for a NCE. A drug is an NCE if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. The FDCA also permits patent term restoration of up to five years as compensation for a patent term lost during product development and FDA regulatory review process to the first applicant to obtain approval of an NDA for a new chemical entity in the United States. Patent-term restoration, however, cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. During the NCE exclusivity period, the FDA may not approve or even accept for review an ANDA or an NDA submitted under Section 505(b)(2) (505(b)(2) NDA), submitted by another company for another drug based on the same active moiety, regardless of whether the drug is intended for the same indication as the original innovative drug or for another indication, where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed

in the FDA's publication *Approved Drug Products with Therapeutic Equivalence Evaluations*, which we refer to as the Orange Book, with the FDA by the innovator NDA holder. Upon approval of an NDA, each of the patents listed in the application for the drug is then published in the Orange Book. These products may be cited by potential competitors in support of approval of an ANDA or 505(b)(2) NDA. Any competitor who files an ANDA seeking approval of a generic equivalent version of a drug listed in the Orange Book or a 505(b)(2) NDA referencing a drug listed in the Orange Book must make patent certifications to the FDA that (1) no patent information on the drug or method of use that is the subject of the application has been submitted to the FDA; (2) the patent has expired; (3) the date on which the patent has expired and approval will not be sought until after the patent expiration; or (4) the patent is invalid or will not be infringed upon by the manufacture, use, or sale of the drug product for which the application is submitted. Generally, the ANDA or 505(b)(2) NDA cannot be approved until all listed patents have expired, except where the ANDA or 505(b)(2) NDA applicant challenges a listed patent through the last type of certification, also known as a paragraph IV certification. If the applicant does not challenge the listed patents or indicates that it is not seeking approval of a patented method of use, the ANDA or 505(b)(2) NDA application will not be approved until all of the listed patents claiming the referenced product have expired. If the ANDA or 505(b)(2) NDA applicant has provided a paragraph IV certification the applicant must send notice of the paragraph IV certification to the NDA and patent holders once the application has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the paragraph IV certification. If the paragraph IV certification is challenged by an NDA holder or the patent owner(s) asserts a patent challenge to the paragraph IV certification, the FDA may not approve that application until the earlier of 30 months from the receipt of the notice of the paragraph IV certification, the expiration of the patent, when the infringement case concerning each such patent was favorably decided in the applicant's favor or settled, or such shorter or longer period as may be ordered by a court. This prohibition is generally referred to as the 30-month stay. In instances where an ANDA or 505(b)(2) NDA applicant files a paragraph IV certification, the NDA holder or patent owner(s) regularly take action to trigger the 30-month stay, recognizing that the related patent litigation may take many months or years to resolve. Thus, approval of an ANDA or 505(b)(2) NDA could be delayed for a significant period of time depending on the patent certification the applicant makes and the reference drug sponsor's decision to initiate patent litigation. If the drug has NCE exclusivity and the ANDA is submitted four years after approval, the 30-month stay is extended so that it expires 7 1/2 years after approval of the innovator drug, unless the patent expires or there is a decision in the infringement case that is favorable to the ANDA applicant before then.

The FDCA alternatively provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages, or strengths of an existing drug. This three-year exclusivity covers only the modification for which the drug received approval on the basis of the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for drugs containing the active agent for the original indication or condition of use. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to any nonclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric exclusivity is another type of marketing exclusivity available in the United States. Pediatric exclusivity provides for an additional six months of marketing exclusivity attached to another period of exclusivity if a sponsor conducts clinical trials in children in response to a written request from the FDA. The issuance of a written request does not require the sponsor to undertake the described clinical trials. The indications the Company is currently pursuing for its product candidates will not be eligible for pediatric exclusivity because they are age-related degenerative diseases and disorders that do not occur in the pediatric population. In addition, orphan drug exclusivity, as described above, may offer a seven-year period of marketing exclusivity, except in certain circumstances.

Other Healthcare Laws

Pharmaceutical manufacturers are subject to additional healthcare laws, regulation, and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct

their business. Such laws include, without limitation, U.S. federal anti-kickback, anti-self-referral, false claims, transparency, including the federal Physician Payments Sunshine Act, consumer fraud, pricing reporting, data privacy, data protection, and security laws and regulations as well as similar foreign laws in the jurisdictions outside the U.S. Similar state and local laws and regulations may also restrict business practices in the pharmaceutical industry, such as state anti-kickback and false claims laws, which may apply to business practices, including but not limited to, research, distribution, sales, and marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, or by patients themselves; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information; state and local laws which require the tracking of gifts and other remuneration and any transfer of value provided to physicians, other healthcare providers and entities; and state and local laws that require the registration of pharmaceutical sales representatives; and state and local laws governing the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts. For example, California recently enacted the CPPA, which creates new individual privacy rights for California consumers (as defined in the law) and places increased privacy and security obligations on entities handling certain personal data of consumers or households. The CCPA requires covered companies to provide new disclosure to consumers about such companies' data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA took effect on January 1, 2020, and the California Attorney General may bring enforcement actions for violations of the CCPA until January 2023. Further, California voters approved a new privacy law, the California Privacy Rights Act, or CPRA, in the November 3, 2020 election. The final text of the CPRA will be promulgated by July 1, 2022. The CPRA will be fully effective starting on January 1, 2023. The CPRA will significantly modify the CCPA, including by expanding consumers' rights with respect to certain sensitive personal information. The CPRA also creates a new state agency, the California Privacy Protection Agency, that will be vested with authority to implement and enforce the CCPA and the CPRA. New legislation proposed or enacted in various other states will continue to shape the data privacy environment nationally.

The risk of our being found in violation of these or other laws and regulations is increased by the fact that many have not been fully interpreted by the regulatory authorities or the courts and their provisions are open to various interpretations. These laws and regulations are subject to change, which can increase the resources needed for compliance and delay drug approval or commercialization. Any action brought against us for violations of these laws or regulations, even successfully defended, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Also, we may be subject to private "qui tam" actions brought by individual whistleblowers on behalf of the federal or state governments. Actual or alleged violation of any such laws or regulations may lead to investigations and other claims and proceedings by regulatory authorities and in certain cases, private actors, and violation of any of such laws or any other governmental regulations that apply may result in penalties, including, without limitation, significant administrative, civil and criminal penalties, damages, fines, additional reporting obligations, and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, the curtailment or restructuring of operations, exclusion from participation in government healthcare programs and imprisonment.

The Office of Inspector General, or OIG, continues to make modifications to existing Anti-Kickback Statute, or AKS, safe harbors which may increase liability and risk as well as adversely impact sales relationships. On November 20, 2020, OIG issued the final rule for Safe Harbors under the Federal AKS. This new final rule creates additional safe harbors including ones pertaining to patient incentives. OIG is able to modify safe harbors as well as regulatory compliance requirements which could impact our business adversely. The majority of states also have statutes or regulations similar to these federal laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payer.

Coverage and Reimbursement

Sales of any pharmaceutical product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs,

commercial insurance, and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Significant uncertainty exists as to the coverage and reimbursement status of any newly approved product. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. One third-party payor's decision to cover a particular product does not ensure that other payors will also provide coverage for the product. As a result, the coverage determination process can require manufacturers to provide scientific details, information on cost-effectiveness, and clinical support for the use of a product to each payor separately. This can be a time-consuming process, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

In addition, third-party payors are increasingly reducing reimbursements for pharmaceutical products and related services. The U.S. government and state legislatures have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Third-party payors are increasingly challenging the prices charged, examining the medical necessity and reviewing the cost effectiveness of pharmaceutical products, in addition to questioning their safety and efficacy. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product.

At the state level, there are also new laws and ongoing ballot initiatives that create additional pressure on drug pricing and may affect how pharmaceutical products are covered and reimbursed. A number of states have adopted or are considering various pricing actions, such as those requiring pharmaceutical manufacturers to publicly report proprietary pricing information, limit price increases or to place a maximum price ceiling or cap on certain products. Existing and proposed state pricing laws have added complexity to the pricing of pharmaceutical drug products.

In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. Pharmaceutical products may face competition from lower-priced products in foreign countries that have placed price controls on pharmaceutical products and may also compete with imported foreign products. Furthermore, there is no assurance that a product will be considered medically reasonable and necessary for a specific indication, that it will be considered cost-effective by third-party payors, that an adequate level of reimbursement will be established even if coverage is available, or that the third-party payors' reimbursement policies will not adversely affect the ability for manufacturers to sell products profitably.

Healthcare Reform

In the United States and certain foreign jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes to the healthcare system. In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively, the ACA, was signed into law, which substantially changed the way healthcare is financed by both governmental and private insurers in the United States. By way of example, the ACA increased the minimum level of Medicaid rebates payable by manufacturers of brand name drugs from 15.1% to 23.1%; it required collection of rebates for drugs paid by Medicaid managed care organizations; imposed a non-deductible annual fee on pharmaceutical manufacturers or importers who sell certain "branded prescription drugs" to specified federal government programs; it implemented a new methodology under which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected; it expanded the eligibility criteria for Medicaid programs; it created a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and it established a Center for Medicare Innovation at the Centers for Medicare & Medicaid Services, or CMS, to

test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

Since its enactment, there have been executive, judicial and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. Since January 2017, President Trump signed several Executive Orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, several bills affecting the implementation of certain taxes under the ACA have passed. For example, in 2017, Congress enacted the Tax Act, which eliminated the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year, a process that is commonly referred to as the "individual mandate." In addition, the 2020 federal spending package permanently eliminated, effective January 1, 2020, the ACA-mandated "Cadillac" tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. On December 14, 2018, a Texas U.S. District Court Judge ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. On December 18, 2019, the U.S. Court of Appeals for the 5th Circuit ruled that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the U.S. Supreme Court granted the petitions for writs of certiorari to review the case and held oral arguments in November 2020, although it is unclear when a decision will be made or how the Supreme Court will rule. In addition, there may be other efforts to challenge, repeal, or replace the ACA. We are continuing to monitor any changes to the ACA that, in turn, may potentially impact our business in the future.

President Joseph R. Biden, Jr. signed the Executive Order on Strengthening Medicaid and stating his administration's intentions to reverse the actions of his predecessor and strengthen the ACA. As part of this Executive Order, the Department of Health and Human Services, United States Treasury, and the Department of Labor are to review all existing regulations, orders, guidance documents, policies, and agency actions to consider if they are consistent with ensuring both coverage under the ACA and if they make high-quality healthcare affordable and accessible to Americans. We are unable to predict the likelihood of changes to the Affordable Care Act or other healthcare laws which may negatively impact our profitability. President Biden intends, as his predecessor did, to take action against drug prices which are considered "high." The most likely time to address this would be in the reauthorization of the Prescription Drug User Fee Act, or PDUFA, in 2022 as part of a package bill. Drug pricing continues to be a subject of debate at the executive and legislative levels of U.S. government and we expect to see legislation focusing on this in the coming year. The American Rescue Plan Act of 2021 signed into law by President Biden on March 14, 2021 includes a provision that will eliminate the statutory cap on rebates drug manufacturers pay to Medicaid beginning in January 2024. With the elimination of the cap, manufacturers may be required to compensate states in an amount greater than what the state Medicaid programs pay for the drug.

Other legislative changes have been proposed and adopted since the ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, effective April 1, 2013, which, due to subsequent legislative amendments, will stay in effect through 2030 with the exception of a temporary suspension implemented under various COVID-19 relief legislation from May 1, 2020 through March 31, 2021, unless additional congressional action is taken. Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted legislation designed, among other things, to bring more transparency to product pricing, to review the relationship between pricing and manufacturer patient programs, and to reform government program reimbursement methodologies for pharmaceutical products. The Prescription Drug Pricing Reduction Act, or PDPRA, which was introduced in Congress in 2019, and again in 2020, proposed to, among other things, penalize pharmaceutical manufacturers for raising prices on drugs covered by Medicare Parts B and D faster than the rate of inflation, cap out-of-pocket expenses for Medicare Part D beneficiaries, and proposes a number of changes to how drugs are reimbursed in Medicare Part B. A similar drug pricing bill, the Elijah E. Cummings Lower Drug Costs Now Act proposes to enable direct price negotiations by the federal government on

certain drugs (with the maximum price paid by Medicare capped based on an international index), requires manufacturers to offer these negotiated prices to other payers, and restricts manufacturers from raising prices on drugs covered by Medicare Parts B and D. This Act passed in the House of Representatives when it was introduced in 2019, and it has been introduced again in the 2021 term. We cannot predict whether any proposed legislation will become law and the effect of these possible changes on our business cannot be predicted at this time.

Legal Proceedings

We are not currently a party to any material legal proceedings. From time to time, we may become involved in other litigation or legal proceedings relating to claims arising from the ordinary course of business.

MANAGEMENT

The following table sets forth information regarding our executive officers and directors:

Name	Age	Position(s)
Executive Officers		
Lisa Ricciardi	61	Chief Executive Officer, President and Director
James M. O'Brien	54	Chief Financial Officer
Employee Director		
Susan Catalano, Ph.D.	57	Director and Chief Science Officer
Non-Employee Directors		
Jack A. Khattar	59	Director, Chairman of the Board
Brett P. Monia, Ph.D.	59	Director
Aaron Fletcher, Ph.D.	41	Director
Stephen Sands	64	Director
Peggy Wallace	64	Director
Mark H. Breedlove	64	Director

Executive Officers

Lisa Ricciardi

Ms. Ricciardi has served as our Chief Executive Officer and President since March 2020 and as a member of our board of directors since March 2019. From July 2018 to October 2019, she served as CEO of Suono Bio, a biotech company based on Langer Labs (MIT) technology. Prior to her position at Suono Bio, Ms. Ricciardi was a retained executive for BioBusiness Links from November 2015 to June 2018 where she performed interim operating executive and advisory board roles. She served as the Senior Vice President, Global Corporate & Business Development of Foundation Medicine from July 2014 to November 2015, and Senior Vice President, US and International Business Development of Express Scripts from October 2010 to October 2012 and in both cases, led deal teams to sell the two companies. Ms. Ricciardi was in the commercial division of Pfizer Inc., taking three drugs to launch before being appointed by the Chairman to run Global Business Development. Ms. Ricciardi previously served on the boards of Contrafect (Nasdaq: CFRX), Chimerix (Nasdaq: CMRX), United Drug Healthcare Group, PLC (LSE: UDG) and Sepracor (Nasdaq: SEPR). She was appointed as the executive in residence at Columbia Technology Ventures in January 2020.

Ms. Ricciardi earned a Bachelor of Arts degree cum laude in English and Religion from Wesleyan University and an MBA from the University of Chicago Booth School of Management.

We believe that Ms. Ricciardi is qualified to serve on our board of directors due to the valuable experience she brings in her capacity as our Chief Executive Officer and President along with her extensive experience and knowledge of our industry.

James M. O'Brien

Mr. O'Brien has served as our Chief Financial Officer since October 2019. From February 2014 to October 2019, Mr. O'Brien served as Executive Vice President of finance for Enzo Biochem, Inc. (NYSE: ENZ), a biotechnology company providing reference laboratory services to the medical community. From November 2010 to June 2013, Mr. O'Brien served as Vice President and Corporate Controller for Allergan, Inc., (formerly known as Actavis plc.) which has now been acquired by Abbvie (NYSE: ABBV), a pharmaceutical company. He also previously served as a Vice President at Takeda Pharmaceuticals (NYSE: TAK) (formerly known as Nycomed) from January 2010 to August 2010, Chief Accounting Officer at USI Holdings from January 2008 to August 2009, and Vice President and Corporate Controller at Aptuit, an Evotec company (Frankfurt Stock Exchange: EVT) and pharmaceutical services provider, from July 2005

to December 2007. Mr. O'Brien also held leadership roles at Purdue Pharma, Bristol-Myers Squibb and PricewaterhouseCoopers in the earlier stages of his career.

Mr. O'Brien is a certified public accountant (CPA) with a Bachelor of Accountancy from George Washington University and an MBA from Fordham University.

Employee Director

Susan Catalano, Ph.D.

Dr. Catalano is a pharmaceutical industry executive with 22 years of experience in strategic and operational scientific leadership of neurobiology and oncology drug discovery and development programs. She is currently our Chief Science Officer and member of our board of directors since co-founding our company in 2007 . Dr. Catalano guided the discovery and development of CT1812. She also established the "International Symposium on sigma-2 Receptors (ISS2R): Role in Health and Disease," now in its fifth year, authored numerous publications and patents and continues to serve as principal investigator of several National Institute of Health, or NIH, awards, and has served on various NIH review panels in the areas of drug discovery and clinical development for neurodegenerative diseases and on the editorial Board of Assay and Drug Discovery Technologies for over 10 years. Previously, she held scientific leadership positions at Acumen Pharmaceuticals, Inc. from 2004 to 2007, Rigel Pharmaceuticals, Inc. from 2001 to 2003, and Roche Biosciences from 1999 to 2001.

Dr. Catalano received her Bachelor of Arts from Barnard College and Ph.D. in Neurobiology from U.C. Irvine with postdoctoral training at U.C. Berkeley and Caltech.

We believe that Dr. Catalano is qualified to serve on our board of directors due to her extensive experience leading the company's discovery and development efforts since its inception, scientific expertise on receptor and disease biology, and knowledge of our industry.

Non-employee Directors

Jack A. Khattar

Mr. Khattar has served as member of our board of directors since July 2020 and was appointed chairman in April 2021. Mr. Khattar founded Supernus Pharmaceuticals, Inc., a pharmaceutical company (Nasdaq:SUPN), in 2005 and has served as its President, Chief Executive Officer, Secretary and director since then. Since June 2016, Mr. Khattar has served as a member of the board of directors of scPharmaceuticals Inc., a pharmaceutical company (Nasdaq:SCPH), and has served as its chairperson since June 2016. From 1999 to 2005, Mr. Khattar served in various positions during that time as a board member, President and Chief Executive Officer of Shire Laboratories Inc., the drug delivery subsidiary of Shire plc. From 1999 to 2004, he also served as a member of Shire plc's Executive Committee. Prior to that, Mr. Khattar served as an executive officer and the chairman of the Management Committee at CIMA Labs Inc., a drug delivery company where he was also responsible for business development, corporate alliances and strategic planning. Prior to joining CIMA in 1995, Mr. Khattar held several marketing and business development positions at Merck & Co., Novartis International AG, Playtex and Kodak Company in various locations, including the United States, Europe and the Middle East. Mr. Khattar currently serves on the board of Navitor Pharmaceuticals, Inc., a private company, since 2020 and Supernus Pharmaceuticals (Nasdaq: SUPN) since 2005. He previously served on the board of Rockville Economic Development, Inc. from 2003 to 2013 and Prevacus, Inc., a privately held development stage biotechnology company from 2015 to 2020. Mr. Khattar has also served on the Advisory Board of New Rhein Healthcare, a private equity firm, since 2019.

Mr. Khattar earned his degrees in Marketing with a BBA from American University of Beirut and an MBA from the Wharton School of the University of Pennsylvania.

We believe that Mr. Khattar is qualified to serve on our board of directors due his leadership, executive, managerial, business and pharmaceutical company experience, along with his more than 30 years of industry experience in the development and commercialization of pharmaceutical products.

Brett P. Monia, Ph.D.

Dr. Monia has served as a member of our board of directors since October 2020. Dr. Monia founded Ionis Pharmaceuticals, Inc., a biotechnology company (Nasdaq: IONS), in 1989, and has served as its Chief Executive Officer since January 2020 after serving as the Chief Operating Officer and Senior Vice President since 2018, as a member of its board of directors since March 2019, and in various other positions with the company since its founding. He is also a director of Dynacure LTD, a clinical stage drug development company, since 2016.

Dr. Monia received his Bachelor of Science in Biology, Biological Sciences and Chemistry from Stockton State College and a Ph.D. in Pharmacology from the University of Pennsylvania.

We believe that Dr. Monia is qualified to serve on our board of directors due to his extensive management experience and deep understanding of our industry.

Aaron Fletcher, Ph.D.

Dr. Fletcher has served as a member of our board of directors since July 2015. In 2014, Dr. Fletcher founded Bios Partners, LP, a biotech venture capital firm, and has served as its Managing Partner since then. In 2012, Dr. Fletcher founded Bios Research, LLC, a financial services firm that provides public equity research in the healthcare space tailored to institutional firms and large family offices. He also currently serves as a director of Cue Biopharma (NYSE: CUE) since October 2019, SKW Holdings Corporation (Nasdaq: SWKH) since August 2019, TFF Pharmaceuticals (Nasdaq: TFFP) since March 2018 where he serves as the chairman of the board, AbiliTech Medical, Inc. since November 2016, Actuate Therapeutics, Inc. since January 2015 where he serves as the chairman of the board, and LTI since August 2014.

Dr. Fletcher holds a BS in Biology from York College and received his Ph.D. in Biochemistry from Colorado State University.

We believe that Dr. Fletcher is qualified to serve on our board of directors due to his extensive business experience and board membership in venture capital and life science companies.

Stephen Sands

Mr. Sands has served as member of our board of directors since June 2017. Mr. Sands has served as Vice Chairman of Investment Banking since March 2014 and Chairman of the Healthcare Group at Lazard Group LLC since May 2016 and has held other positions at Lazard since 1994. From July 1986, Mr. Sands worked at McKinsey & Company, leaving as a Partner in the healthcare practice in October 1994. While on leave from McKinsey from December 1987 to August 1990, he co-founded two life sciences companies: Enzytech (acquired by Alkermes) and Opta Food Ingredients (acquired by Stake Technology and now SunOpta). He currently is a director of Cytosite Biopharma Inc., a private biotechnology company, since February 2019. Mr. Sands has previously served as director on the boards of several life sciences companies, including National Imaging Associates (acquired by Magellan Health), Inc. and Isogen LLC. (acquired by Monsanto).

Mr. Sands earned a Bachelor of Arts in Biology from Oberlin College, a Bachelor of Science and Master of Science in Chemical Engineering from Washington University in St. Louis, and an MBA with a concentration in Finance from New York University.

We believe that Mr. Sands is qualified to serve on our board of directors due to his deep knowledge of the life sciences industry and financial advisory experience in the biopharma sector.

Peggy Wallace

Ms. Wallace has served as member of our board of directors since September 2016. Ms. Wallace has served as Co-Chief Executive Officer and Managing Partner of Golden Seeds, LLC and Golden Seeds Funds, an investment company, since 2011 and 2008, respectively, prior to which she served as a Managing Director from 2005 to 2008. Ms. Wallace currently is a member of the boards of directors of two private

companies: Chromis Fiberoptics, a fiber optic products supplier, since 2006, and ShipperBee, a delivery company, since January 2018.

Ms. Wallace received her Bachelor of Arts from George Washington University.

We believe that Ms. Wallace is qualified to serve on our board of directors due to her extensive business experience and experience in venture capital and the life science industry.

Mark H. Breedlove

Mark H. Breedlove has served as member of our board of directors since January 2011. Since 2010, Mr. Breedlove served as General Partner for the Breedlove Family Limited Partnership, a family investment partnership, where he is responsible for all direct investment activity, including a strategy of investing in life sciences companies. Since 2003, Mr. Breedlove also has served as President and CEO of Keystone Profiles, Ltd., a steel manufacturing company. From 1999 to 2000, Mr. Breedlove served as President, COO and a member of the Board of Directors of Qualitor Inc., an aftermarket vehicle parts company.

Mr. Breedlove has a Bachelor of Science degree in Business Administration, Finance, from the Pennsylvania State University. He also has an MBA with an emphasis in Finance from the University of Michigan.

We believe that Mr. Breedlove is qualified to serve on our board of directors due to his experience as an investor and his experience with financial matters in a variety of businesses.

Family Relationships

There are no family relationships among our directors and executive officers.

Board Composition and Election of Directors

Our board of directors is currently comprised of eight directors. Six of our directors qualify as independent directors in accordance with the independent director guidelines of Nasdaq. The election of the members of our board of directors is currently governed by the third amended and restated voting agreement that we entered into with certain holders of our common stock and convertible preferred stock and the related provisions of our second amended and restated certificate of incorporation. Pursuant to our third amended and restated voting agreement and second amended and restated certificate of incorporation, our current directors were elected as follows:

- Ms. Wallace was elected as the designee of Golden Seeds Cognition Therapeutics LLC, Golden Seeds Fund LP, Golden Seeds Advisors Fund 2 LP and/or Golden Seeds Fund 2 LP and/or any of their affiliates;
- Dr. Fletcher was elected as a designee of BIOS Memory SPV I, LP and/or any of its affiliates;
- Dr. Monia was elected by the holders of our common stock and convertible preferred stock and designated as an industry expert;
- Ms. Ricciardi was elected by the holders of our common stock and convertible preferred stock and designated as our then-serving and current Chief Executive Officer;
- Mr. Breedlove, Mr. Khattar and Mr. Sands were elected by the holders of our common stock and our convertible preferred stock; and
- Dr. Catalano was elected as the designee by certain holders pursuant to a voting agreement that terminates upon closing of this offering.

After this offering, the number of directors will be fixed by our board of directors, subject to the terms of our third amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the closing of this offering. Each of our current directors will continue to serve as a director until the election and qualification of his or her successor, or until his or her earlier death, resignation or removal.

Classified Board of Directors

In accordance with our third amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, our directors will be divided into three classes serving staggered three-year terms. At each annual meeting of stockholders, a class of directors will be subject to re-election for a three-year term. As a result, only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Our current directors will be divided among the three classes as follows:

- the Class I directors will be , and , and their terms will expire at the first annual meeting of stockholders held following the closing of this offering;
- the Class II directors will be , and , and their terms will expire at the second annual meeting of stockholders held following the closing of this offering; and
- the Class III directors will be , and , and their terms will expire at the third annual meeting of stockholders held following the closing of this offering.

Each director's term continues until the election and qualification of his or her successor, or his or her earlier death, resignation or removal. Our third amended and restated certificate of incorporation and our amended and restated bylaws, which will become effective immediately prior to the closing of this offering, will authorize only our board of directors to fill vacancies on our board of directors. Any increase or decrease in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The classification of our board of directors may have the effect of delaying or preventing a change in control or management. See "Description of Capital Stock — Anti-Takeover Provisions of Delaware Law and our Charter Documents" for a discussion of other anti-takeover provisions will be included in our third amended and restated certificate of incorporation.

Board Leadership Structure

Our board of directors is currently led by our Chairman, Mr. Khattar, an independent director. Our board of directors recognizes that it is important to determine an optimal board leadership structure to ensure the independent oversight of management as the company continues to grow. We separate the roles of chief executive officer and chairman of the board of directors in recognition of the differences between the two roles. The chief executive officer is responsible for setting the strategic direction for our company and the day-to-day leadership and performance of our company, while the chairman of the board of directors provides guidance to the chief executive officer and presides over meetings of the full board of directors. We believe that this separation of responsibilities provides a balanced approach to managing the board of directors and overseeing our company.

Our board of directors has concluded that our current leadership structure is appropriate at this time. However, our board of directors will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Role of Board in Risk Oversight

Risk assessment and oversight are an integral part of our governance and management processes. Our board of directors encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings, and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Throughout the year, senior management reviews these risks with the board of directors at regular board meetings as part of management presentations that focus on particular business functions, operations or strategies, and presents the steps taken by management to mitigate or eliminate such risks.

Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through our board of directors as a whole, as well as through various standing committees of our board of directors that address the risks inherent in their respective areas of oversight. While our board of directors is responsible for monitoring strategic risk exposure, our audit committee

oversees management of financial reporting, compliance and litigation risks, as well as the steps management has taken to monitor and control such exposures. Our nominating and corporate governance committee manages risks associated with the independence of our board of directors, potential conflicts of interest and the effectiveness of our board of directors and our compensation committee is responsible for overseeing the management of risks relating to our executive compensation policies, plans and arrangements and the extent to which those policies or practices increase or decrease risks for our company.

Director Independence

In connection with this offering, we intend to apply to list our common stock on the Nasdaq Global Market. Under the Nasdaq listing rules, or the Listing Rules, independent directors must comprise a majority of a listed company's board of directors within a specified period following the closing of this offering. In addition, the Nasdaq Listing Rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and governance committees be independent. Under the Nasdaq Listing Rules, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act. In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other board committee: (i) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries; or (ii) be an affiliated person of the listed company or any of its subsidiaries. We intend to satisfy the audit committee independence requirements of Rule 10A-3 as of the closing of this offering.

Additionally, compensation committee members must not have a relationship with us that is material to the director's ability to be independent from management in connection with the duties of a compensation committee member. We intend to satisfy the compensation committee independence requirements as of the closing of this offering.

Our board of directors has undertaken a review of the independence of each director and determined that all of our directors, other than Ms. Ricciardi and Dr. Catalano, qualify as "independent" directors in accordance with the Nasdaq Listing Rules. Ms. Ricciardi and Dr. Catalano are not considered independent by virtue of their position as our Chief Executive Officer and President, and as our Chief Science Officer, respectively. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director's business and personal activities and relationships as they may relate to us and our management.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee. Our board of directors may establish other committees to facilitate the management of our business, each of which have the composition and responsibilities described below. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Each committee intends to adopt a written charter that satisfies the applicable rules and regulations of the SEC and Nasdaq Listing Rules, which we will post on our website at www.cogrx.com upon the closing of this offering.

Audit Committee

Our audit committee consists of , and . Our board of directors has determined that each member of our audit committee is independent under the Nasdaq Listing Rules and Rule 10A-3(b)(1) of the Exchange Act. The chair of our audit committee is . Our board of directors has determined that each member of the audit committee can read and understanding fundamental consolidated financial statements and that is an "audit committee financial expert" as such term is currently defined in Item 407(d)(5) of Regulation S-K. Our audit committee is directly responsible for, among other things:

- selecting and hiring our independent registered public accounting firm to audit our consolidated financial statements;
- ensuring the independence of the independent registered public accounting firm;
- discussing the scope and results of the audit with the independent registered public accounting firm and reviewing, with management and that firm, our interim and year-end operating results;
- establishing procedures for employees to anonymously submit concerns about questionable accounting or audit matters;
- considering the adequacy of our internal controls and internal audit function;
- monitoring compliance with the code of business and conduct and ethics for financial management;
- reviewing material related party transactions or those that require disclosure; and
- approving or, as permitted, pre-approving all audit and non-audit services to be performed by the independent registered public accounting firm.

Compensation Committee

Our compensation committee consists of , and . Our board of directors has determined that each member of this committee is a non-employee director, as defined by Rule 16b-3 promulgated under the Exchange Act and meets the requirements for independence under the Nasdaq Listing Rules. The chair of our compensation committee is . The compensation committee is responsible for, among other things:

- reviewing and approving the compensation of our executive officers and recommending that our board of directors approve, the compensation of our Chief Executive Officer;
- reviewing and recommending to our board of directors the compensation of our directors;
- administering our stock and equity incentive plans;
- reviewing and approving, or making recommendations to our board of directors with respect to, incentive compensation and equity plans;
- reviewing our overall compensation philosophy; and
- overseeing our compliance with regulatory requirements associated with the compensation of directors, officers and employees.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of , and . Our board of directors has determined that each member of the nominating and corporate governance committee meets the requirements for independence under the Nasdaq Listing Rules. The chair of our nominating and corporate governance committee is . The nominating and corporate governance committee is responsible for, among other things:

- identifying and recommending candidates for membership on our board of directors;
- reviewing and recommending our corporate governance guidelines and policies;
- reviewing proposed waivers of the code of conduct for directors and executive officers;
- overseeing the process of evaluating the performance of our board of directors; and
- assisting our board of directors on corporate governance matters.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee is currently, or has been at any time, one of our executive officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or on our compensation committee.

Board Diversity

Upon the closing of this offering, our nominating and corporate governance committee will be responsible for reviewing with the board of directors, on an annual basis, the appropriate characteristics, skills and experience required for the board of directors as a whole and its individual members. In evaluating the suitability of individual candidates (both new candidates and current members), the nominating and corporate governance committee, in recommending candidates for election, and the board of directors, in approving (and, in the case of vacancies, appointing) such candidates, may take into account many factors, including but not limited to the following:

- personal and professional integrity;
- ethics and values;
- experience in corporate management, such as serving as an officer or former officer of a publicly held company;
- professional and academic experience relevant to our industry;
- experience as a board member of another publicly held company;
- strength of leadership skills;
- experience in finance and accounting and/or executive compensation practices;
- ability to devote the time required for preparation, participation and attendance at board of directors' meetings and committee meetings, if applicable;
- background, gender, age and ethnicity;
- conflicts of interest; and
- ability to make mature business judgments.

Following the closing of this offering, our board of directors will evaluate each individual in the context of the board of directors as a whole, with the objective of ensuring that the board of directors, as a whole, has the necessary tools to perform its oversight function effectively in light of our business and structure.

Non-employee Director Compensation

The following table presents the total compensation earned by each of our non-employee directors in the year ended December 31, 2020. Other than as described below, none of our non-employee directors received any other compensation in the year ended December 31, 2020.

Name	Fees earned or paid in cash ($)	Option awards ($)[1]	All other compensation ($)	Total ($)
Jack A. Khattar	19,000	40,711	—	59,711
Brett P. Monia	9,625	40,092	—	49,717
Aaron Fletcher, Ph.D.	—	11,543	—	11,543
Stephen Sands	25,000	7,723	—	32,723
Peggy Wallace	—	11,543	—	11,543
Mark H. Breedlove	—	11,543	—	11,543

(1) Amounts in this column represent the aggregate grant date fair value of the stock options awarded to our directors in fiscal year 2020. For a discussion of the assumptions and methodologies used to calculate the amounts referred to above, please see the discussion of option awards contained in Note 13, Stock Based Compensation, to our financial statements included elsewhere in this filing. As of December 31, 2020, each non-employee director held outstanding options to acquire the following number of

shares: Mr. Khattar, 135,000; Mr. Monia, 135,000; Dr. Fletcher, 62,500; Mr. Sands, 172,500; Ms. Wallace, 62,500; and Mr. Breedlove, 74,621.

Non-employee Director Compensation Policy

Prior to this offering, we did not have a formal policy to provide any cash or equity compensation to our non-employee directors for their service on our board of directors or committees of our board of directors. The Company has entered into the following agreements, amended certain agreements, and granted the following awards:

- In 2020, in connection with joining our board of directors as independent, non-employee directors, we entered into agreements with Mr. Khattar and Mr. Monia whereby they would be paid $50,000 per annum, prorated for any partial year of service, plus a one-time option award of 135,000 shares. Mr. Khattar and Mr. Monia are also eligible for annual option awards of 25,000 shares.
- In 2020, the board of directors awarded Mr. Sands 25,000 stock options. In addition, in order to compensate Mr. Sands on terms consistent with other independent, non-employee directors, as outlined in the agreements entered into with Mr. Monia and Mr. Khattar, our board of directors approved payment to Mr. Sands of $50,000 per annum, prorated for any partial year, effective as of June 30, 2020.
- Non-independent directors generally receive an option award to purchase 12,500 shares of our common stock in respect of each year of service on the board. Accordingly, during 2020, our board of directors awarded Dr. Fletcher, Ms. Wallace and Mr. Breedlove 37,500 stock options each, for prior and current years of service.
- Director stock option awards generally vest in four equal annual installments on the first, second, third and fourth anniversaries from the date of grant or from the date of appointment to the board.

In connection with this offering, our board of directors approved the following annual non-employee director compensation program, which will take effect following the closing of this offering.

Compensation Elements: Non-Employee Director Compensation Policy

Cash	
Annual Retainer	$
Annual Committee Chair Retainer	
Audit	$
Compensation	$
Nominating and Corporate Governance	$
Annual Committee Member Retainer	
Audit	$
Compensation	$
Nominating and Corporate Governance	$
Equity	
Initial Equity Grant	
Annual Equity Retainer	

Each annual cash retainer will be paid quarterly in arrears. Our board of directors may, in its discretion, permit a non-employee director to elect to receive any portion of the annual cash retainer in the form of fully vested shares of our common stock in lieu of cash.

Code of Business Conduct and Ethics

In connection with this offering, our board of directors will adopt a written code of business conduct and ethics that will apply to all of our directors, officers and employees. The code of business conduct and ethics will cover fundamental ethics and compliance-related principles and practices such as accurate

accounting records and financial reporting, avoiding conflicts of interest, the protection and use of our property and information and compliance with legal and regulatory requirements. Our code of business conduct and ethics will be posted on the investor relations section of our website at www.cogrx.com. We intend to disclose any amendments to our code of business conduct and ethics, or waivers of its requirements, on our website to the extent required by the applicable rules and exchange requirements.

Limitation on Liability and Indemnification Matters

Our third amended and restated certificate of incorporation and our amended and restated bylaws, which will each become effective immediately prior to the closing of this offering, will limit our directors' liability and may indemnify our directors and officers to the fullest extent permitted under the Delaware General Corporation Law, or DGCL. The DGCL provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any unlawful payment of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the DGCL; or
- any transaction from which the director derived an improper benefit.

The DGCL and our amended and restated bylaws provide that we will, in certain situations, indemnify our directors and officers and may indemnify other employees and other agents, to the fullest extent permitted by law.

We have entered or intend to enter into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, penalties, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request. Subject to certain limitations, our indemnification agreements also require us to advance expenses incurred by our directors, officers and key employees for the defense of any action for which indemnification is required or permitted.

We maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and these indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our third amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors and officers for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and our stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought and we are not aware of any threatened litigation that may result in claims for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act, may be permitted to directors, officers or control persons, in the opinion of the SEC, such indemnification is against public policy, as expressed in the Securities Act and is therefore unenforceable.

EXECUTIVE COMPENSATION

Our named executive officers, or NEOs, for the year ended December 31, 2020, which consist of our current principal executive officer our former principal executive officer, and our other most highly compensated executive officer, are:

- Lisa Ricciardi, our Chief Executive Officer and President;
- Kenneth I. Moch, our former Chief Executive Officer and President; and
- James M. O'Brien, our Chief Financial Officer.

Summary Compensation Table

The following table provides information regarding the compensation earned by our NEOs for the year ended December 31, 2020.

Name and principal position	Year	Salary ($)	Bonus ($)	Option awards ($)[1]	Non-equity incentive plan compensation ($)[2]	All other compensation ($)	Total ($)
Lisa Ricciardi[3]	2020	287,385	—	901,904	79,893	3,415[4]	1,272,597
Chief Executive Officer							
Kenneth I. Moch[5]	2020	93,591	—	—	—	609,293[6]	702,884
Former Chief Executive Officer and President							
James M. O'Brien	2020	340,000	—	—	70,890	7,323[4]	418,213
Chief Financial Officer							

(1) Amounts shown in this column represent the aggregate grant date fair value of the stock options awarded to the NEO in fiscal year 2020. For a discussion of the assumptions and methodologies used to calculate the amounts referred to above, please see the discussion of option awards contained in Note 13, Stock Based Compensation, to our financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these stock options and do not correspond to the actual economic value that may be received by the NEO upon exercise of the stock options.

(2) Amounts shown are cash incentive payments earned in respect of 2020 performance and paid in 2021.

(3) Ms. Ricciardi served as a non-employee director beginning in January 2020, and was appointed our Chief Executive Officer and President in March 2020. The amount shown in the Option Awards column includes an option grant with a grant date fair value of $7,696, awarded to Ms. Ricciardi at the beginning of 2020 as compensation for her services as a non-employee director.

(4) Amounts shown are Company 401(k) match payments.

(5) Mr. Moch resigned as Chief Executive Officer and President in March 2020.

(6) Amounts shown for Mr. Moch represent severance of $386,250 (payable over the 12-month period following his termination date of March 17, 2020), a lump sum payment of $104,288, accrued vacation payment of $14,856 and payment of $100,000 in connection with consulting services payable over the 12-month period following his termination date. In addition, Mr. Moch received $3,899 in Company match 401(k) payments prior to his termination date.

Narrative Disclosure to the Summary Compensation Table

Elements of Compensation

The compensation of our NEOs generally consists of base salary, annual cash bonus opportunities, long term incentive compensation in the form of equity awards and other benefits, as described below.

Base Salary

The base salary payable to each NEO is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role, responsibilities, and contributions. Each NEO's initial base salary was specified in her or his employment agreement or letter agreement, as described below, and is reviewed (and, if applicable, adjusted) from time to time by our board of directors or compensation committee. For 2020, the NEOs' annual base salary rates were: $386,000 for Ms. Ricciardi, $340,000 for Mr. O'Brien and $386,250 for Mr. Moch. Ms. Ricciardi's and Mr. O'Brien's base salaries remain unchanged for 2021.

Annual Performance-Based Bonus

Each of our NEOs' performance-based cash bonus opportunity is expressed as a percentage of base salary that can be achieved at a target level by meeting predetermined corporate and individual performance objectives. Our compensation committee annually sets each executive's target bonus for the year. The 2020 annual bonus for Ms. Ricciardi and Mr. O'Brien were targeted at 40% and 30% of their respective base salaries. Mr. Moch did not receive a bonus for 2020.

For 2020, all NEOs were eligible to earn their annual bonuses pursuant to the achievement of corporate and/or individual performance goals, including certain clinical milestones, pipeline, platform and manufacturing development, operations, financing, corporate development, human resources, scientific leadership, and intellectual property. Following a review of the corporate goals attained in 2020, our compensation committee recommended, and our board of directors approved, 2020 annual bonus payments to each of Ms. Ricciardi and Mr. O'Brien in an amount equal to 70% of their respective target bonus amounts, totaling $79,893 and $70,890, respectively (pro-rated in the case of Ms. Ricciardi, to account for her start date).

Long Term Equity Incentives

Our equity-based incentive awards are designed to align our interests and the interests of our stockholders with those of our employees and consultants, including our NEOs. Our board of directors or compensation committee approves equity grants. Ms. Ricciardi received options to purchase shares of our common stock in 2020. See "— Employment Arrangements with our NEOs" for more information regarding equity awards made in 2020 to Ms. Ricciardi.

Employment Arrangements with our NEOs

Lisa Ricciardi

In February 2020, in her capacity as a director, we issued to Ms. Ricciardi an option to purchase 25,000 shares of our common stock, at an exercise price of $0.33. The option will vest over a four-year period, with 25% of the shares of our common stock underlying the option vesting on March 7, 2021, and 75% of the shares of common stock underlying the option vesting in equal annual installments thereafter.

In March 2020, we entered into an interim CEO letter agreement with Ms. Ricciardi, which provided for a six-month term through September 2020 and her continued service as a member of our board. Pursuant to her interim CEO letter agreement, we issued to Ms. Ricciardi a fully vested option to purchase 65,000 shares of our common stock at an exercise price of $0.37 per share.

In June 2020, we terminated and replaced Ms. Ricciardi's interim CEO letter agreement with a new employment agreement when she assumed her permanent position. Ms. Ricciardi's current employment agreement provides for her at-will employment as our Chief Executive Officer and President and sets her initial annual base salary at $386,000 and her initial target annual bonus opportunity at 40% of her base salary (pro-rated for 2020). Ms. Ricciardi's annual performance bonus was prorated based on the portion of the fiscal year during which she was actually employed as the Chief Executive Officer, including her time served in an interim capacity.

Ms. Ricciardi's employment agreement also provided for the issuance of an option (the "Initial Stock Option") to purchase 2,898,689 shares of our common stock, or 5% of our fully diluted equity, at an exercise

price of $0.37 per share. The Initial Stock Option will vest over a four-year period, with 25% of the common stock underlying the Initial Stock Option vesting on June 1, 2021, and 75% of our common stock underlying the Initial Stock Option vesting in 36 equal monthly installments thereafter. We will also issue an option to purchase shares of our common stock upon completion of the next subsequent offering of an additional series of preferred stock at a price per share equal to $1.15 in an amount necessary to maintain Ms. Ricciardi's fully diluted equity position at a minimum of 5% and at an exercise price per share equal to the fair market of our common stock on the date of issuance. Should Ms. Ricciardi's performance exceed expectation but the additional series of preferred stock offering does not reach the specified price hurdle, our board of directors will not unreasonably withhold the additional stock options.

Additionally, Ms. Ricciardi's employment agreement provides for the issuance of stock options to purchase shares of our common stock representing an aggregate of 2% of our fully diluted equity, in the event that we achieve certain performance targets upon one or more offerings of our equity securities. We expect that these performance metrics will be achieved in connection with the closing of this offering and intend to grant these options to Ms. Ricciardi in connection with this offering.

If we undergo a change of control at a price per share of our preferred stock of at least $3.50, and Ms. Ricciardi remains actively employed on the closing of such change of control, any unvested Shares subject to the Additional Options will become fully vested.

Ms. Ricciardi's employment agreement provides for severance benefits upon a termination of her employment by us without "cause" or her resignation for "good reason", subject to Ms. Ricciardi's execution of a form release of claims. The severance benefits include: (i) payment of all accrued and unpaid base salary, (ii) payment of any expenses incurred by not yet reimbursed, (iii) any benefits that have accrued to Ms. Ricciardi under the terms of the employee benefits of the Company, (iv) to the extent unpaid, payment of the cash bonus awarded to Ms. Ricciardi with respect to the fiscal year prior to the fiscal year of termination, (v) continuation of her base salary for 12 months, (vi) COBRA premiums paid by us until the earlier of the date at the end of the 12 month period following the termination date or the date the she becomes eligible for group health insurance through another employer, (vii) and with respect to any of her awarded and outstanding options that are subject to time-based vesting, a number of stock options equal to the number of shares of common stock that would have vested if Ms. Ricciardi continued to be employed by the Company for a period equal to nine (9) months following the date of termination will become vested and exercisable. In addition, if such termination without "cause" or for "good reason" occurs within the 12 month period immediately following a "change of control", then in addition to payments in (i)-(iv) and (vii) above, Ms. Ricciardi' base salary and COBRA continuation period will be extended from 12 months to 18 months, she will receive an amount equal to her target cash bonus for the year in which she was terminated, and the shares of our common stock underlying the Initial Stock Option and the Additional Options will become vested and exercisable.

Ms. Ricciardi's employment agreement also contains customary non-competition and non-solicitation provisions that extend for up to one-year following termination of her employment with us. The payment of any severance benefits under Ms. Ricciardi's employment agreement is conditioned on continued compliance with such covenants.

We expect to enter into a new employment agreement with Ms. Ricciardi that will be effective upon closing of this offering.

James M. O'Brien

In October 2019, we entered into a letter agreement with Mr. O'Brien. Mr. O'Brien's letter agreement provides for Mr. O'Brien's at-will employment as our Chief Financial Officer and sets forth his initial annual base salary of $340,000 and his initial target annual bonus opportunity at 30% of his base salary. Mr. O'Brien's letter agreement also provided for the issuance of an option to purchase 423,978 shares of our common stock, or 0.75% of our outstanding equity on a fully diluted basis, at an exercise price of $0.33 per share. The option will vest over a four year period, with 25% of the shares of common stock underlying the option vesting on October 7, 2020, and 75% of the shares of common stock underlying the option vesting in equal monthly installments thereafter, in each case if Mr. O'Brien remains employed by the Company

through the applicable vesting dates. See "— Outstanding Equity Awards at Fiscal Year-End" for additional details regarding the stock option granted to Mr. O'Brien in connection with his hire.

Mr. O'Brien's letter agreement provides for severance benefits upon a termination of his employment by us without "cause", or his resignation for "good reason", subject to Mr. O'Brien's execution of a general release of claims. The severance benefits include: (i) payment of all accrued and unpaid base salary, (ii) payment for any vacation time accrued but not used, (iii) payment of any business expenses incurred by not yet reimbursed, (iv) continuation of his base salary for six (6) months, (v) payment of any bonus to which he would have otherwise been entitled for the prior fiscal year but for the termination of his employment, and (vi) COBRA premiums paid by us for six (6) months. In addition, if such termination without "cause" or for "good reason" occurs within the 12 month period immediately following a "change of control", then in addition to payments in (i) through (iii) and (v) above, Mr. O'Brien's base salary continuation period will be extended from six (6) to twelve (12) months and all unvested restricted stock, stock options and other equity incentives awarded to Mr. O'Brien will become immediately and automatically fully vested and exercisable.

Mr. O'Brien is also subject to certain restrictive covenants. The payment of any severance benefits under Mr. O'Brien's letter agreement is conditioned on continued compliance with such covenants.

We expect to enter into a new employment agreement with Mr. O'Brien that will be effective upon closing of this offering.

Kenneth I. Moch

Mr. Moch was previously party to an employment agreement with us that contained customary non-competition and non-solicitation provisions extending for up to one-year following termination of his employment with us and a customary invention assignment regarding ownership of intellectual property.

Mr. Moch's employment agreement provided for severance benefits upon a termination of his employment by the Company without "cause" or his resignation for "good reason," subject to Mr. Moch's execution of a form release of claims, as follows: (i) payment of all accrued and unpaid base salary, (ii) payment of any expenses incurred but not yet reimbursed, (iii) any benefits that have accrued to Ms. Moch under the terms of the employee benefit programs of the Company, (iv) payment of his base salary for twelve (12) months following termination and (v) COBRA premiums paid by us until the earlier of the date at the end of the twelve (12) month period following termination date or the date the he becomes eligible for group health insurance through another employer. In addition, if such termination without "cause" or for "good reason" had occurred within the 12-month period immediately following a "change of control", then in addition to payments in (i)-(v) above, Mr. Moch's base salary and COBRA continuation period would have been extended from 12 months to 18 months and he would have received an amount equal to his target cash bonus for the year in which he was terminated.

In connection with Mr. Moch's resignation on March 17, 2020, we entered into a separation and release agreement with Mr. Moch. Under the terms of the separation and release agreement, we agreed to provide to Mr. Moch the following payments and benefits, subject to his execution of a release and compliance with restrictive covenants: (i) payment of his base salary of $386,250 for 12 months, (ii), the making of a lump sum payment to him in the amount of $104,287.50, (iii) waiving in the entirety the medical insurance premiums under COBRA until the earlier of March 17, 2021 (12 months after his termination of employment date) and the date Mr. Moch becomes eligible for medical benefits through another employer. Mr. Moch also agreed that except as set forth in the immediately preceding sentence, none of the Company or its affiliates have any obligation or liability to Mr. Moch, including under Mr. Moch's employment agreement. Mr. Moch's options to purchase 2,339,304 shares of our common stock that were vested on his date of separation remain exercisable for a period of three year plus three months, and all unvested options on the date of separation were forfeited.

In connection with Mr. Moch's termination of employment, we entered into an advisor services agreement with Mr. Moch. Pursuant to Mr. Moch's advisor services agreement, Mr. Moch agreed to provide certain transition services and other consulting services to the company for twelve (12) months, including with respect to our business strategy, legal matters and investor relations as our Chief Executive

Officer requests, and Mr. Moch received an aggregate fee of $100,000, paid in equal monthly installments for the twelve (12) month period following his termination date.

Outstanding Equity Awards at Fiscal Year-End

The following table provides information regarding the outstanding equity awards held by our NEOs as of December 31, 2020. All awards were granted pursuant to the 2017 Plan and 2007 Plan. See "— Equity incentive plans — 2017 Plan and 2007 Plan" below for additional information.

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity incentive awards: number of securities underlying unexercised unearned options (#)	Option Exercise Price ($)	Option Expiration Date
Lisa Ricciardi	33,750[(1)]	101,250[(1)]	—	0.33	9/29/2029
	—	25,000[(2)]	—	0.33	4/30/2030
	65,000		—	0.37	4/22/2030
	—	2,898,686[(3)]	—	0.37	5/31/2030
James M. O'Brien	123,519[(4)]	299,978[(4)]	—	0.33	10/7/2029
Kenneth I. Moch	2,339,204	—	—	0.27	6/17/2023

(1) This option vests in equal, annual installments with 25% vested on March 18, 2020, with the remaining 75% in 3 equal annual installments thereafter, subject generally to continued service.

(2) This option vests in equal, annual installments with 25% vesting on March 7, 2021, with the remaining 75% in 3 equal annual installments thereafter, subject generally to continued service.

(3) This option vests as follows: 25% vesting on June 1, 2021, with the remaining 75% vesting in 36 substantially equal monthly installments thereafter, subject generally to continued service.

(4) This option vests as follows: 25% vested on October 7, 2020, with the remaining 75% vesting in 36 substantially equal monthly installments thereafter, subject generally to continued service.

Equity Incentive Plans

2021 Plan

Our 2021 Plan will become effective upon the effectiveness of the Registration Statement of which this prospectus forms a part. Upon the effectiveness of the 2021 Plan, we will cease granting awards under our 2017 Plan. A summary of the material terms of the 2021 Plan follows below.

The 2021 Plan authorizes the award of both equity-based and cash-based incentive awards, including: (i) stock options (both incentive stock options and nonqualified stock options), (ii) stock appreciation rights, or SARs, (iii) restricted stock awards, or RSAs, (iv) restricted stock units, or RSUs, and (v) cash or other stock based awards. Incentive stock options may be granted only to employees. All other types of awards may be issued to employees, directors, consultants and other service providers.

Shares Subject to 2021 Plan. We will initially reserve shares of our common stock for issuance under our 2021 Plan. The number of shares reserved for issuance under our 2021 Plan will increase automatically on and each anniversary of such date prior to the termination of the 2021 Plan, equal to the lesser of (i) % of our shares of common stock issued and outstanding on the last day of the immediately preceding fiscal year and (ii) such smaller number of shares as determined by our board or compensation committee. No more than shares of our common stock may be issued under the 2021 Plan through incentive stock options.

The following shares will be added (or added back) to the shares available for issuance under the 2021 Plan:

- Shares subject to 2007 Plan or 2017 Plan (collectively, the "Prior Plans") or 2021 Plan awards that expire, terminate or are cancelled or forfeited for any reason after the effectiveness of the 2021 Plan;

- Shares that after the effectiveness of the 2021 Plan are withheld to satisfy the exercise price of an option issued under a Prior Plan or the 2021 Plan; and
- Shares that after the effectiveness of the 2021 Plan are withheld to satisfy tax withholding obligations related to any award under a Prior Plan or the 2021 Plan.

However, the total number of shares underlying Prior Plan awards that may be recycled into the 2021 Plan pursuant to the above-described rules will not exceed shares underlying 2007 Plan and 2017 Plan awards as of date of 2021 Plan adoption.

Shares of our common stock issued by us through the assumption or substitution of awards in connection with a future acquisition of another entity will not reduce the shares available for issuance under the 2021 Plan.

Administration. We expect that our 2021 Plan will be administered by our compensation committee. The administrator of the plan will have the authority to, among other things, interpret the plan and award agreements, select grantees, determine the vesting, payment and other terms of awards, and modify or amend awards. Our compensation committee may delegate to one or more of our officers the authority to issue awards under the 2021 Plan to grantees who are not executive officers, subject to parameters established by the compensation committee.

Adjustments. In the event of certain corporate events or transactions (such as a merger, consolidation, reorganization, recapitalization, stock split, reverse stock split, spin-off, stock dividend, or similar transaction or change in our capital structure), our compensation committee will make adjustments or substitutions to the number and kind of shares that may be issued under the 2021 Plan, the number and kind of shares subject to outstanding awards, the exercise price or base price of outstanding awards, and/or any other affected terms and conditions of the 2021 Plan or outstanding awards, in each case as it deems appropriate and equitable.

Stock options. The 2021 Plan provides for the grant of both incentive stock options and non-qualified stock options to purchase shares of our common stock at a stated exercise price. The exercise price of stock options granted under the 2021 Plan must be at least equal to the fair market value of our common stock on the date of grant. The maximum term of options granted under our 2021 Plan is ten years.

Our compensation committee may provide in the terms of the applicable award agreement that the participant may exercise an unvested portion in exchange for restricted stock subject to the same vesting terms as the option.

Stock appreciation rights. An SAR provides for a payment, in cash or shares of our common stock or a combination of both, to the holder based upon the difference between the fair market value of our common stock on the date of exercise and a predetermined exercise price, multiplied by the number of shares. The base price of a SAR must be at least the fair market value of a share of our common stock on the date of grant. SARs may not have a term that is longer than ten years from the date of grant.

Restricted stock awards. An RSA is an issuance of shares of our common stock subject to forfeiture restrictions that lapse based on the satisfaction of service and/or performance conditions. The price, if any, of each share subject to an RSA will be determined by the compensation committee. During the vesting period, a participant will have the right to vote and receive any dividends with respect to restricted stock, provided that our compensation committee may specify that any such dividends are subject to the same vesting schedule as the shares to which they relate.

Restricted stock units. RSUs represent the right to receive shares of our common stock (or cash equal to the value of such shares) at a specified time in the future, following the satisfaction of specified service and/or performance conditions.

Cash or other stock based awards. Cash or other stock based awards (including awards to receive unrestricted shares of our common stock or immediate cash payments) may be granted to participants. Our compensation committee will determine the terms and conditions of each such award, including, as applicable, the term, any exercise or purchase price, performance goals, vesting conditions, and other terms

and conditions. Payment in respect of a cash or other stock based award may be made in cash, shares of our common stock, or a combination of both, at the discretion of our compensation committee.

Change in control. Upon or in anticipation of a change in control (which includes certain merger, asset or stock transactions, certain changes in our board composition and any other event deemed by our board of directors to constitute a change in control), our compensation committee may take such actions as it deems appropriate with respect to outstanding awards under the 2021 Plan. Such actions may include (among other things) the acceleration of award vesting, the substitution of awards, the cancellation of unexercised or unvested awards and the redemption or cashout of awards. In the discretion of our compensation committee, any cash or other substitute consideration payable upon redemption or cashout of an award may be subjected to the same vesting terms that applied to the original award, or earn-out, escrow, holdback or similar arrangements comparable to those applicable to stockholders in connection with the change in control. The compensation committee need not treat all outstanding awards in an identical manner.

Repricing. The compensation committee may in its discretion: (i) cancel options or stock appreciation rights outstanding under the 2021 Plan in exchange for new options or stock appreciation rights with a lower exercise or base price per share; (ii) cancel underwater options or stock appreciation rights outstanding under the 2021 Plan in exchange for consideration payable in our equity securities or cash; or (iii) otherwise directly reduce the exercise or base price of options or stock appreciation rights outstanding under the 2021 Plan.

Director Compensation Limits. Beginning with the calendar year, the aggregate amount of equity and cash compensation payable to a non-employee director with respect to a calendar year for his or her service as a director may not exceed $ (or $, in the case of a newly appointed or newly elected non-employee director's first year of service with us. This director compensation limit will not apply to (i) compensation earned by a non-employee director solely in his or her capacity as chairman of the Board or lead independent director, (ii) compensation earned by a non-employee director for services he or she performs outside of his or her role as a non-employee director (i.e. as an advisor or consultant), or (iii) compensation awarded by the Board to a non-employee director in extraordinary circumstances, as determined by the Board in its discretion, so long as, in each case, the non-employee director does not participate in the decision to award him- or herself the additional compensation.

Clawback. Awards under the 2021 Plan will be subject to clawback or recoupment pursuant to any applicable policy, law or exchange listing requirement in effect from time to time.

Transferability. Except for certain estate planning transfers authorized by the compensation committee, awards granted under the 2021 Plan are generally nontransferable except by will or by the laws of descent and distribution.

Amendment and termination. Our board of directors may amend our 2021 Plan at any time, subject to stockholder approval if required by applicable law or exchange listing requirement. The 2021 Plan will terminate ten years after it becomes effective.

2017 Plan

Our Cognition Therapeutics, Inc. 2017 Equity Incentive Plan ("2017 Plan") was adopted by our board of directors, approved by shareholders, and made effective as of September 20, 2017. Our 2017 Plan was originally adopted to enable the issuance of stock options and stock awards to our employees, advisors, directors, and consultants.

As noted above, we expect to terminate the 2017 Plan and will cease granting awards thereunder upon the effective date of our 2021 Plan (described above). Any outstanding awards will continue to be subject to the terms of the 2017 Plan and the applicable award agreements, until such awards are exercised or settled, or until they terminate or expire by their terms.

A summary of the material terms of the 2017 Plan follows below.

Administration. We expect that our compensation committee will administer the 2017 Plan and outstanding awards thereunder following the date of this offering.

As of April 30, 2021, there were (i) 1,028,772 shares available for issuance in respect of new awards under the 2017 Plan and (ii) options outstanding under the 2017 Plan with respect to 6,352,864 shares of our common stock.

Share recycling. Shares underlying 2017 Plan awards that are forfeited, expired, canceled, reacquired by the company prior to vesting will become available for grant under the 2021 Plan.

Options. The 2017 Plan provides for the grant of both (i) incentive stock options, which are intended to qualify for tax treatment as set forth under Section 422 of the Code, as amended, or the Code, and (ii) non-qualified stock options to purchase shares of our common stock at a stated exercise price. The exercise price of stock options granted under the 2017 Plan must be at least equal to the fair market value of our common stock on the date of grant. The maximum term of options granted under our 2017 Plan is ten years.

The board of directors may approve certain stock options issued under the 2017 Plan to become exercisable prior to vesting in exchange for restricted shares of common stock subject to a repurchase right in favor of the company during a specified restriction period.

Stock Awards. The 2017 Plan also allows for the grant or sale of stock awards that may be subject to restrictions, as determined by the board of directors. The price, if any, of each share subject to a stock award will be determined by the board of directors/compensation committee. During the restriction period, a participant will have the right to vote and receive any dividends with respect to stock awards.

Change of Control. If we are subject to a "Change of Control" as defined in the 2017 Plan (including certain dissolution, liquidation, asset sale or merger transactions), the board of directors will determine how to treat outstanding awards under our 2017 Plan. This may include one or more of the following: (i) the acceleration of outstanding options or lapse in restrictions on outstanding stock awards, (ii) the termination of outstanding awards, unless exercised prior to the Change of Control; and (iii) the cashout or redemption of outstanding awards. The board of directors need not treat all outstanding awards in an identical manner.

Adjustments. In the event of a stock dividend, reorganization, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification, merger, asset sale, or other similar event or transaction affecting our common stock, proportional adjustments will be made to the number of shares reserved for issuance under our 2017 Plan; the number and class of shares subject to outstanding awards; and the exercise or repurchase price applicable to outstanding awards.

Transferability. Unless otherwise determined by the board of directors and/or specified in the applicable award agreement, awards under the 2017 Plan generally may not be transferred in any manner other than by will, the laws of descent, and distribution or qualified domestic relations order.

Amendment/Termination. The board of directors may amend or terminate the 2017 Plan at any time; provided, however, that the board of directions shall not amend this Plan without stockholder approval if such approval is required in order to comply with the Code or other applicable laws.

2007 Plan

Our Cognition Therapeutics Inc. Amended and Restated 2007 Equity Incentive Plan ("2007 Plan") was adopted by our board of directors, approved by shareholders, and made effective as of October 1, 2007, and was most recently amended and restated on January 10, 2017. Our 2007 Plan was originally adopted to enable the issuance of stock options and stock awards to our employees, advisors, directors, and consultants. The 2007 Plan was implemented to encourage the participants to contribute materially to the growth of the company and therefore benefit the company's stockholders.

As of April 30, 2021, there were stock options with respect to 7,907,353 shares outstanding and no additional shares available for issuance in respect of new awards under the 2007 Plan. Any outstanding awards will continue to be subject to the terms of the 2007 Plan and the applicable award agreements, until such awards are exercised or settled, or until they terminate or expire by their terms.

A summary of the material terms of the 2007 Plan follows below.

Administration. We expect that our compensation committee will administer the 2007 Plan and outstanding awards thereunder following the date of this offering.

Share recycling. If and to the extent shares granted are terminated, expired, canceled, forfeited, exchanged or surrendered without having been exercised, the shares subject to such grants will be available for grant under the 2021 Plan.

Options. The 2007 Plan provides for the grant of both (i) incentive stock options, which are intended to qualify for tax treatment as set forth under Section 422 of the Code, as amended, or the Code, and (ii) non-qualified stock options to purchase shares of our common stock at a stated exercise price. The exercise price of stock options granted under the 2007 Plan must be at least equal to the fair market value of our common stock on the date of grant. The maximum term of options granted under our 2007 Plan is ten years.

The board of directors may approve certain stock options issued under the 2007 Plan to become exercisable prior to vesting in exchange for restricted shares of common stock subject to a repurchase right in favor of the company during a specified restriction period.

Stock Awards. The 2007 Plan also allows for the grant or sale of stock awards that may be subject to restrictions, as determined by the board of directors. The price, if any, of each share subject to a stock award will be determined by the board of directors/compensation committee. During the restriction period, a participant will have the right to vote and receive any dividends with respect to stock awards.

Change of Control. If we are subject to a "Change of Control" as defined in the 2007 Plan (including certain dissolution, liquidation, asset sale or merger transactions), the board of directors will determine how to treat outstanding awards under our 2007 Plan. This may include one or more of the following: (i) the acceleration of outstanding options or lapse in restrictions on outstanding stock awards, (ii) the termination of outstanding awards, unless exercised prior to the Change of Control; and (iii) the cashout or redemption of outstanding awards. The board of directors need not treat all outstanding awards in an identical manner.

Adjustments. In the event of a stock dividend, reorganization, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification, merger, asset sale, or other similar event or transaction affecting our common stock, proportional adjustments will be made to the number of shares reserved for issuance under our 2007 Plan; the number and class of shares subject to outstanding awards; and the exercise or repurchase price applicable to outstanding awards.

Transferability. Unless otherwise determined by the board of directors and/or specified in the applicable award agreement, awards under the 2007 Plan generally may not be transferred in any manner other than by will, the laws of descent, and distribution or qualified domestic relations order.

Amendment/Termination. The board of directors may amend or terminate the 2007 Plan at any time; provided, however, that the board of directions shall not amend this Plan without stockholder approval if such approval is required in order to comply with the Code or other applicable laws.

Employee Stock Purchase Plan

Our board of directors intends to adopt the Employee Stock Purchase Plan, or ESPP, prior to closing of this offering, under which we may provide our employees and employees of our subsidiary with an opportunity to purchase shares of our common stock at a discounted purchase price. The ESPP will first become effective on . The material terms of the ESPP are summarized below. The ESPP is intended to qualify as an "employee stock purchase plan" meeting the requirements of Section 423 of the Code.

Administration. Subject to the express provisions of the ESPP, our compensation committee will have the authority to construe and interpret the ESPP, prescribe, amend, and rescind rules relating to the ESPP's administration and take any other actions necessary or desirable for the administration of the ESPP and to facilitate compliance with Section 423 of the Code and other applicable law.

Stock Subject to the ESPP. Subject to adjustment as provided in the ESPP, a total of shares of our common stock will be authorized and reserved for issuance under the ESPP. In addition, subject to prior approval by our board of directors in each instance, on or about and each anniversary of such date thereafter prior to the termination of the ESPP, the number of shares of our

common stock authorized and reserved for issuance under the ESPP will be increased by a number of shares of our common stock equal to the least of (i) shares of our common stock, (ii) % of the shares of our common stock outstanding on the final day of the immediately preceding calendar year, and (iii) such smaller number of shares of our common stock as determined by our board of directors. Such shares of our common stock may be newly issued shares, treasury shares or shares acquired on the open market. In the event that any dividend or other distribution (whether in the form of cash, our common stock, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, or exchange of our common stock or our other securities, or other change in our structure affecting our common stock occurs, then in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the ESPP, our compensation committee will, in such manner as it deems equitable, adjust the number of shares and class of common stock that may be delivered under the ESPP, the purchase price per share and the number of shares covered by each outstanding option under the ESPP, and the numerical limits described above.

Eligibility. Generally, our employees and employees of our subsidiary who customarily are employed for at least twenty (20) hours per week and for more than five (5) months in any calendar year will be eligible to participate in the ESPP. Notwithstanding the foregoing, our compensation committee may exclude from participation in the ESPP or any offering period employees who are (i) "highly compensated employees" within the meaning of Section 414(q) of the Code, or (ii) citizens or residents of a foreign jurisdiction where the grant of an option under the ESPP to such employee would be prohibited under the laws of such foreign jurisdiction or the grant of an option under the ESPP to such employee in compliance with the laws of such foreign jurisdiction would cause the ESPP to violate the requirements of Section 423 of the Code. No employee may be granted options to purchase shares of our common stock under the ESPP if such employee (x) immediately after the grant would own capital stock possessing 5% or more of the total combined voting power or value of all classes of our capital stock, or (y) holds rights to purchase shares of our common stock under all of our employee stock purchase plans (in accordance with Section 423(b)(8) of the Code) that accrue at a rate exceeding $25,000 (determined as of the option grant date) for each calendar year in which such rights are outstanding.

Grant and exercise of options. The ESPP provides for six (6) month offering periods, commencing on or about January 1st and July 1stof each year, unless specified otherwise by our compensation committee. Eligible employees may elect to become a participant in the ESPP by submitting an enrollment form, pursuant to which an employee may elect to enroll in the ESPP, authorize a new level of payroll deductions, or stop payroll deductions and withdraw from an offering period. However, a participant may not purchase more than shares of our common stock during each offering period.

During each offering period for which a participant has enrolled, the participant may contribute through payroll deductions in an amount equal to (i) between 1% and %, in whole percentages, of his or her compensation, or (ii) a fixed dollar amount, in each case, on each pay day occurring during such offering period. A participant's compensation for purposes of the ESPP includes base salary and base wages (including overtime). No interest shall accrue on or be payable with respect to the payroll deductions of a participant in the ESPP. Payroll deductions would be made before deduction for any salary deferral contributions made by the employee to any tax-qualified or nonqualified deferred compensation plan, cafeteria plan or similar arrangement.

On the last trading day of each offering period, a participant's option to purchase shares of our common stock will be exercised automatically. The per-share purchase price will be the lesser of (i) percent (%) of the fair market value of one share of our common stock on the first trading day of the applicable offering period and (ii) percent (%) of the fair market value of one share of our common stock on the last trading day of the applicable offering period. As soon as reasonably practicable after the last day of each offering period, we will arrange for the delivery to each participant of the shares of our common stock purchased upon exercise of his or her option. We may require that the shares of our common stock be deposited and/or retained for a specified period of time with a financial services firm or other agent it designates as broker. Neither payroll deductions nor rights with respect to the exercise of an option or to receive shares of our common stock are transferable, other than by will, by the laws of descent and distribution, or by written designation of a beneficiary with our compensation committee.

Termination of Employment and Withdrawal from the ESPP. Participants may elect to withdraw from the ESPP at any time and receive back any of their contributions, without interest, not used to purchase shares of our common stock; provided that if a participant wishes to withdraw his or her funds prior to purchase, he or she must submit a revised enrollment form to our compensation committee at least fifteen (15) days prior to the end of the then-current offering period. Participants who terminate employment before the end of an offering period will be deemed to have withdrawn from the ESPP and the payroll deductions in the participant's notional account that have not been used to purchase shares of our common stock will be returned to the participant.

Amendment and Termination of the ESPP. Our compensation committee may amend or terminate the ESPP at any time for any reason. If the ESPP is terminated, our compensation committee may elect to terminate the outstanding offering period either immediately, or after shares of our common stock have been purchased on the last trading day of the offering period (which may, in the discretion of our compensation committee, be accelerated) and all amounts that have not been used to purchase shares of our common stock will then be returned to participants as soon as administratively practicable. In the event of a merger, consolidation, acquisition of property or stock, separation, reorganization, or other corporate event described in Section 424 of the Code, each outstanding option will be assumed or an equivalent option substituted by the successor corporation, or a parent, or subsidiary of such successor corporation. If the successor corporation refuses to assume or substitute the option, the offering period with respect to which the option relates will be shortened by setting a new purchase date that occurs before the date of the applicable transaction. Unless terminated earlier pursuant to the terms of the ESPP, the ESPP will have a term of 10 years following the ESPP's effective date.

Other Benefits

We currently provide welfare benefits that are available to all of our employees, including our NEOs, including health, dental, life, vision and disability insurance.

In addition, we maintain, and the NEOs participate in, a 401(k) plan that provides eligible employees with an opportunity to save for retirement on a tax-advantaged basis and under which we are permitted to make safe harbor and discretionary employer contributions. The 401(k) plan also provides for automatic enrollment for eligible employees who do not make a deferral election. Employees' pre-tax contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. The 401(k) plan is intended to be qualified under Section 401(a) of the Code, with the related trust intended to be tax exempt under Section 501(a) of the Code. As the 401(k) plan is a safe harbor plan, we are required to make a certain level of matching contributions. We match 100% of a participating employee's deferral contributions up to 4% of annual compensation, and participants are always fully vested in their safe harbor matching employer contributions.

We do not maintain any defined benefit pension plans or nonqualified deferred compensation plans.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend or terminate a Rule 10b5-1 plan subject to compliance with our insider trading policy. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with our insider trading policy. Prior to 180 days after the date of this offering, subject to early termination, the sale of any shares under such plan would be prohibited by the lock-up agreement that the director or officer has entered into with the underwriters.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2018 and any currently proposed transactions to which we were or are expected to be a participant in which (1) the amount involved exceeded or will exceed the lesser of $120,000 or one percent of our average total assets at year-end for the last two completed fiscal years, and (2) any of our directors, executive officers or holders of more than 5% of our capital stock, or any affiliate or member of the immediate family of the foregoing persons, had or will have a direct or indirect material interest, other than compensation and other arrangements that are described under the section titled “Executive compensation” and “Management — Non-employee director compensation.”

We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that we would pay or receive, as applicable, in arm’s-length transactions.

Convertible Promissory Note Financing and Conversion

From March 2018 to July 2020, we issued convertible promissory notes in the aggregate principal amount of $13.0 million with an interest rate of 8.0% per annum, pursuant to note purchase agreements entered into with certain holders of our capital stock. On May 1, 2021, the holders of all of our outstanding convertible promissory notes agreed to an acceleration of the date of the automatic conversion from June 30, 2021 to May 1, 2021 for all convertible promissory notes. Accordingly, on May 1, 2021, all of our outstanding convertible promissory notes were converted into 10,928,155 shares of our Series B-1 convertible preferred stock, at a conversion price equal to $1.385 per share. As of the date of this prospectus, no notes are outstanding. Pursuant to the terms of our Series B-1 convertible preferred stock, all shares will automatically convert into shares of our common stock upon the closing of this offering on a one-for-one basis.

The table below sets forth the principal amount of convertible promissory notes purchased by our directors and holders of more than 5.0% of our capital stock and their affiliated entities, and the number of shares of our Series B-1 convertible preferred stock issued pursuant to the Notes Conversion.

Name	Principal Amount of Convertible Notes	Shares of Series B-1 Convertible Preferred Stock
Entities affiliated with Breedlove Family Limited Partnership[1]	$ 475,730	343,487
Entities affiliated with Golden Seeds Cognition Therapeutics, LLC[2]	$1,841,258	1,329,428
Entities affiliated with BIOS Memory SPV I, LP[3]	$4,250,000	3,068,592
Ogden CAP Associates, LLC[4]	$ 491,127	354,604
Stephen Sands[5]	$ 25,000	18,050

(1) Mr. Breedlove, one of our directors, is the General Partner of the Breedlove Family Limited Partnership.

(2) Golden Seeds Cognition Therapeutics, LLC is a beneficial owner of more than 5% of our common stock or shares of common stock issuable upon the exercise of stock options or warrants that are exercisable within 60 days of , 2021. Ms. Wallace, one of our directors, is the Co-Chief Executive Officer and Managing Partner of Golden Seeds, LLC and Golden Seeds Funds.

(3) BIOS Memory SPV I, LP is a beneficial owner of more than 5% of our common stock or shares of common stock issuable upon the exercise of stock options or warrants that are exercisable within 60 days of , 2021. Dr. Fletcher, one of our directors, is the Managing Partner of Bios Partners, LP and founded Bios Research, LLC.

(4) Ogden CAP Associates, LLC is a beneficial owner of more than 5% of our common stock or shares of common stock issuable upon the exercise of stock options or warrants that are exercisable within 60 days of , 2021 and has been granted a board observer seat in connection with such holdings.

(5) Mr. Sands is one of our independent directors.

Simple Agreements for Future Equity

In March 2021, we entered into the SAFEs, or the safe offering, with various investors, pursuant to which we received gross proceeds in an aggregate amount equal to $8.94 million. The amount invested by the investors in the safe offering is automatically convertible into shares of our common stock upon the closing of this offering at a conversion price equal to 80% of the initial public offering price of our common stock in this offering. As a result, upon the closing of this offering, the principal amount invested in the sale offering is convertible into shares of our common stock, based on an assumed initial offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus.

The table below sets forth the amount invested in the safe offering by holders of more than 5% of our capital stock and their affiliated entities and the number of shares or our common stock issuable upon conversion of the principal amount invested in the safe offering upon the closing of this offering.

Name	Amount of SAFEs	Shares of Common Stock
Entities affiliated with Golden Seeds Cognition Therapeutics, LLC[1]	$3,092,383	
Entities affiliated with BIOS Memory SPV I, LP[2]	$2,000,000	

(1) Golden Seeds Cognition Therapeutics, LLC is a beneficial owner of more than 5% of our common stock or shares of common stock issuable upon the exercise of stock options or warrants that are exercisable within 60 days of, 2021. Ms. Wallace, one of our directors, is the Co-Chief Executive Officer and Managing Partner of Golden Seeds, LLC and Golden Seeds Funds.

(2) BIOS Memory SPV I, LP is a beneficial owner of more than 5% of our common stock or shares of common stock issuable upon the exercise of stock options or warrants that are exercisable within 60 days of , 2021. Dr. Fletcher, one of our directors, is the Managing Partner of Bios Partners, LP and founded Bios Research, LLC.

Voting Agreement

In connection with the issuance and sale of our shares of preferred stock, we entered into a voting agreement with certain holders of our common stock and each holder of our preferred stock. Each holder of more than 5% of our capital stock, as set forth in the section titled “Principal Stockholders,” is a party to these agreements. Our directors who are parties to these agreements or who are related to parties to these agreements are Dr. Catalano, Ms. Wallace, Mr. Fletcher and Mr. Breedlove. The voting agreement, including all rights thereunder, will automatically terminate immediately prior to the closing of this offering.

Right of First Refusal and Co-Sale Agreement

In connection with the issuance and sale of our shares of preferred stock, we entered into a right of first refusal and co-sale agreement with certain holders of our common stock and each holder of our preferred stock. Each holder of more than 5% of our capital stock, as set forth in the section titled “Principal Stockholders,” is a party to these agreements. Our directors who are parties to these agreements or who are related to parties to these agreements are Dr. Catalano, Ms. Wallace, Mr. Fletcher and Mr. Breedlove.

The right of first refusal and co-sale agreement, including all rights thereunder, will automatically terminate immediately prior to the closing of this offering.

Investors’ Rights Agreement

In connection with the issuance and sale of our shares of preferred stock, we entered into an investors’ rights agreement, as amended, or the investors’ rights agreement, with certain holders of our common stock and each holder of our preferred stock. The holders of more than 5% of our capital stock listed above are parties to these agreements. The investors’ rights agreement imposes certain affirmative obligations on us, including with respect to financial reporting obligations and investor inspections, and also grants certain other rights to certain of the holders of our capital stock party thereto, including rights of first offer, demand and piggyback registration rights and, if we are eligible, Form S-3 registration rights, with respect to the

shares of capital stock held by them. See the section titled "Description of Capital Stock — Registration Rights" for additional information. Certain provisions of the investors' rights agreement, including our affirmative obligations and the right of first offer rights will terminate immediately prior to the closing of this offering, while the registration rights set forth in the investors' rights agreement will continue in effect after the closing of this offering until they expire in accordance with their terms.

Executive Officer and Director Compensation

Please see "Executive compensation" and "Management — Non-employee director compensation" for information regarding the compensation of our directors and executive officers.

Employment Agreements

We have entered into employment agreements and letter agreements with certain of our executive officers that, among other things, provide for certain compensatory and change in control benefits, as well as severance benefits. For a description of these agreements with our NEOs, see the section titled "Executive compensation — Employment Arrangements with our NEOs."

Indemnification Agreements

We have entered and intend to continue to enter into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request. For more information regarding these indemnification agreements, see "Management — Limitation on liability and indemnification matters."

Policies and Procedures for Related Party Transactions

Our board of directors will adopt a written related party transaction policy, which will become effective upon the closing of this offering, setting forth the policies and procedures for the review and approval or ratification of related-party transactions. This policy will cover any transaction, arrangement or relationship or any series of similar transactions, arrangements or relationships, in which we were or are to be a participant and a related party had or will have a direct or indirect material interest, as determined by the audit committee of our board of directors, including, without limitation, purchases of goods or services by or from the related party or entities in which the related party has a material interest, and indebtedness, guarantees of indebtedness or employment by us of a related party.

All related party transactions described in this section occurred prior to adoption of this policy and as such, these transactions were not subject to the approval and review procedures set forth in the policy. However, these transactions were reviewed and approved by our board of directors.

PRINCIPAL STOCKHOLDERS

The following table sets forth, as of , 2021, information regarding beneficial ownership of our capital stock by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- each of our NEOs;
- each of our directors; and
- all of our executive officers and directors as a group.

The percentage ownership information under the column titled "Beneficial ownership prior to this offering" is based on shares of common stock outstanding as of , 2021, assuming (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 51,452,501 shares of common stock upon the closing of this offering, (ii) the issuance of shares of common stock upon the exercise of warrants that otherwise expire upon or prior to the closing of this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), and (iii) the issuance of shares of our common stock issuable upon the conversion of the SAFEs in the aggregate amount of $8.94 million upon the closing of this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus). The percentage ownership information under the column titled "Beneficial ownership after this offering" is based on the sale of shares of common stock in this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus). The percentage ownership information assumes no exercise of the underwriters' option to purchase additional shares.

Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power over that security. In addition, shares of common stock issuable upon the exercise of stock options or warrants and the conversion of convertible securities that are exercisable or convertible within 60 days of , 2021, are included in the following table. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. The information contained in the following table does not necessarily indicate beneficial ownership for any other purpose. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Unless otherwise noted below, the address for each beneficial owner listed in the table below is c/o Cognition Therapeutics, Inc., 2403 Sidney Street, Pittsburgh, Pennsylvania 15203.

	Beneficial ownership prior to this offering		Beneficial ownership after this offering	
Name of Beneficial Owner	Number of shares beneficially owned	Percentage of beneficial ownership	Number of shares beneficially owned	Percentage of beneficial ownership
5% and Greater Stockholders:				
Golden Seeds Cognition Therapeutics, LLC		%		
Ogden CAP Associates, LLC		%		
BIOS Memory SPV I, LP		%		
Pittsburgh Life Sciences Greenhouse		%		
Named Executive Officers and Directors:				
Lisa Ricciardi		%		
James M. O'Brien		%		

Name of Beneficial Owner	Beneficial ownership prior to this offering		Beneficial ownership after this offering	
	Number of shares beneficially owned	Percentage of beneficial ownership	Number of shares beneficially owned	Percentage of beneficial ownership
Susan Catalano, Ph.D.		%		
Mark H. Breedlove		%		
Aaron Fletcher, Ph.D.		%		
Jack A. Khattar		%		
Brett P. Monia		%		
Stephen Sands		%		
Peggy Wallace		%		
All current directors and executive officers as a group (13 persons)		%		

DESCRIPTION OF CAPITAL STOCK

The following descriptions are summaries of the material terms of our third amended and restated certificate of incorporation, amended and restated bylaws, the investor rights agreement to which we and certain of our stockholders are parties and of the DGCL. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our form of third amended and restated certificate of incorporation, form of amended and restated bylaws and investors' rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is part.

General

Upon the closing of this offering and the filing of our third amended and restated certificate of incorporation with the Secretary of State for the State of Delaware, our authorized capital stock will consist of shares of common stock, par value $0.001 per share, and shares of preferred stock, par value $0.001 per share. All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Common Stock

Outstanding Shares

As of , 2021, there would have been shares of common stock outstanding, held by stockholders of record, after giving effect to the automatic conversion of all our preferred stock outstanding into an aggregate of 51,452,501 shares of our common stock, the issuance of shares of our common stock issuable upon the exercise of warrants to purchase common stock that otherwise would expire upon or prior to the closing of this offering, and the issuance of shares of our common stock issuable upon the conversion of the SAFEs in the aggregate amount of $8.94 million, in each case immediately upon the closing of this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus).

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors. In addition, the affirmative vote of holders of 66⅔% of the voting power of all of the then outstanding voting stock will be required to take certain actions, including amending certain provisions of our third amended and restated certificate of incorporation, such as the provisions relating to amending our amended and restated bylaws, procedures for our stockholder meetings, the classified board, director liability, and exclusive forum for proceedings.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and

privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

Preferred Stock

Upon the closing of this offering, all outstanding shares of our preferred stock will be automatically converted into an aggregate of 51,452,501 shares of common stock. Under the terms of our third amended and restated certificate of incorporation that will become effective immediately prior to the closing of this offering, our board of directors is authorized to direct us to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third-party to acquire, or could discourage a third-party from seeking to acquire, a majority of our outstanding voting stock. Upon the closing of this offering, there will be no shares of preferred stock outstanding, and we have no present plans to issue any shares of preferred stock.

Warrants

As of December 31, 2020, the certain intuitional investors held warrants to purchase an aggregate of 650,656 shares of our common stock at a weighted average exercise price of $0.06 per share, subject to customary adjustments provided in the warrant agreement. The warrants expire upon the closing of the offering.

Stock Options and Grant Plan Shares

As of December 31, 2020, 14,839,637 shares of common stock were issuable upon the exercise of outstanding stock options, at a weighted average exercise price of $0.30 per share. For additional information regarding terms of our equity incentive plans, see the section titled “Executive compensation — Equity incentive plans.”

Registration Rights

The investors’ rights agreement grants certain of the holders of shares of our capital stock party thereto certain registration rights in respect of the “registrable securities” held by them, which securities include (1) the shares of our common stock issued upon the conversion of shares of our preferred stock, (2) the shares of common stock issued upon the conversion and/or exercise of any other security, and (3) any shares of our common stock issued as a dividend or other distribution with respect to the shares described in the foregoing clause (1) and (2). The registration of the resale of these shares of our common stock pursuant to the exercise of these registration rights would enable the holders thereof to sell such shares without restriction under the Securities Act when the applicable registration statement is declared effective.

Holders of shares of our common stock (including shares issuable upon the conversion of our preferred stock) are entitled to such registration rights pursuant the investors’ rights agreement.

Expenses of Registration

Subject to specified conditions and limitations, we are required to pay all expenses, other than underwriting discounts and commissions and stock transfer taxes incurred in connection with any exercise of these registration rights.

Expiration of Registration Rights

These registration rights will expire on the earlier to occur of (1) such time after the closing of this offering in which all of such holders registrable shares can be sold without limitation during a three-month period without registration, and (2) the four year anniversary of the closing of this offering.

Demand Registration Rights

At any time beginning six months after the closing of this offering, the holders of a majority of the common stock issued or issuable upon conversion of our preferred stock then outstanding may, on not more than two occasions, request that we prepare, file and maintain a registration statement on Form S-1 to register the sale of their registrable securities, provided such registrable securities represent at least 20% of all registrable securities then outstanding. Once we are eligible to use a registration statement on Form S-3, the stockholders party to the investors' rights agreement representing at least 20% of the registrable securities then outstanding may, not more than twice in any twelve-month period, request that we prepare, file and maintain a registration statement on Form S-3 covering the sale of their registrable securities, but only if the anticipated offering price, net of underwriting discounts and commissions, would exceed $1.0 million.

Piggyback Registration Rights

In the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the stockholders party to the investors' rights agreement will be entitled to certain "piggyback" registration rights allowing them to include their registrable securities in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a demand registration or a registration statement on Form S-8, these holders will be entitled to notice of the registration and will have the right to include their registrable securities in the registration subject to certain limitations.

Indemnification

The investors' rights agreement contains customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling holders of registrable securities in the event of either material misstatements or omissions in the applicable registration statement attributable to us or our violation of the Securities Act, and the selling stockholders are obligated to indemnify us for material misstatements or omission in the registration statement attributable to them, subject to certain limitations.

Anti-Takeover Provisions of Delaware Law and Our Charter Documents

Some provisions of Delaware law and our third amended and restated certificate of incorporation and our amended and restated bylaws that will become effective immediately prior to the closing of this offering contain provisions that could make the following transactions more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the DGCL, which prohibits persons deemed "interested stockholders" from engaging in a "business combination" with a publicly-held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved

in advance by the board of directors, such as discouraging takeover attempts that might result in a premium over the market price of our common stock.

Elimination of Stockholder Action by Written Consent

Our third amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, will provide that all stockholder actions must be effected at a duly called meeting of stockholders and not by consent in writing. A special meeting of stockholders may be called only by a majority of our board of directors, the chair of our board of directors, or our chief executive officer.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Amendment of Charter Provisions

Our third amended and restated certificate of incorporation will further provide that the affirmative vote of holders of at least $66^{2}/3\%$ of the voting power of all of the then outstanding shares of voting stock, voting as a single class, will be required to amend certain provisions of our third amended and restated certificate of incorporation, including provisions relating to the size of the board, removal of directors, special meetings, actions by written consent and cumulative voting. The affirmative vote of holders of at least 66⅔% of the voting power of all of the then outstanding shares of voting stock, voting as a single class, will be required to amend or repeal our amended and restated bylaws, although our amended and restated bylaws may be amended by a simple majority vote of our board of directors.

Classified Board; Election and Removal of Directors

Our third amended and restated certificate of incorporation will further provide that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered terms, and will give our board of directors the exclusive right to expand the size of our board of directors and to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director.

Choice of Forum

Our third amended and restated certificate of incorporation will provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state court located within the State of Delaware or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware) will be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of us, (ii) any action asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, stockholder, employee or agent of ours to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL, our third amended and restated certificate of incorporation or our amended and restated bylaws (in each case, as may be amended from time to time), (iv) any action asserting a claim governed by the internal affairs doctrine of the State of Delaware, or (v) any other action asserting an "internal corporate claim," as defined in Section 115 of the DGCL, in all cases subject to the court having personal jurisdiction over all indispensable parties named as defendants.

In addition, our third amended and restated certificate of incorporation will further provide that, unless we consent in writing to the selection of an alternative forum (which consent may be given at any time, including during the pendency of litigation), the federal district courts of the United States of America shall be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities will be deemed to have notice of and consented to this provision.

Limitation on Liability and Indemnification Matters

For a discussion of liability and indemnification, see “Management — Limitation on Liability and Indemnification Matters.”

Listing

We intend to apply to list our common stock on The Nasdaq Global Market under the trading symbol “CGTX”.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is .

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock, and a liquid trading market for our common stock may not develop or be sustained after this offering. Future sales of our common stock, including shares issued upon the exercise of outstanding options or warrants, in the public market after the closing of this offering, or the perception that those sales may occur, could adversely affect the prevailing market price for our common stock from time to time or impair our ability to raise equity capital in the future.

Based on the number of shares of common stock outstanding as of , 2021, upon the closing of this offering and assuming (i) the automatic conversion of all our preferred stock outstanding as of into an aggregate of 51,452,501 shares of our common stock upon the closing of this offering, (ii) the issuance of shares of our common stock issuable upon the exercise of warrants to purchase common stock that otherwise would expire upon the closing of this offering (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), (iii) the issuance of shares of our common stock issuable upon the conversion of the SAFEs upon the closing of this offering in the aggregate amount of $8.94 million (assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus), (iv) no exercise of the underwriters' option to purchase additional shares of common stock, and (v) no exercise of outstanding options to purchase shares of our common stock, we will have outstanding an aggregate of approximately shares of common stock. All of the shares sold in this offering will be freely tradable unless purchased by our "affiliates" as such term is defined in Rule 144 under the Securities Act or purchased by existing stockholders and their affiliated entities that are subject to lock-up agreements. All remaining shares of common stock held by existing stockholders immediately prior to the closing of this offering will be "restricted securities," as such term is defined in Rule 144. These restricted securities were issued and sold in private transactions and are eligible for public sale only if registered under the Securities Act or if they qualify for an exemption from registration under the Securities Act, including the exemptions provided by Rule 144 or Rule 701 of the Securities Act, or Rule 701, which rules are summarized below.

As a result of the lock-up agreements referred to below and the provisions of Rule 144 and Rule 701 under the Securities Act, based on the number of shares of our common stock outstanding as of , 2021, the remaining shares of our common stock will generally become for sale in the public market are as follows:

Approximate Number of Shares	First Date Available for Sale on the Public Markets
Shares	181 days after the date of this prospectus, upon expiration of the lock-up agreements referred to below, subject in some cases to applicable volume, manner of sale and other limitations under Rule 144 and Rule 701.

We may issue shares of common stock from time to time as consideration for future acquisitions, investments or other corporate purposes.

In the event that any such acquisition, investment or other transaction is significant, the number of shares of common stock that we may issue may in turn be significant. We may also grant registration rights covering those shares of common stock issued in connection with any such acquisition and investment.

In addition, the shares of common stock reserved for future issuance under the 2017 Plan and 2021 Plan will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements, a registration statement under the Securities Act or an exemption from registration, including Rule 144 and Rule 701.

Rule 144

Under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, and we are current in our Exchange Act reporting at the time of sale, a person (or persons whose shares are required to be aggregated) who is not deemed to have been one of our "affiliates" for purposes of Rule 144 at any time during the three months preceding a

sale and who has beneficially owned restricted securities within the meaning of Rule 144 for at least six months, including the holding period of any prior owner other than one of our "affiliates," is entitled to sell those shares in the public market (subject to the lock-up agreement referred to below, if applicable) without complying with the manner of sale, volume limitations or notice provisions of Rule 144, but subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than "affiliates," then such person is entitled to sell such shares in the public market without complying with any of the requirements of Rule 144 (subject to the lock-up agreement referred to below, if applicable).

In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, our "affiliates," as defined in Rule 144, who have beneficially owned the shares proposed to be sold for at least six months, are entitled to sell in the public market, upon expiration of any applicable lock-up agreements and within any three-month period, a number of those shares of our common stock that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding, which will equal approximately shares of common stock immediately upon the closing of this offering (calculated as of , 2021 on the basis of the assumptions described above and assuming no exercise of the underwriter's option to purchase additional shares and no exercise of outstanding options or warrants subsequent to , 2021); or
- the average weekly trading volume of our common stock on during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Such sales under Rule 144 by our "affiliates" or persons selling shares on behalf of our "affiliates" are also subject to certain manner of sale provisions, notice requirements and requirements related to the availability of current public information about us. Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted securities have entered into lock-up agreements as referenced above and their restricted securities will become eligible for sale (subject to the above limitations under Rule 144) upon the expiration of the restrictions set forth in those agreements.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who acquired common stock from us in connection with a written compensatory stock or option plan or other written agreement in compliance with Rule 701 before the effective date of the registration statement of which this prospectus is a part (to the extent such common stock is not subject to a lock-up agreement) and who are not our "affiliates" as defined in Rule 144 during the immediately preceding 90 days, is entitled to rely on Rule 701 to resell such shares beginning 90 days after the date of this prospectus in reliance on Rule 144, but without complying with the notice, manner of sale, public information requirements or volume limitation provisions of Rule 144. Persons who are our "affiliates" may resell those shares beginning 90 days after the date of this prospectus without compliance with minimum holding period requirements under Rule 144 (subject to the terms of the lock-up agreement referred to below, if applicable).

Lock-Up Agreements

In connection with this offering, we, our directors, our executive officers and the holders of substantially all of our common stock, stock options and other securities convertible into, exercisable or exchangeable for our common stock, have agreed, subject to certain exceptions, with the underwriters not to directly or indirectly offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, or enter into any hedging, swap or other agreement or transaction that transfers any of the economic consequences of ownership of shares of our common stock or any options to purchase shares of our common stock, or any securities convertible into or exchangeable for shares of common stock, during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of the representative of the underwriters, and certain other limited exceptions. These agreements are described in the section titled "Underwriting."

In addition to the restrictions contained in the lock-up agreements described above, we have entered into agreements with certain security holders, including the amended and restated investors' rights agreement, our standard form of option agreement, our standard form of restricted stock agreement and our standard form of restricted stock purchase agreement, that contain market stand-off provisions or incorporate market stand-off provisions from our equity incentive plan imposing restrictions on the ability of such security holders to offer, sell or transfer our equity securities for a period of 180 days following the date of this prospectus.

Following the lock-up periods set forth in the agreements described above, and assuming that the representative of the underwriters do not release any parties from these agreements, all of the shares of our common stock that are restricted securities or are held by our affiliates as of the date of this prospectus will be eligible for sale in the public market in compliance with Rule 144 under the Securities Act.

Registration Rights

Upon the closing of this offering, the holders of up to approximately million shares of our common stock (which includes all of the shares of common stock issuable upon (i) the automatic conversion of our preferred stock upon the closing of this offering, (ii) the conversion of our convertible notes, and (iii) the exercise of warrants that otherwise would expire upon the closing of this offering), or their transferees will be entitled to rights with respect to the registration of the resale of their shares under the Securities Act, subject to the lock-up agreements described under "Lock-Up Agreements" above. Registration of the resale of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration statement registering such shares, except for shares purchased by affiliates.

Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock. The requisite percentage of these stockholders have waived all such stockholders' rights to notice of this offering and to include their shares of registrable securities in this offering.

See the section titled "Description of Capital Stock — Registration Rights" for additional information. Shares covered by a registration statement will be eligible for sale on the public market upon the expiration or release from the terms of any applicable lock-up agreement.

Equity Incentive Plans

We intend to file with the SEC a registration statement on Form S-8 under the Securities Act covering the shares of common stock reserved for issuance under the 2007 Plan, the 2017 Plan and the 2021 Plan. Such registration statement is expected to be filed and become effective as soon as practicable after the closing of this offering. Accordingly, shares registered under such registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations for affiliates and the lock-up agreements described above, if applicable.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or the IRS, in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non- U.S. Holder's particular circumstances, including the impact of the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons subject to the alternative minimum tax;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies and other financial institutions;
- brokers, dealers or traders in securities;
- "controlled foreign corporations," "passive foreign investment companies" and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans;
- "qualified foreign pension funds" and entities all of the interests of which are held by qualified foreign pension funds; and
- persons subject to special tax accounting rules as a result of any item of gross income with respect to our common stock being taken into account in an applicable financial statement.

If an entity or arrangement treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP

AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a "Non-U.S. Holder" is any beneficial owner of our common stock that is neither a "U.S. person" nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation or entity treated as a corporation that is created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (i) is subject to the primary supervision of a U.S. court and the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code), or (ii) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section titled "Dividend Policy," we do not currently intend to pay any cash dividends on our capital stock in the foreseeable future. However, if we make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "— Sale or Other Taxable Disposition."

Subject to the discussions below on effectively connected income, backup withholding and the Foreign Account Tax Compliance Act, or FATCA, dividends paid to a Non-U.S. Holder of our common stock will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment or fixed base in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States.

Any such effectively connected dividends generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also generally will be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits attributable to such dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

Subject to the discussions below regarding backup withholding and FATCA, a Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment or fixed base in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest, or USRPI, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also generally will be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits attributable to such gain, as adjusted for certain items.

Gain described in the third bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty), which may be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder of our common stock will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period. If we are a USRPHC and either our common stock is not regularly traded on an established securities market or a Non-U.S. Holder holds more than 5% of our common stock, actually or constructively, during the applicable testing period, such Non-U.S. Holder will generally be taxed on any gain in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business, except that the branch profits tax generally will not apply.

Non-U.S. Holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our common stock will not be subject to backup withholding, provided the holder either certifies its non-U.S. status by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any dividends on our common stock paid to the Non-U.S. Holder, regardless of whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting, if the applicable withholding agent receives the certification described above or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker that does not have certain enumerated relationships with the United States generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS also may be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (commonly referred to as FATCA) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (i) the foreign financial institution undertakes certain diligence and reporting obligations, (ii) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in clause (i) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertakes to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies currently to payments of dividends on our common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of our common stock on or after January 1, 2021, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

UNDERWRITING

National Securities Corporation is acting as lead managing underwriter of the offering and acting as representative of the underwriters named below. We have entered into an underwriting agreement with the underwriters, dated , 2021. Subject to the terms and conditions of the underwriting agreement, we agreed to sell to the underwriters, and the underwriters agreed to purchase shares of our common stock, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus.

Underwriters	Number of Shares
National Securities Corporation	
Total	

The underwriters are committed to purchase all of the shares of common stock offered by us if any are taken, other than those covered by the option to purchase additional shares described below. The underwriting agreement provides that the underwriters' obligations to purchase shares of our common stock are subject to conditions contained in the underwriting agreement. A copy of the underwriting agreement has been filed as an exhibit to the registration statement of which this prospectus forms a part.

We have been advised by National Securities Corporation that it proposes to offer shares of our common stock directly to the public at the public offering price set forth on the cover page of this prospectus, and at this price less a concession not in excess of $ per share of common stock to other dealers. The underwriters may allow, and certain dealers may re-allow, a discount from the concession not in excess of $ per share of common stock to certain brokers and dealers. After this offering, the offering price, concessions and other selling terms may be changed by the underwriters.

None of our securities included in this offering may be offered or sold, directly or indirectly, nor may this prospectus and any other offering material or advertisements in connection with the offer and sales of any of our common stock be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons who receive this prospectus are advised to inform themselves about and to observe any restrictions relating to this offering of our common stock and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy any of our common stock included in this offering in any jurisdiction where that would not be permitted or legal.

Each underwriter has advised us that it does not intend to confirm sales to any accounts over which it exercises discretionary authority.

Underwriting Discount and Expenses

We have agreed to pay the underwriters a fee equal to % of the gross proceeds of the offering from investors introduced by the underwriters. The following table summarizes the underwriting discount and commission to be paid to the underwriters by us.

	Per Share	Total Without Exercise of Over-Allotment	Total With Exercise of Over-Allotment
Public offering price	$	$	$
Underwriting discounts and commissions	$	$	$
Proceeds, before expenses to us	$	$	$

In addition to the discount set forth in the above table, we have agreed to reimburse the underwriters up to $200,000 for certain of their fees and expenses relating to the offering.

Over-Allotment Option

In addition to the discount set forth in the above table, we have granted to the underwriters an option, exercisable not later than 45 days after the date of this prospectus, to purchase up to an additional 15% of

the shares of common stock firmly committed in this offering at the public offering price, less the underwriting discount, set forth on the cover page of this prospectus. The underwriters may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of our common stock are purchased pursuant to the over-allotment option, the underwriters will offer these additional shares of our common stock on the same terms as those on which the other shares of common stock are being offered hereby.

Determination of Offering Price Listing

We intend to apply to list our common stock on The Nasdaq Global Market under the symbol "CGTX." In order to meet the requirements for listing on that exchange, the underwriters have undertaken to sell a minimum number of shares to a minimum number of beneficial owners as required by that exchange.

Before this offering, there has been no public market for our common stock. Our lead managing underwriter, National Securities Corporation, is not obligated to make a market in our securities, and even if it chooses to make a market, can discontinue doing so at any time without notice. Neither we nor any underwriter can provide any assurance that an active and liquid trading market in our securities will develop or, if developed, that the market will continue.

The public offering price of the shares offered by this prospectus has been determined by negotiation between us and the underwriters. Among the factors considered in determining the public offering price of the shares were:

- our history and our prospects;
- the industry in which we operate;
- our past and present operating results;
- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the shares. Upon the commencement of trading, the price of our shares will be subject to change as a result of market conditions and other factors, and we cannot assure you that the shares can be resold at or above the public offering price.

Lock-Up Agreements

We, our executive officers and directors and each holder of our common stock have agreed not to sell or transfer any common stock or securities convertible into or exchangeable or exercisable for common stock, for 180 days after the date of this prospectus, subject to specified exceptions, without first obtaining the written consent of National Securities Corporation. Specifically, these persons have agreed, with certain limited exceptions, not to directly or indirectly:

- offer, pledge, sell, contract to sell or lend any common stock;
- sell any option or contract to purchase any common stock;
- purchase any option or contract to sell any common stock;
- grant any option, right or warrant to purchase any common stock;
- otherwise transfer or dispose of any common stock;
- make a demand or exercise any right with respect to the registration of any common stock;
- enter into any swap or any other agreement or any transaction that transfers, in whole or in part, the economic consequences of ownership of common stock, whether any such swap or transaction is to be settled by delivery of common stock or other securities, in cash or otherwise;
- publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap hedge or other arrangement relating to any common stock; or

- in the case of the Company, file or cause to be filed any registration statement (other than a registration statement on Form S-8) with the Commission relating to the offering of any shares of our capital stock or any securities convertible into or exercisable or exchangeable for shares of our capital stock.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition.

Indemnification

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act relating to losses or claims resulting from material misstatements in or omissions from this prospectus, the registration statement of which this prospectus forms a part, certain free writing prospectuses that may be used in the offering and in any marketing materials used in connection with this offering and to contribute to payments the underwriters may be required to make in respect of those liabilities.

Short Positions and Penalty Bids

The underwriters may engage in over-allotment, syndicate covering transactions and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, in accordance with Regulation M under the Exchange Act.

- Over-allotment involves sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by an underwriter is not greater than the number of shares that it may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriters may close out any short position by either exercising their over-allotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which it may purchase shares through the over-allotment option. If the underwriters sell more shares than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.
- Penalty bids permit an underwriter to reclaim a selling concession from a syndicate member when the shares originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of the common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NASDAQ Global Market, and if commenced, they may be discontinued at any time.

Neither we nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor the underwriters make any representation that the underwriters will engage in these transactions or that any transaction, once commenced, will not be discontinued without notice.

Electronic Distribution

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by the underwriters, or by their affiliates. In those cases, prospective investors may view offering terms online. Other than the prospectus in electronic format, the information on an underwriter's website and any information contained in any other website maintained by an underwriter is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriters in their capacity as underwriters and should not be relied upon by investors.

The underwriters' compensation in connection with this offering is limited to the fees and expenses described above under "Underwriting Discount and Expenses."

Other Relationships

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their affiliates may in the future engage in investment banking and other commercial dealings in the ordinary course of business with us and our affiliates, for which it may in the future receive customary fees, commissions and expenses.

In addition, in the ordinary course of its business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for its own account and for the accounts of its customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

LEGAL MATTERS

The validity of the issuance of our common stock offered in this prospectus will be passed upon for us by Troutman Pepper Hamilton Sanders LLP, Philadelphia, Pennsylvania. Certain legal matters in connection with this offering will be passed upon for the underwriters by McGuireWoods LLP, New York, New York.

EXPERTS

The consolidated financial statements of Cognition Therapeutics, Inc. at December 31, 2020 and 2019, and for each of the two years in the period ended December 31, 2020, appearing in this prospectus and registration statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements) appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You may read our SEC filings, including this registration statement, over the Internet at the SEC's website at www.sec.gov. Upon the closing of this offering, we will be subject to the information reporting requirements of the Exchange Act and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for review at the SEC's website referred to above. We also maintain a website at www.cogrx.com, at which, following the closing of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus or the registration statement of which it forms a part, and the inclusion of our website address in this prospectus is an inactive textual reference only. You should not consider the contents of our website in making an investment decision with respect to our common stock.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Cognition Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Cognition Therapeutics, Inc. and Subsidiary (the Company) as of December 31, 2019 and 2020, the related consolidated statements of operations and comprehensive loss**,** convertible preferred stock and stockholders' deficit and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2020, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

The Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations, does not expect to generate revenues or operating cash flows for the foreseeable future, and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2020.

Philadelphia, Pennsylvania

May 7, 2021

COGNITION THERAPEUTICS, INC.

CONSOLIDATED BALANCE SHEETS

Amounts in thousands, except share and per share amounts

	As of December 31,	
	2019	**2020**
Assets		
Current assets		
Cash and cash equivalents	$ 2,890	$ 5,189
Grant receivables	2,662	564
Prepaid expenses	117	544
Other receivables	1,462	588
Other current asses	29	23
Total current assets	7,160	6,908
Property and equipment, net	299	211
Total assets	$ 7,459	$ 7,119
Liabilities, Convertible Preferred Stock, and Stockholders' Deficit		
Current liabilities		
Accounts payable	2,357	2,003
Current portion of capital lease obligation	4	—
Accrued expenses	1,321	994
Other current liabilities	1	253
Total current liabilities	3,683	3,250
Paycheck protection program loan	—	443
Derivative liability	1,493	2,209
Warrant liability	181	—
Convertible notes, net	6,897	12,409
Accrued interest	700	1,622
Total liabilities	12,954	19,933
Commitments and contingencies		
Convertible preferred stock:		
Series A convertible preferred stock, par value $0.001 per share, 3,067,519 shares authorized at December 31, 2019 and 2020, 2,819,027 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $4,766 as of December 31, 2020	4,413	4,616
Series A-1 convertible preferred stock, par value $0.001 per share, 3,970,776 shares authorized at December 31, 2019 and 2020, 3,730,366 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $5,572 as of December 31, 2020	5,160	5,398
Series A-2 convertible preferred stock, par value $0.001 per share, 3,565,063 shares authorized at December 31, 2019 and 2020, 3,565,063 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $5,997 as of December 31, 2020	5,552	5,809
Series B convertible preferred stock, par value $0.001 per share, 30,450,000 shares authorized at December 31, 2019 and 2020, 30,409,890 shares issued and outstanding as of December 31, 2019 and 2020; liquidation preference of $40,826 as of December 31, 2020	37,802	39,547
Total convertible preferred stock	52,927	55,370
Stockholders' deficit:		
Common stock, $0.001 par value, 58,000,000 shares authorized at December 31, 2019 and 2020; 1,519,431 and 1,742,756 shares issued and outstanding at December 31, 2019 and 2020, respectively	2	2
Additional paid-in capital	—	221
Accumulated deficit	(58,239)	(68,220)
Accumulated other comprehensive loss	(185)	(187)
Total stockholders' deficit	(58,422)	(68,184)
Total liabilities, convertible preferred stock, and stockholders' deficit	$ 7,459	$ 7,119

The accompanying notes are an integral part of these consolidated financial statements.

COGNITION THERAPEUTICS, INC.

Consolidated Statements of Operations and Comprehensive Loss

Amounts in thousands, except share and per share amounts

	For the Year Ended December 31,	
	2019	2020
Operating Expenses:		
Research and development	$ 14,379	$ 12,887
General and administrative	3,452	4,520
Total operating expenses	17,831	17,407
Loss from operations	(17,831)	(17,407)
Other income (expense):		
Grant income	13,164	10,855
Change in the fair value of the derivative liability	(231)	18
Change in the fair value of the warrant liability	(7)	181
Other income, net	1,087	394
Loss on debt extinguishment	—	(129)
Interest expense, net	(1,024)	(1,751)
Total other income (expense), net	12,989	9,568
Net loss	(4,842)	(7,839)
Cumulative preferred stock dividends	(3,920)	(4,234)
Net loss attributable to common stockholders	$ (8,762)	$ (12,073)
Unrealized loss on foreign currency translation	(20)	(2)
Total comprehensive loss	$ (4,862)	$ (7,841)
Net loss per share attributable to common stockholders, basic and diluted	$ (5.77)	$ (7.35)
Weighted-average common shares outstanding, basic and diluted	1,519,285	1,643,514

The accompanying notes are an integral part of these consolidated financial statements.

COGNITION THERAPEUTICS, INC.

Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit

Amounts in thousands, except share amounts

	Series A Convertible Preferred Stock		Series A-1 Convertible Preferred Stock		Series A-2 Convertible Preferred Stock		Series B Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balances as of December 31, 2018	2,819,027	$4,086	3,730,366	$4,778	3,565,063	$5,141	30,409,890	$35,002	1,519,236	$ 2	$ —	$(49,838)	$(165)	$(50,001)
Exercise of warrants	—	—	—	—	—	—	—	—	195	—	—	—	—	—
Equity-based compensation	—	—	—	—	—	—	—	—	—	—	361	—	—	361
Accretion of convertible preferred stock to redemption value	—	327	—	382	—	411	—	2,800	—	—	(361)	(3,559)	—	(3,920)
Other comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	—	(20)	(20)
Net loss	—	—	—	—	—	—	—	—	—	—	—	(4,842)	—	(4,842)
Balances as of December 31, 2019	2,819,027	4,413	3,730,366	5,160	3,565,063	5,552	30,409,890	37,802	1,519,431	2	—	(58,239)	(185)	(58,422)
Exercise of common stock warrants	—	—	—	—	—	—	—	—	163,334	—	34	—	—	34
Exercise of stock options	—	—	—	—	—	—	—	—	59,991	—	13	—	—	13
Equity-based compensation	—	—	—	—	—	—	—	—	—	—	475	—	—	475
Accretion of convertible preferred stock to redemption value	—	203	—	238	—	257	—	1,745	—	—	(301)	(2,142)	—	(2,443)
Other comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	—	(2)	(2)
Net loss	—	—	—	—	—	—	—	—	—	—	—	(7,839)	—	(7,839)
Balances as of December 31, 2020	2,819,027	$4,616	3,730,366	$5,398	3,565,063	$5,809	30,409,890	$39,547	1,742,756	$ 2	$ 221	$(68,220)	$(187)	$(68,184)

The accompanying notes are an integral part of these consolidated financial statements.

COGNITION THERAPEUTICS, INC.

Consolidated Statements of Cash Flows

Amounts in thousands

	For the Year Ended December 31,	
	2019	**2020**
Cash flows from operating activities:		
Net loss	$(4,842)	$(7,839)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	81	98
Amortization of debt issuance costs	30	54
Amortization of debt discount	464	782
Change in the fair value of the derivative liability	231	(18)
Change in the fair value of the warrant liability	7	(181)
Loss on debt extinguishment	—	129
Equity-based compensation	361	475
Changes in operating assets and liabilities:		
Grant receivables	(43)	2,097
Prepaid expenses and other current assets	(22)	(417)
Other receivables	(1,075)	904
Accounts payable	862	(364)
Accrued expenses and interest	934	595
Other current liabilities	(86)	252
Net cash used in operating activities	(3,098)	(3,433)
Cash flows from investing activities:		
Payments for property and equipment	(144)	(10)
Net cash used in investing activities	(144)	(10)
Cash flows from financing activities:		
Payments on capital lease obligation	(50)	(4)
Proceeds from the exercise of common stock warrants	—	34
Proceeds from the exercise of stock options	—	13
Proceeds from the paycheck protection program loan	—	443
Proceeds from the issuance of convertible notes	2,878	5,372
Debt issuance costs related to convertible notes	(34)	(93)
Net cash provided financing activities	2,794	5,765
Effect of exchange rate changes on cash and cash equivalents	(60)	(23)
Net (decrease) increase in cash and cash equivalents	(508)	2,299
Cash and cash equivalents – beginning of period	3,398	2,890
Cash and cash equivalents – end of period	$ 2,980	$ 5,189
Supplemental disclosures of non-cash investing and financing activities:		
Purchase of property and equipment in accrued expenses	$ 55	$ —
Non-cash accretion of convertible preferred stock to redemption value	$(3,920)	$(2,443)

The accompanying notes are an integral part of these consolidated financial statements.

Cognition Therapeutics, Inc.
Notes to the consolidated financial statements

Amounts in thousands, except share and per share amounts

1. Description of Business and Financial Condition

Cognition Therapeutics, Inc. and Subsidiary (hereafter "the Company") incorporated as a Delaware corporation on August 21, 2007. The Company is a biopharmaceutical company developing disease-modifying therapies for central nervous system (CNS) disorders. The Company's pipeline candidates were discovered using proprietary biology and chemistry platforms designed to identify novel drug targets and disease-modifying therapies that address dysregulated pathways specifically associated with neurodegenerative diseases. The Company was founded on the unique combination of biological expertise around these targets, including proprietary assays that emphasize functional responses, and proprietary medicinal chemistry intended to produce novel, high-quality small-molecule drug candidates.

On July 14, 2015, the Company formed Cognition Therapeutics PTY LTD, a wholly owned subsidiary, primarily for the purpose of conducting research and development efforts at facilities located in Australia. Assets and liabilities of the Company's Australian subsidiary, which uses the Australian dollar as its local functional currency, are translated to United States (U.S.) dollars at year-end exchange rates. Income statement accounts are translated using the average exchange rates prevailing during the month in which income and expenses are generated. Translation adjustments are recorded to accumulated other comprehensive income (loss) ("AOCI") within stockholders' deficit. Gains and losses from foreign currency transactions are included in net loss as a part of other income, net.

Liquidity and Going Concern

As of December 31, 2020, the Company had an accumulated deficit of $68,220 and cash and cash equivalents of $5,189. The Company incurred net losses of $4,842 and $7,839 for the years ended December 31, 2019 and 2020, respectively. The Company has financed its operations to date primarily through government and private philanthropic grants, private placements of its convertible preferred stock, private offerings of convertible notes, and the Simple Agreement for Future Equity, or SAFEs, described in Note 17. It is not anticipated that the Company will generate commercial revenue or operating cash flows in the foreseeable future. The Company's ability to continue as a going concern in the near term is largely dependent on the Company's ability to raise additional funds through debt or equity transactions, grant awards or other means. The Company's forecasted cash required to fund operations, excluding future fundraising efforts and future additional NIH Grants, indicates that the Company does not have sufficient funds to support operations through the one year period from the issuance date of these financial statements. Accordingly, there is substantial doubt about the Company's ability to continue as a going concern within one year after the date that these financial statements are issued.

Management's plans to address this going concern uncertainty include raising additional financing through public or private equity offerings, debt financings, collaborations and licensing arrangements, additional grant awards, or other sources to fund its operations, however, there can be no assurance that the Company will be able to obtain such funding on terms acceptable to the Company, on a timely basis or at all. The failure of the Company to obtain sufficient funds on acceptable terms when needed would have a material adverse effect on the Company's business, results of operations and financial condition.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to

the authoritative United States generally accepted accounting principles as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") of the Financial Accounting Standards Board ("FASB").

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of interest-bearing deposits at various financial institutions. The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

Receivables

Grant Receivables

Grant receivables relate to outstanding amounts due for reimbursable expenditures of awarded grants issued by the National Institute of Health and are carried at their estimated collectible amounts. The Company expects all receivables to be collectible, and accordingly, there is no allowance for doubtful accounts required on these grant receivables.

Other Receivables

Other receivables consist of research and development tax credits from the state of Pennsylvania and the Australian research and development tax credit from the Australian Tax Authority. Historically, the Company has sold the Pennsylvania tax credits to third parties, while the Australian tax refund is paid directly to the Company by the Australian Tax Authority. Research and development tax refunds and credits are carried at their estimated collectible amounts. The Company expects all receivables to be collectible and accordingly, there is no allowance for doubtful accounts required on these other receivables.

Property and Equipment

Property and equipment is recorded at cost, less accumulated depreciation. Depreciation is computed on the straight-line basis over the estimated useful life of the asset. The Company estimates the useful life to be 5 and 6 years for equipment and furniture and fixtures, respectively. The cost of repairs and maintenance is charged to expense as incurred.

Property and equipment is evaluated for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable from the estimated future cash flows expected to result from its use and eventual disposition. If expected cash flows are less than the carrying value, an impairment loss is recognized equal to an amount by which the carrying value exceeds the fair value of the assets. There were no indicators of impairment of long-lived assets during the years ended December 31, 2019 or 2020.

Convertible Instruments

ASC 815, *Derivatives and Hedging Activities* ("ASC 815") requires companies to bifurcate certain conversion options and redemption features from their host instruments and account for them as free-standing derivative financial instruments should certain criteria be met.

Cognition Therapeutics, Inc.
Notes to the consolidated financial statements

Amounts in thousands, except share and per share amounts

The Company also follows ASC 480-10, *Distinguishing Liabilities from Equity* ("ASC 480-10") when evaluating the accounting for its hybrid instruments. A financial instrument that embodies an unconditional obligation, or a financial instrument other than an outstanding share that embodies a conditional obligation, that the issuer must or may settle by issuing a variable number of its equity shares shall be classified as a liability (or an asset in some circumstances) if, at inception, the monetary value of the obligation is based solely or predominantly on any one of the following: (a) a fixed monetary amount known at inception; (b) variations in something other than the fair value of the issuer's equity shares; or (c) variations inversely related to changes in the fair value of the issuer's equity shares. Hybrid instruments meeting these criteria are not further evaluated for any embedded derivatives and are carried as a liability at fair value at each balance sheet date.

Debt Issuance Costs and Discounts

The Company incurred third-party costs in connection with the convertible notes as described in Note 9. These costs are classified on the balance sheet as a direct deduction from the convertible notes and amortized over the term of the agreement as interest expense using the effective interest rate method.

Discounts related to bifurcated derivatives resulting from the convertible note issuances are recorded as a reduction to the carrying value of the debt and amortized over the life of the debt using the effective interest method.

Warrants Issued in Connection with Financings

The Company generally accounts for warrants issued in connection with debt and equity financings as a component of equity, unless the warrants include specific features, such as if the warrants are exercisable for securities that are considered contingently redeemable. For warrants that are exercisable for securities that are considered contingently redeemable, the Company records the fair value of the warrants as a liability at each balance sheet date and records changes in fair value in other (income) expense in the consolidated statement of operations and comprehensive loss.

Convertible Preferred Stock

The Company has classified convertible preferred stock outside of stockholders' deficit in the accompanying balance sheets due to the convertible preferred stock's redemption features. Originally, the convertible preferred stock was eligible to become redeemable at the holders option at any time after March 20, 2021. This right was removed in connection with an amendment to the Company's articles of incorporation on July 29, 2020. Pre-amendment, the convertible preferred stock was redeemable due to the passage of time, and therefore, the Company recorded changes in the redemption value and accreted the convertible preferred stock immediately to the redemption value during each period presented. These increases were affected through charges against retained earnings, if any, and then to additional paid-in capital. In the absence of additional paid-in capital, the accretion is charged to accumulated deficit. Post-amendment, the convertible preferred stock is considered to be contingently redeemable only upon the occurrence of a deemed liquidation event (Note 10). As a result, the Company ceased accreting the convertible preferred stock on July 29, 2020. To evaluate whether the changes to the terms of the preferred stock should be accounted for as a modification or extinguishment, the Company follows the qualitative approach, in which amendments to preferred shares are analyzed based on the expected economics as well as the business purpose of the amendment. The Company concluded that the amendment did not result in a significant change to the fundamental nature of the preferred stock, and accordingly, the amendment was accounted for as a modification, and there was no accounting impact for the modification.

Grant income

In 2019 and 2020, the Company generated grant income of $13,164 and $10,855 from reimbursements from the National Institute of Health ("NIH") for aging research. The Company records the proceeds from

these grants as grant income in other income (expense) in the period in which the reimbursable research and development services are performed.

Research and Development Costs

The Company is involved in research and development aimed at the development of treatments for a variety of diseases related to the central nervous system, with a primary focus on Alzheimer's Disease. Research and development costs are expensed as incurred. Research and development expenses consist principally of personnel costs, including salaries, stock-based compensation, and benefits for employees, third-party license fees and other operational costs related to our research and development activities, including allocated facility-related expenses and external costs of outside vendors, and other direct and indirect costs. Non-refundable research and development costs are deferred and expensed as the related goods are delivered or services are performed. Costs for external development activities are recognized based on an evaluation of the progress to completion of specific tasks. Costs for certain research and development activities are recognized based on the pattern of performance of the individual arrangements, which may differ from the pattern of billings incurred, and are reflected in the consolidated financial statements as prepaid expenses or as accrued research and development expenses.

Income Taxes

The Company accounts for income taxes under the asset and liability method pursuant to authoritative guidance.

Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under this authoritative guidance, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. If it is more likely than not that some portion or all of a deferred tax asset will not be recognized, a valuation allowance is recognized.

The Company accounts for uncertainty in income taxes using a recognition threshold of more-likely-than-not to be sustained upon examination by the appropriate taxing authority. Measurement of the uncertainty occurs if the recognition threshold is met. The Company has determined that there were no uncertainties as of December 31, 2019 and December 31, 2020 that met the recognition threshold.

Equity-based Compensation

Following the provisions of ASC 718, *Compensation — Stock Compensation*, the Company recognizes compensation expense for equity-based grants using the straight-line attribution method, in which the expense is recognized ratably over the requisite service period within operating expenses based on the grant date fair value. The Company also has granted awards subject to performance-based vesting. The Company would recognize compensation expense for these awards commencing in the period in which the vesting condition becomes probable of achievement. Grant date fair value is estimated on the date of grant using the Black-Scholes option pricing model. Forfeitures are recognized in the period in which they occur.

Black-Scholes requires inputs based on certain subjective assumptions, including (i) the expected stock price volatility, (ii) the expected term of the award, (iii) the risk-free interest rate and (iv) expected dividends. Due to the lack of a public market for the Company's common stock and lack of company-specific historical and implied volatility data, the Company has based its computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to the Company, including stage of product development and life science industry focus. The historical volatility is calculated

based on a period of time commensurate with expected term assumption. The Company uses the simplified method to calculate the expected term for stock options granted to employees whereby the expected term equals the arithmetic average of the vesting term and the original contractual term of the stock options due to its lack of sufficient historical data. The risk-free interest rate is based on U.S. Treasury securities with a maturity date commensurate with the expected term of the associated award. The expected dividend yield is assumed to be zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock.

Due to the absence of an active market for the Company's common stock, the Company utilized methodologies in accordance with the framework of the American Institute of Certified Public Accountants Technical Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, to estimate the fair value of its common stock. In determining the exercise prices for stock options granted, the Company has considered the estimated fair value of the common stock as of the measurement date. The estimated fair value of the common stock has been determined at each grant date based upon a variety of factors, including the illiquid nature of the common stock, arm's-length sales of the Company's capital stock (including convertible preferred stock), the effect of the rights and preferences of the preferred stockholders and the prospects of a liquidity event. Among other factors are the Company's financial position and historical financial performance, the status of technological developments within the Company's research, the composition and ability of the current research and management team, an evaluation or benchmark of the Company's competition and the current business climate in the marketplace. Significant changes to the key assumptions underlying the factors used could result in different fair values of common stock at each valuation date.

Concentration of Credit Risk

The Company's financial instruments that are exposed to credit risks consist of cash and cash equivalents. The Company maintains its cash and cash equivalents in bank deposit accounts which, at times, may exceed the federally insured limit. The Company has not experienced any losses in these accounts and does not believe it is exposed to any significant credit risk related to these funds.

Fair Value of Financial Instruments

The Company applies ASC 820, *Fair Value Measurement* ("ASC 820"), which establishes a framework for measuring fair value and clarifies the definition of fair value within that framework. ASC 820 defines fair value as an exit price, which is the price that would be received for an asset or paid to transfer a liability in the Company's principal or most advantageous market in an orderly transaction between market participants on the measurement date. The fair value hierarchy established in ASC 820 generally requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Observable inputs reflect the assumptions that market participants would use in pricing the asset or liability and are developed based on market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the entity's own assumptions based on market data and the entity's judgments about the assumptions that market participants would use in pricing the asset or liability and are to be developed based on the best information available in the circumstances.

The carrying value of the Company's cash and cash equivalents, grants receivable, prepaid expense, other receivables, other current assets, accounts payable, accrued expenses and other current liabilities approximate fair value because of the short-term maturity of these financial instruments. In addition, the Company records its warrant liability and derivative liability at fair value.

Cognition Therapeutics, Inc.
Notes to the consolidated financial statements

Amounts in thousands, except share and per share amounts

The valuation hierarchy is composed of three levels. The classification within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement. The levels within the valuation hierarchy are described below:

- Level 1 — Assets and liabilities with unadjusted, quoted prices listed on active market exchanges. Inputs to the fair value measurement are observable inputs, such as quoted prices in active markets for identical assets or liabilities.
- Level 2 — Inputs to the fair value measurement are determined using prices for recently traded assets and liabilities with similar underlying terms, as well as direct or indirect observable inputs, such as interest rates and yield curves that are observable at commonly quoted intervals.
- Level 3 — Inputs to the fair value measurement are unobservable inputs, such as estimates, assumptions, and valuation techniques when little or no market data exists for the assets or liabilities.

Comprehensive Loss

The Company recorded $20 and $2 in other comprehensive loss related to foreign currency translation for the years ended December 31, 2019 and 2020, respectively. The Company presents comprehensive loss in a single statement within its consolidated financial statements.

Net Loss Per Share Attributable to Common Stockholders

Basic net loss attributable to common shares is computed by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during each period. Diluted net loss attributable to common shares includes the effect, if any, from the potential exercise or conversion of securities, such as convertible preferred stock and stock options, which would result in the issuance of incremental shares of common stock. For diluted net loss per share, the weighted-average number of shares of common stock is the same for basic net loss per share due to the fact that when a net loss exists, dilutive securities are not included in the calculation as the impact is anti-dilutive. The Company's convertible preferred stock entitles the holder to participate in dividends and earnings of the Company, and, if the Company were to recognize net income, it would have to use the two-class method to calculate earnings per share. The two-class method is not applicable during periods with a net loss, as the holders of the convertible preferred stock have no obligation to fund losses.

Segments

The Company has determined that it operates and manages one operating segment, which is the business of developing and commercializing therapeutics. The Company's chief operating decision maker, its chief executive officer, reviews financial information on an aggregate basis for the purpose of allocating resources.

Emerging Growth Company Status

The Company is an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 ("JOBS Act"). Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that it is (a) no longer an emerging growth company or (b) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

Cognition Therapeutics, Inc.
Notes to the consolidated financial statements

Amounts in thousands, except share and per share amounts

Recent Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update (ASU) No. 2016-02, *Leases* (Topic 842). ASU No. 2016-02 requires lessees to recognize the assets and liabilities that arise from leases on the balance sheet. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. ASU No. 2016-02 is effective for the Company for annual periods beginning after December 15, 2021. Early adoption is permitted. The Company expects to adopt this guidance when effective and is assessing what effect the adoption of ASU 2016-02 will have on its consolidated financial statements and accompanying notes. The Company expects to record right-of-use assets and liabilities upon adoption.

In June 2018, the FASB issued ASU 2018-07, *Compensation — Stock Compensation* (Topic 718) Improvements to Nonemployee Share-Based Payment Accounting. The new ASU simplifies the accounting for share-based payments to non-employees by aligning it with the accounting for share-based payments to employees, with certain exceptions. The Company adopted the standard on January 1, 2020 and it did not have a material impact on the Company's financial condition, results of operations and cash flows.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820)*. This standard modifies disclosure requirements related to fair value measurement and is effective for all entities for fiscal years beginning after December 15, 2019. Among other things, ASU 2018-13 requires public entities to disclose the range and weighted average used to develop significant unobservable inputs for level 3 fair value measurements, while eliminating the requirement for public entities to disclose the amount of and reasons for transfers between level 1 and level 2 of the fair value hierarchy. Implementation on a prospective or retrospective basis varies by specific disclosure requirement. The standard also allows for early adoption of any removed or modified disclosures upon issuance while delaying adoption of the additional disclosures until their effective date. The Company adopted this guidance on January 1, 2020 and the adoption did not have a material impact on its financial statements.

In August 2020, the FASB issued ASU 2020-06, *Debt — Debt with Conversion and Other Options* (Subtopic 470-20) and *Derivatives and Hedging — Contracts in Entity's Own Equity* (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity. This ASU simplifies the accounting for certain convertible instruments. ASU 2020-06 will be effective for fiscal years beginning after December 15, 2021, with early adoption permitted for interim and annual reporting periods beginning after December 15, 2020. The Company is currently evaluating the impact of the pending adoption of the new standard on the Company's consolidated financial statements.

In October 2020, the FASB issued ASU 2020-10, *Codification Improvements*, which updates various codification topics by clarifying or improving disclosure requirements to align with the SEC's regulations. The Company will adopt ASU 2020-10 as of the reporting period beginning January 1, 2021. The adoption of this update is not expected to have a material effect on the Company's financial statements.

Cognition Therapeutics, Inc.
Notes to the consolidated financial statements

Amounts in thousands, except share and per share amounts

3. Financial Instruments and Fair Value Measurements

Financial assets and liabilities measured at fair value are summarized below:

	As of December 31, 2019			
	Quoted Priced in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Assets:				
Money market funds	$1,886	$—	$ —	$1,886
Total assets	$1,886	$—	$ —	$1,886
Liabilities:				
Derivative liability	$ —	$—	$1,493	$1,493
Warrant liability	—	—	181	181
Total liabilities	$ —	$—	$1,674	$1,674

	As of December 31, 2020			
	Quoted Priced in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Assets:				
Money market funds	$2,853	$—	$ —	$2,853
Total assets	$2,853	$—	$ —	$2,853
Liabilities:				
Derivative liability	$ —	$—	$2,209	$2,209
Total liabilities	$ —	$—	$2,209	$2,209

The following table sets forth a summary of the changes in fair value of the Level 3 liabilities for the years ended December 31, 2019 and 2020:

	Warrant Liability	Derivative Liability	Total
Balance at December 31, 2018	$ 174	$ 771	$ 945
Change in the fair value of the warrant liability	7	—	7
Fair value recognized upon the issuance of Convertible Notes	—	491	491
Change in the fair value of the derivative liability	—	231	231
Balance at December 31, 2019	181	1,493	1,674
Change in the fair value of the warrant liability	(181)	—	(181)
Fair value recognized upon the issuance of Convertible Notes	—	734	734
Change in the fair value of the derivative liability	—	(18)	(18)
Total liabilities	$ —	$2,209	$2,209

Derivative Liability — The Company recognizes derivative liabilities as a result of the issuance of the convertible notes that contain conversion and redemption features that are required to be bifurcated. The fair value measurement of the derivative liability is classified as Level 3 under the fair value hierarchy as it has been valued using certain unobservable inputs. These inputs include: (1) probability of occurrence of

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future events (such as a qualified financing or a sale), and (2) discount rate for implied return required by investor. Significant increases or decreases in any of those inputs in isolation could result in a significantly lower or higher fair value measurement.

The fair value of the derivative liability was determined by calculating the fair value of the notes with the conversion and redemption features as compared to the fair value of the notes without such features, with the difference representing the value of the conversion and redemption features, or the derivative liability. The conversion and redemption features are measured at fair value as of each reporting date and the change in the fair value for the period is recorded in the consolidated statements of operations as a change in the fair value of the derivative liability. The fair value of the derivative liability is based on Level 3 unobservable inputs. Changes in fair value are recognized as a gain or loss within other income (expense) on the consolidated statements of operations and comprehensive loss.

Warrant Liability — As of December 31, 2019 the company had 180,724 of series A-1 preferred stock warrants outstanding. The fair value of the warrant liability was reported as a long-term liability on the consolidated balance sheet. The warrants expired unexercised in October 2020 and the Company recorded a change in fair value adjustment of $181 in the consolidated statement of operations and comprehensive loss.

4. Property and Equipment

Property and equipment, net, consisted of the following:

	As of December 31,	
	2019	2020
Equipment	$ 977	$ 987
Furniture and fixtures	1	1
Property and equipment, gross	978	988
Less: Accumulated depreciation	(679)	(777)
Property and equipment, net	$ 299	$ 211

Depreciation expense for the years ended December 31, 2019 and 2020 was $43 and $60. Amortization expense was $38 for the years ended December 31, 2019 and 2020. Equipment cost includes an asset under a capital lease totaling $190 on December 31, 2019 and December 31, 2020. Accumulated amortization of the leased equipment as of December 31, 2019 and December 31, 2020 was $114 and $152.

5. Accrued Expenses

Accrued expense consists of the following:

	As of December 31,	
	2019	2020
Employee compensation, benefits, and related accruals	$ 532	$732
Consulting and contracted research	566	143
Professional fees	164	114
Other accrued	59	5
Total	$1,321	$994

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6. Other Receivables

Other receivables consist of the following:

	As of December 31,	
	2019	2020
Research and development incentive receivables	$1,364	$489
Other receivables	98	99
Total	$1,462	$588

7. Other Income Net

Other income net consists of the following:

	Year Ended December 31,	
	2019	2020
Research and development incentive	$ 982	$474
Foreign currency loss	—	(88)
Other income, net	105	8
Total	$1,087	$394

8. Commitments and Contingencies

The Company has operating leases for its office and laboratory facilities under agreements that run through June 30, 2023. The Company entered into a capital lease agreement on December 9, 2016, as a lessee. The leased equipment has a one-dollar buyout option at the conclusion of the lease term. The agreement requires 36 total monthly lease payments of $4,338. In 2020, the capital lease has expired.

Minimum lease commitments consisted of the following as of December 31, 2020:

	Operating Leases
2021	$118
2022	118
2023	59
Total lease commitments	$295

Rent expense was $118 and $179 for the years ended December 31, 2019 and 2020, respectively.

From time to time, the Company may be involved in disputes or regulatory inquiries that arise in the ordinary course of business. When the Company determines that a loss is both probable and reasonably estimable, a liability is recorded and disclosed if the amount is material to the financial statements taken as a whole. When a material loss contingency is only reasonably possible, the Company does not record a liability, but instead discloses the nature and the amount of the claim, and an estimate of the loss or range of loss, if such an estimate can reasonably be made.

As of December 31, 2019 and 2020, there was no litigation or contingency with at least a reasonable possibility of a material loss.

9. Debt

On March 8, 2018, the Company entered into a Convertible Note Purchase Agreement (“the Original Agreement”) with existing investors of the Company. Under the terms of the Original Agreement, the

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Company agreed to issue up to $5,000 in principle Convertible Notes (the "Original Notes"). The Original Notes accrued interest at 4.0% per annum from the date of issuance with a maturity date of February 27, 2020 (subsequently extended — see below). The Company issued $2,965 in Original Notes in March and April 2018. Under the terms of the Original Agreement, the following features are included:

i. Automatic conversion into equity securities upon the closing of an equity financing with aggregate gross proceeds of at least $10,000, at the conversion price equal to 90.0% of the lowest price per share of the equity financing securities sold (a "Automatic Conversion Upon a Qualified Financing")

ii. Optional conversion into equity securities upon the closing of an equity financing that does not constitute a Qualified Financing at a conversion price equal to 90.0% of the price per share of the equity financing securities sold (a "Optional Conversion Upon a Non-Qualified Financing")

iii. Optional conversion of the unpaid principal balance plus accrued and unpaid interest to into Series B-1 convertible preferred stock at a conversion price of $1.385 per share or redemption of the unpaid principal balance plus accrued and unpaid interest if (i) a transaction results in any person or group with over 50.0% voting power, (ii) any consolidation or merger transaction, or (iii) a sale or transfer of substantially all of the Company's assets ("Option Conversion or Redemption")

iv. Automatic redemption of unpaid principal and all accrued and unpaid interest upon maturity, liquidation, dissolution, winding up, or event of default ("Automatic Redemption")

On November 15, 2018, the Company entered into a Convertible Note Purchase Agreement (the "Additional Agreement") with existing investors of the Company. Under the terms of the Additional Agreement, the Company agreed to issue up to an aggregate of $8,000 in principle Convertible Notes (the "Additional Notes"). In connection with the Additional Agreement, the Company amended the Original Notes (the "Amendment"). The Amendment resulted in the following changes to the Original Notes:

i. the interest rate of the Original Notes accrue interest at 4.0% from issuance to November 15, 2018, and accrue interest at 8.0% from November 15, 2018 to maturity or conversion,

ii. the conversion price was amended to 80.0% of the price per share in connection with conversion of the notes upon a Qualified or Non-Qualified Financing,

iii. the holder's option upon a sale event to receive repayment, at two times the principal plus accrued and unpaid interest, ("Optional Redemption Upon a Sales Transaction") and

iv. a condition that each holder of $1,000 in aggregate principal must be included in the 66 2/3% of the holders of the principal amount of the Notes to provide consent to make any further amendments or waivers.

On February 27, 2020, the Company entered into a Convertible Note Purchase Agreement (the "Second Amendment") with existing investors of the Company. Under the terms of the Second Amendment, the Company agreed to issue up to an aggregate of $10,035 in principle Convertible Notes (the "Second Amendment Notes"). In connection with the Second Amendment, the Company amended the Original Notes and Additional Notes. The Second Amendment resulted in the following changes:

i. extend the maturity date to June 30, 2021

ii. add a cap for a conversion in connection with a Qualified Financing

iii. provide for mandatory conversion of the Combined Notes into Series B-1 convertible preferred stock of the Company if the Company has not completed a Qualified Financing on or before June 30, 2021

The Company applied extinguishment accounting to the Original Notes upon execution of the Amendment in 2018 on the basis that the present value of the cash flows under the terms of the Amendment

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of the Original notes were determined to be substantially different. The Company applied extinguishment accounting upon execution of the Second Amendment as the addition of the conversion features are substantive and recorded a loss on debt extinguishment of $129 in the consolidated statement of operations and comprehensive loss during 2020.

Each Additional Note and Second Amendment Note (collectively with the Original Notes, the "Convertible Notes" or the "Notes) included the features set forth above. The Company issued $2,965 Original Notes in 2018, $4,661 Additional Notes in 2018 and 2019, and $5,372 Second Amendment Notes in 2020.

The total issuance costs incurred in connection with all closings of the Convertible Notes was $205.

The Convertible Notes were considered to be a hybrid financial instrument consisting of a fixed interest rate host with certain embedded features requiring evaluation for bifurcation and separate accounting. The Company determined that the Automatic Conversion Upon a Qualified Financing, Optional Conversion Upon a Non-Qualified Financing and the Optional Redemption Upon a Sales Transaction were considered freestanding financial instruments which required bifurcation from the host debt instruments.

The resulting debt discount from the derivative liabilities was presented as a direct deduction from the carrying amount of the Convertible Notes and amortized to interest expense using the effective interest rate method.

The Convertible Notes as of December 31, 2019 and 2020 consist of the following:

	2019	2020
Convertible notes principal	$7,626	$12,998
Less: unamortized note issuance costs	(44)	(45)
Less: debt discount	(685)	(544)
	$6,897	$12,409

Interest expense on the convertible notes, including amortization of debt issuance costs, consisted of the following for the year ended December 31, 2019 and 2020:

	2019	2020
Coupon interest	$ 574	$ 922
Issuance costs amortization	30	54
Discount amortization	464	782
	$1,068	$1,758

At December 31, 2020 and 2019, the Company has classified the outstanding convertible notes, as well as accrued interest, within long term liabilities, as the convertible notes are not expected to require the use of current assets to settle the obligations within the next twelve months. In May of 2021, the convertible notes and accrued interest thereon were converted in Series B-1 convertible preferred stock (Note 17).

In April 2020, the Company received a $443 unsecured loan, bearing interest at 1.0%, pursuant to the Paycheck Protection Program (the "PPP"), a program implemented by the U.S. Small Business Administration (the "SBA") under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") (the "PPP Loan"). The PPP provides for loans to qualifying businesses for amounts up to 2.5 times of the average monthly payroll expenses of the qualifying business. The loan and accrued interest are forgivable after eight weeks if the borrower uses the loan proceeds for eligible purposes, including payroll, benefits, rent and utilities. The amount of loan forgiveness may be reduced if the borrower terminates employees or reduces salaries during the eight-week period. The unforgiven portion of the PPP loan is payable over two years at an

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interest rate of 1.0%, with a deferral of payments for the first six months. The Company used the proceeds for purposes consistent with the PPP.

10. Preferred Stock

As of December 31, 2020, convertible preferred stock consisted of the following:

Class of Preferred	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Preference	Common Stock Issuable Upon Conversion
Series A Preferred Stock	3,067,519	2,819,027	$ 4,616	$ 4,766	2,819,027
Series A-1 Preferred Stock	3,970,776	3,730,366	5,398	5,572	3,730,366
Series A-2 Preferred Stock	3,565,063	3,565,063	5,809	5,997	3,565,063
Series B Preferred Stock	30,450,000	30,409,890	39,547	40,826	30,409,890
Total	41,053,358	40,524,346	$55,370	$ 57,161	40,524,346

Rights, preferences, privileges, and restrictions:

The holders of shares of Series A, A-1, A-2, B and B-1 convertible preferred stock (or collectively, the "Preferred Stock") have the rights, preferences, privileges, and restrictions as set forth below:

Dividends:

The holders of the Preferred Stock are entitled to receive cumulative dividends when, as and if declared by the Company's Board of Directors. Accrued dividends shall accrue only on the unreturned amount of the original issue price taking into account the payment of any mandatory dividend. As used herein, "original issue price" means $0.69 per share with respect to the Series A and A-1 preferred stock, $0.8415 per share with respect to the Series A-2 preferred Stock, and $0.923 per share with respect to the Series B preferred stock. After such time the holders receive their full preferred liquidation amount, less any and all mandatory dividends, the holders of preferred stock will not be entitled to any additional accruing dividends; provided that the holders of the preferred stock will share in all dividends and distributions declared by the Board of Directors and paid by the Company with the holders of common stock on an as if converted to common stock basis.

Voting Rights:

The holders of Preferred Stock are entitled to voting rights equal to the number of shares of common stock into which the shares of Preferred Stock can be converted. In addition, as long as there are shares of Preferred Stock outstanding, each of the holders of over 7.5% of the total Preferred Stock outstanding on a converted basis shall be entitled to designate one director of the Company to be elected by the holders of Preferred Stock. The holders of a majority of the then outstanding shares of common stock, voting together as a single class, shall be entitled to elect one director of the Company. If the holders of the Preferred Stock or common stock fail to elect a sufficient number of directors to fulfill directorships for which they are entitled to elect directors, then any directorship shall remain vacant until the holders of the Preferred Stock or common stock elect such person.

Liquidation Rights:

In the event of any liquidation, dissolution or winding up of the Company, whether voluntary or involuntary, the holders of Preferred Stock have liquidation preferences, before any distribution or payment is made to holders of any common stock, in an amount per share equal to the original issue price for such Preferred Stock plus all accruing dividends (the "Preferred Liquidation Amount"). If the assets and funds to

be distributed among the holders of Preferred Stock are insufficient to permit the payment to such holders, then the entire assets and funds of the Company legally available for distribution will be distributed ratably among the holders of Preferred Stock in proportion to the Preferred Liquidation Amount each such holder is otherwise entitled to receive on each share, less any mandatory dividends.

Upon completion of the payment of the full liquidation preference of Preferred Stock less any and all mandatory dividends previously distributed, the remaining assets of the Company, if any, shall be distributed among the holders of common stock and Preferred Stock, pro rata based on the number of common shares held by each (assuming conversion of all shares of the Preferred Stock into common stock).

Conversion:

Each share of Preferred Stock is convertible into shares of common stock, at the option of the holder, at any time after date of issuance. Each share of Preferred Stock automatically converts to the number of shares of common stock determined in accordance with the conversion rate upon the closing of a public offering, at a price per share of not less than three times the highest, then applicable conversion price, resulting in offering proceeds of at least $30,000 net of underwriting discounts and commissions ("Mandatory Conversion Time"). The conversion ratio will be adjusted in the case of specified changes to the Company's capitalization as a result of stock splits, combinations, common stock dividends and distributions, reclassifications, exchanges, substitutions, reorganizations, mergers or consolidations.

Redemption:

Prior to the July 29, 2020 amendment to the article of incorporation, Preferred Stockholders had the right to redeem shares of preferred stock on or after March 20, 2021 after receipt of written notice requesting redemption from 60% of the then outstanding shares of the preferred stock voting together as a single class on an as-converted to common stock basis at a price equal to the original issue price plus all accruing dividends. As the Preferred Stock was redeemable due to the passage of time prior to the amendment, the Company recorded changes in the redemption value and accreted the Preferred Stock immediately to its redemption value during each reporting period.

On July 29, 2020, the articles of incorporation were amended resulting in the removal of the redemption right. As the redemption option was removed in connection with the amendment, the only option for redemption is based on the occurrence of a deemed liquidation event. As the events that would trigger a deemed liquidation event are corporate transactions that are not certain to occur, the Company determined that post July 29, 2020, the Preferred Stock is no longer considered probable to become redeemable, and is instead contingently redeemable. As a result, the Company ceased the accretion of the Preferred Stock to redemption value upon execution of the amendment to the articles of incorporation.

Protective Provisions:

At any time when shares of Preferred Stock are outstanding, the Company shall not, either directly, indirectly by amendment, merger, consolidation or otherwise, do any of the following without the written consent or affirmative vote of at least 60% of the then outstanding shares of Preferred Stock, voting together as a single class on an as-converted to Common Stock basis: (i) effect the consummation of a liquidation event or any other merger or consolidation, (ii) amend, alter or repeal any provision of the Company's certificate of incorporation of bylaws in a manner that adversely affects the powers, preferences or rights of the Preferred Stock, (iii) amend, alter, or repeal any provision of the by-laws of the Company, in a manner that affects the powers, preferences, or rights of Preferred Stock, (iv) increase or decrease the authorized number of shares of Preferred Stock or Common Stock, (v) reclassify, alter, or amend any existing security of the Company in respect to the distribution of assets on the liquidation, dissolution, or winding up of the Company or payment of dividends, if such reclassification, alteration, or amendment would render such other security senior to Preferred Stock in respect to any such right, preference, or privilege, (vi) purchase or

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redeem, or declare any dividend, on any shares of capital stock of the Company other than repurchase of stock pursuant to stock restriction agreements approved by the Board of Directors that grant to the Company the right of repurchase upon termination of the service, (vii) borrow or authorize any amount of indebtedness, other than inventory financing in the ordinary course of business and any indebtedness in an amount of up to $250 in aggregate that is approved by the Board of Directors, (viii) increase or decrease the authorized number of directors of the Board of Directors (ix) effect a change in business from the discovery and development of small molecule therapeutics targeting toxic proteins that cause cognitive decline associated with Alzheimer's disease and other neurodegenerative diseases, (x) enter into any transaction with any person other than in the ordinary course of business on an arm's length basis, (xi) increase the number of shares of common stock reserved for issuance, (xii) make any loan except advances in ordinary course of business or advances up to $50 in aggregate approved by the Board of Directors, (xiii) hire, terminate, or change compensation in excess of $100 of any officer, director, or employee, unless approved by the Board of Directors, (xiv) own any stock or securities of any other corporation, unless approved by the Board of Directors, (xv) guarantee any indebtedness except for trade accounts of the Company or any guarantee approved by the Board of Directors, (xvi) make any investment other than investments in prime commercial paper, money market funds, certificates of deposits in any United States bank having a net worth in excess of $100,000 or obligations issued or guaranteed by the United States of America, unless approved by the Board of Directors.

11. Warrants

In conjunction with both debt and equity investments, the Company issued warrants on each of the following classes of stock: Common and Series A-1.

The following is a summary of the Company's outstanding common stock warrants as of December 31, 2020:

Number of Warrants	Exercise Price	Expiration Date
163,334	$0.21	May 2021
375,741	$0.01	March 2023
78,194	$0.01	May 2023
33,387	$0.01	August 2023

Series A-1 Preferred Stock Warrants

The Company reviewed the classification of the warrants as liabilities or equity under the guidance of ASC 480-10, Distinguishing Liabilities from Equity, and concluded that the Series A-1 convertible preferred stock warrants should be classified as a liability. The Company re-measures the warrant liability to fair market value at the end of each reporting period. The Series A-1 preferred stock warrants expired in October 2020 and were not exercised. For the year ended December 31, 2020, the Company recorded a fair value adjustment of $181 in the consolidated statement of operations and comprehensive loss.

Common Stock Warrants

The Company's common stock warrants are equity classified as there are no features within the warrant agreements that require liability treatment. Accordingly, the warrants are recorded as a component of equity when they are issued.

12. Common Stock

Common stockholders are entitled to dividends if and when declared by the Company's Board of Directors subject to the rights of the preferred stockholders. As of December 31, 2020, no dividends on common stock had been declared by the Company.

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The Company has reserved the following shares of common stock for conversion of preferred stock, exercise of warrants and exercise of stock options as of December 31:

	2019	2020
Convertible preferred stock outstanding	40,524,346	40,524,346
Options issued and outstanding	13,245,253	14,839,637
Warrants for series A-1 preferred stock	180,724	—
Warrants for common stock	813,990	650,656
Total	54,764,313	56,014,639

13. Equity-based Compensation

On September 15, 2017, the Company's Board of Directors (the Board) approved the 2017 Amended and Restated Equity Incentive Plan (the "Plan"), which provides for the granting of incentive stock options, non-qualified stock options and stock awards to employees, certain consultants and directors. The Board, or its designated committee, has the sole authority to select the individuals to whom awards are granted and determine the terms of each award, including the number of shares and the schedule upon which the award becomes exercisable.

The aggregate number of shares of common stock of the Company that may be issued under the Plan is 15,288,989 (taking into account shares of common stock that may become issuable pursuant to Section 3(b) of the Plan in respect of shares of common stock reserved under the Company's Amended and Restated 2007 Equity Incentive Plan). The Plan also allows for a provision for shares granted which are cancelled, forfeited, exchanged or surrendered without having been exercised to subsequently be available for reissuance under the Plan.

The Company recorded total equity-based compensation expense in the statement of operations and comprehensive loss related to incentive stock options and nonstatutory stock options as follows:

	Year Ended December 31,	
	2019	2020
Research and development	$175	$216
General and administrative	186	259
Total equity-based compensation	$361	$475

As of December 31, 2020, total future compensation expense related to unvested awards yet to be recognized by the Company was $1,182. Total future compensation expense related to unvested awards yet to be recognized by the Company is expected to be recognized over a weighted- average remaining vesting period of approximately 2.2 years.

The fair value of options granted was estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

	Year Ended December 31,	
	2019	2020
Fair value of common stock	$0.33	$0.37
Expected volatility	88.92% – 97.50%	101.35% – 109.34%
Risk-free interest rate	1.43% – 2.50%	0.27% – 1.60%
Dividend yield	0.00%	0.00%
Expected term (years)	6.00 – 7.00	5.00 – 6.25

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Expected Term — The expected term represents the period that the stock-based awards are expected to be outstanding. As the Company does not have sufficient historical experience for determining the expected term of the stock option awards granted, expected term has been calculated using the simplified method.

Risk-Free Interest Rate — The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the date of grant for zero-coupon U.S. Treasury constant maturity notes with terms approximately equal to the stock-based awards' expected term.

Expected Volatility — Since the Company is privately held and does not have a trading history of common stock, the expected volatility was derived from the average historical stock volatilities of the common stock of several public companies within the industry that the Company considers to be comparable to our business over a period equivalent to the expected term of the stock-based awards.

Dividend Yield — The expected dividend yield is zero as the Company has not paid and does not anticipate paying any dividends in the foreseeable future.

Fair Value of Common Stock — The fair value of the shares of common stock underlying the stock-based awards has historically been determined by the Board of Directors with input from management. Because there has been no public market for the common stock, the Board of Directors has determined the fair value of the common stock at the time of grant of the stock-based award by considering a number of objective and subjective factors, including having contemporaneous valuations of the common stock performed by a third-party valuation specialist.

Activity for options was as follows:

	Options Outstanding			
	Number of Options	Weighted Average Exercise Price	Aggregate Intrinsic Value (in 000's)	Weighted Average Remaining Contractual Life (in Years)
Balance, December 31, 2019	13,245,253	$0.28		
Options granted	4,029,807	$0.37		
Options exercised	(59,991)	$0.22		
Options forfeited	(2,190,110)	$0.26		
Options expired	(185,322)	$0.23		
Balance, December 31, 2020	14,839,637	$0.30	$3,511	7.8
Exercisable as of December 31, 2020	9,090,089	$0.27	$2,423	6.4
Vested and expected to vest as of December 31, 2020	13,710,311	$0.30	$3,274	7.7

The weighted-average grant date fair value of stock options granted was $0.23 and $0.30 during the years ended December 31, 2019 and 2020, respectively. There were 2,773,107 stock options granted at an aggregate fair value of $638 for the year ended December 31, 2019 and 4,029,807 stock options granted at an aggregate fair value of $1,210 for the year ended December 31, 2020. The total grant-date fair value of stock options vested during the years ended December 31, 2019 and 2020 was $371 and $335, respectively. There were no stock options exercised during the year ended December 31, 2019. During the year ended December 31, 2020, there were 59,991 stock options exercised with an aggregate grant date fair value of $11. The intrinsic value of stock options exercised during the year ended December 31, 2020 was $19.

The Company granted 1,129,326 option awards containing performance conditions to an executive during the year ended December 31, 2019. As of December 31, 2019, and 2020, the Company determined that the achievement of the performance targets was not probable and therefore, there was no expense

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recognized for these awards during the years ended December 31, 2019 and 2020, respectively. As of December 31, 2020, total unrecognized compensation expense related to un-vested performance based awards was $254, which would be recognized commencing with the period in which the performance condition is deemed probable of achievement.

14. Net Loss per Share

The following outstanding potentially dilutive common stock equivalents have been excluded from the calculation of diluted net loss per share attributable to common stockholders for the periods presented due to their antidilutive effect:

	December 31, 2019	December 31, 2020
Convertible preferred stock (as converted)	40,524,346	40,524,346
Options issued and outstanding	13,245,253	14,839,637
Warrants for series A-1 preferred stock	180,724	—
Warrants for common stock	813,990	650,656
Total	54,764,313	56,014,639

The basic and diluted net loss per share attributable to common stockholders has been prepared as follows:

	December 31, 2019	December 31, 2020
Net loss	$ (4,842)	$ (7,839)
Cumulative preferred stock dividends	(3,920)	(4,234)
Net loss attributable to common stockholders	$ (8,762)	$ (12,073)
Weighted-average common shares outstanding-basic and diluted	1,519,285	1,643,514
Total	$ (5.77)	$ (7.35)

15. Retirement Plan

The Company has a 401(k) retirement plan to provide retirement and incidental benefits for its employees. Employees may contribute a percentage of their annual compensation to the 401(k) retirement plan, limited to a maximum annual amount as set periodically by the Internal Revenue Service. The Company matches employee contributions dollar for dollar up to a maximum of 4% of the employees' compensation per person per year. All matching contributions vest immediately. Company matching contributions to the 401(k) retirement plan totaled $83 and $110 for the year ended December 31, 2019 and 2020, respectively.

16. Income Taxes

The net loss consists of the following components:

	Year Ended December 31,	
	2019	2020
Domestic	$ (3,489)	$ (7,268)
Foreign	(1,353)	(571)
Total	$ (4,842)	$ (7,839)

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During the years ended December 31, 2019 and 2020, the Company recorded no current or deferred income tax expenses or benefits as the Company has incurred losses since inception and has provided a full valuation allowance against its deferred tax assets.

Global Intangible Low-Taxed Income ("GILTI") is the excess of a U.S. shareholders total net foreign income over a deemed return on tangible assets. In January 2018, in response to inquiries by companies, the FASB issued guidance that allows companies to elect as an accounting policy whether to treat the GILTI tax as a period cost or to recognize deferred tax assets and liabilities when basis differences exist that are expected to affect the amount of GILTI inclusion upon reversal. The Company has elected to treat GILTI as a period expense.

A reconciliation of the expected income tax (benefit) computed using the federal statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,	
	2019	2020
Income tax computed at federal statutory rate	21.0%	21.0%
State taxes, net of federal benefit	6.5%	7.1%
Change in valuation allowance	(34.5%)	(35.8%)
R&D Credit	10.5%	10.7%
Interest expense	(2.0%)	(3.2%)
Equity-based compensation	(1.4%)	(1.0%)
Other	(0.1%)	1.2%
Effective income tax rate	0.0%	0.0%

The Company's deferred tax assets and liabilities consist of the following:

	December 31, 2019	December 31, 2020
Deferred tax assets:		
Net operating loss carryforwards	$ 9,902	$ 11,060
Tax credit carryforwards	2,397	3,713
Equity-based compensation	74	291
Other	—	137
Deferred tax assets	12,373	15,201
Less: valuation allowance	(12,365)	(15,179)
Deferred tax assets after valuation allowance	8	22
Deferred tax liabilities		
Fixed assets	(8)	(22)
Deferred tax liabilities	(8)	(22)
Net deferred tax assets	$ —	$ —

The Company evaluated the positive and negative evidence bearing upon its ability to realize the deferred tax assets as of December 31, 2019 and 2020. Management considered the Company's cumulative net losses and concluded as of December 31, 2019 and 2020, that it was more likely than not that the Company would not realize the benefits of the deferred tax assets. Accordingly, a full valuation allowance was established against the net deferred tax assets as of December 31, 2019 and 2020. The valuation allowance

increased by $1,669 and $2,814 for the years ended December 31, 2019 and 2020, respectively, primarily as a result of operating losses generated with no corresponding financial statement benefit.

The Company has incurred net operating losses ("NOL") since inception. As of December 31, 2020, the Company had federal net operating loss carryforwards of $37,879 that expire at various dates through 2037. Included in the federal net operating loss carryforwards of $37,879 is $11,651 that can be carried forward indefinitely. As of December 31, 2020, the Company had state net operating loss carryforwards of $37,879, available to reduce future state taxable income, which expire at various dates through 2040. As of December 31, 2020, the Company had foreign net operating loss carryforwards of $389 that can be carried forward indefinitely. As of December 31, 2020, the Company had federal research and development tax credit carryforwards of $3,713 available to reduce future federal tax liabilities.

Utilization of the Company's net operating loss carryforwards and research and development tax credit carryforwards may be subject to a substantial annual limitation under Section 382 of the Internal Revenue Code of 1986 due to ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50% over a three-year period. The Company has not conducted a study to assess whether a change of control has occurred or whether there have been multiple changes of control since inception due to the significant complexity and cost associated with such a study. If the Company has experienced a change of control, as defined by Section 382, at any time since inception, utilization of the net operating loss carryforwards or research and development tax credit carryforwards would be subject to an annual limitation under Section 382, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term tax-exempt rate, and then could be subject to additional adjustments, as required. Any limitation may result in expiration of a portion of the net operating loss carryforwards or research and development tax credit carryforwards before utilization. Further, until a study is completed, and any limitation is known, no amounts are being presented as an uncertain tax position.

The Company files tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by federal and state jurisdictions, where applicable. There are currently no pending tax examinations. The Company's tax years are still open under statute from inception to the present.

17. Subsequent Events

Subsequent events have been evaluated through May 7, 2021, which is the date the financial statements were issued.

On January 21, 2021, the Company received confirmation from the SBA that the PPP Loan had been forgiven in full including all interest incurred. Accordingly, the Company will recognize income for debt extinguishment pursuant to ASC 470-50-15-4 during the quarter ended March 31, 2021.

On March 25, 2021, the Company entered into simple agreements for future equity ("SAFEs") with existing investors, pursuant to which the Company received gross proceeds in an aggregate amount equal to $8,942. Pursuant to the arrangement, all of the SAFEs were initially issued with a conversion price equal to 80% of either the common stock price upon the occurrence of an initial public offering, or the price paid for shares of preferred stock by other investors upon a subsequent private financing. Upon a change of control, investors will be entitled to receive a portion of proceeds equal to the greater of the purchase amount or the amount payable on the number of shares of common stock equal to the purchase amount divided by the liquidity price. In a liquidity or dissolution event, the investors' right to receive cash is junior to payment of outstanding indebtedness and creditor claims, on par for other SAFEs and preferred stock, and senior to common stock. The SAFE agreements have no interest rate or maturity date, and the SAFE investors have no voting right prior to conversion.

Cognition Therapeutics, Inc.
Notes to the consolidated financial statements

Amounts in thousands, except share and per share amounts

On May 1, 2021, the holders of the convertible promissory notes agreed to an acceleration of the automatic conversion of all convertible promissory notes from June 30, 2021 to May 1, 2021 into 10,928,155 shares of our class B-1 preferred stock, at a conversion price equal to $1.385 per share.

Shares

Common stock

Preliminary prospectus

, 2021

Through and including , 2021 (the 25th day after the commencement of this offering), all dealers that buy, sell or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other expenses of issuance and distribution.

The following table sets forth the costs and expenses, other than the underwriting discounts and commissions, payable by Cognition Therapeutics, Inc., or the Registrant, in connection with the sale of our common stock being registered. All amounts are estimates except for the SEC registration fee, FINRA filing fee and Nasdaq Stock Market listing fee.

Item	Amount
SEC registration fee	$ *
FINRA filing fee	*
Nasdaq Stock Market listing fee	*
Printing expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Blue Sky, qualification fees and expenses	*
Transfer agent fees and expenses	*
Miscellaneous expenses	*
Total	$ *

* To be filed by amendment.

Item 14. Indemnification of directors and officers.

As permitted by Section 102 of the Delaware General Corporation Law, our third amended and restated certificate of incorporation and amended and restated bylaws to be in effect immediately prior to the closing of this offering will limit or eliminate the personal liability of our directors for a breach of their fiduciary duty of care as a director. The duty of care generally requires that, when acting on behalf of the corporation, directors exercise an informed business judgment based on all material information reasonably available to them. Consequently, a director will not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any act related to unlawful stock repurchases, redemptions or other distributions or payment of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not affect the availability of equitable remedies such as injunctive relief or rescission. Our third amended and restated certificate of incorporation will authorize us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws will provide that:

- we may indemnify our directors, officers and employees to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions;
- we may advance expenses to our directors, officers and employees in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions; and

- the rights provided in our amended and restated bylaws are not exclusive.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide for the indemnification provisions described above and elsewhere herein. We have entered into, and intend to continue to enter into, separate indemnification agreements with our directors and officers that may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements generally require us, among other things, to indemnify our officers and directors against certain liabilities that may arise by reason of their status or service as directors or officers, other than liabilities arising from willful misconduct. These indemnification agreements also generally require us to advance any expenses incurred by the directors or officers as a result of any proceeding against them as to which they could be indemnified. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

We have purchased and currently intend to maintain insurance on behalf of each and every person who is or was a director or officer of the company against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

The form of underwriting agreement for this initial public offering provides for indemnification by the underwriters of us and our officers and directors who sign this registration statement for specified liabilities, including matters arising under the Securities Act.

Item 15. Recent sales of unregistered securities.

Set forth below is information regarding all unregistered securities sold by us since January 1, 2018. Also included is the consideration received by us for such securities and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

Convertible Notes

From March 2018 to July 2020, we issued convertible promissory notes in the aggregate principal amount of $13.0 million with an interest rate of 8.0% per annum, pursuant to note purchase agreements entered into with certain holders of our capital stock. On May 1, 2021, the holders of all of our outstanding convertible promissory notes agreed to an acceleration of the date of the automatic conversion from June 30, 2021 to May 1, 2021 for all convertible promissory notes. Accordingly, on May 1, 2021, all of our outstanding convertible promissory notes were converted into 10,928,155 shares of our Series B-1 convertible preferred stock at a conversion price equal to $1.385 per share. As of the date of this prospectus, no notes are outstanding. Pursuant to the terms of our Series B-1 convertible preferred stock all shares will automatically convert into shares of our common stock upon the closing of this offering on a one-for-one basis.

SAFE Financing

In March 2021, we entered into simple agreements for future equity, or SAFEs, with various investors, pursuant to which we received gross proceeds in an aggregate amount equal to $8.94 million. The amount invested by the investors in the SAFEs is automatically convertible into shares of our common stock upon the closing of our initial public offering at a conversion price equal to 80% of the initial public offering price.

Equity Awards

Since January 1, 2018, we have granted stock options to employees, officers, directors and consultants, covering an aggregate of 7,270,239 shares of our common stock, having a weighted average exercise price of $0.36 per share, in connection with services provided to us by such parties.

Since January 1, 2018, we have issued an aggregate of 141,848 shares of our common stock to employees, officers, directors and consultants upon their exercise of stock options, for aggregate cash consideration of approximately $0.031 million.

Unless otherwise stated, the issuances of the above securities were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act or Regulation D promulgated thereunder, or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. Individuals who purchased securities as described above represented their intention to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were affixed to the share certificates issued in such transactions.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions or any public offering.

Item 16. Exhibits and financial statement schedules.

(a) Exhibits.

The exhibits listed below are filed as part of this registration statement.

Exhibit number	Exhibit description
1.1†	Form of Underwriting Agreement.
3.1	Second Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on dated November 14, 2016, as currently in effect.
3.2	Amendment to Second Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on dated January 10, 2017.
3.3	Second Amendment to Second Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on dated February 2, 2017.
3.4	Third Amendment to Second Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on dated July 29, 2020.
3.5	Fourth Amendment to Second Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on dated April 30, 2021.
3.6†	Form of Third Amended and Restated Certificate of Incorporation, which will become effective immediately prior to the closing of this offering.
3.7	Bylaws, dated August 21, 2007, as currently in effect.
3.8†	Form of Amended and Restated Bylaws, which will become effective immediately prior to the closing of this offering.
4.1†	Specimen Common Stock Certificate of Registrant.
5.1†	Opinion of Troutman Pepper Hamilton Sanders LLP.
10.1†•	Form of Indemnification Agreement by and between the Registrant and its individual directors and officers.
10.2	Third Amended and Restated Investor Rights Agreement dated as of March 20, 2014, by and among the Registrant and the investors listed therein.
10.3	First Amendment dated as of March 23, 2020, to the Third Amended and Restated Investor Rights Agreement dated as March 20, 2014, by and among the Registrant and the investors listed therein.
10.4	Office Lease dated July 1, 2017, by and between the Registrant and RJ Equities LP.
10.5	First Amendment to Office Lease dated July 1, 2017, by and between the Registrant and RJ Equities LP.
10.6	Amended and Restated 2007 Equity Incentive Plan
10.7	2017 Equity Incentive Plan.
10.8	Amendment to 2017 Equity Incentive Plan.
10.9	Second Amendment to 2017 Equity Incentive Plan.

Exhibit number	Exhibit description
10.10†•	2021 Equity Incentive Plan.
10.11†	Form of Restricted Stock Award Agreement.
10.12†•	Form of Non-Qualified Stock Option Agreement.
10.13†•	Form of Incentive Stock Option Agreement.
10.14•	Employment Agreement dated June 1, 2020 by and between the Registrant and Lisa Ricciardi.
10.15•	Separation and Release Agreement dated April 21, 2020 by and between the Registrant and Kenneth Moch.
10.16•	Advisor Services Agreement dated March 17, 2020 by and between the Registrant and Kenneth Moch.
10.17•	Letter Agreement dated October 7, 2019, by and between the Registrant and James M. O'Brien.
10.18†•	Option Agreements for Directors
10.19†•	Letter Agreement between the Registrant and Brett P. Monia, Ph.D.
10.20†•	Letter Agreement between the Registrant and Jack A. Khattar.
23.1†	Consent of Ernst & Young LLP, an Independent Registered Public Accounting Firm.
23.2†	Consent of Troutman Pepper Hamilton Sanders LLP (included in Exhibit 5.1).
24.1†	Power of Attorney (included on the signature page to this registration statement).

† To be filed by amendment.

• Indicates management contract or compensatory plan.

(b) Financial statement schedules.

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the consolidated financial statements or notes thereto.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

1. For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

2. For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Pittsburgh, Commonwealth of Pennsylvania on May 7, 2021.

COGNITION THERAPEUTICS, INC.

By: /s/ Lisa Ricciardi

Lisa Ricciardi
Chief Executive Officer
(*Principal Executive Officer*)

Power of attorney

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Lisa Ricciardi and James M. O'Brien, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Lisa Ricciardi Lisa Ricciardi	Chief Executive Officer and Director (*Principal Executive Officer*)	May 7, 2021
/s/ James M. O'Brien James M. O'Brien	Chief Financial Officer (*Principal Financial and Accounting Officer*)	May 7, 2021
/s/ Jack A. Khattar Jack A. Khattar	Director (Chairman of the Board)	May 7, 2021
/s/ Mark H. Breedlove Mark H. Breedlove	Director	May 7, 2021
/s/ Susan Catalano, Ph.D. Susan Catalano, Ph.D.	Director	May 7, 2021
/s/ Aaron Fletcher, Ph.D. Aaron Fletcher, Ph.D.	Director	May 7, 2021
/s/ Brett P. Monia, Ph.D. Brett P. Monia, Ph.D.	Director	May 7, 2021
/s/ Stephen Sands Stephen Sands	Director	May 7, 2021
/s/ Peggy Wallace Peggy Wallace	Director	May 7, 2021

SECOND AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
COGNITION THERAPEUTICS, INC.

(incorporated on August 21, 2007)

COGNITION THERAPEUTICS, INC., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware, as it may be amended from time to time (the "**General Corporation Law**"), hereby certifies as follows:

1. The name of this corporation is Cognition Therapeutics, Inc.

2. The original Certificate of Incorporation of this corporation was filed with the Secretary of State of the State of Delaware on August 21, 2007, amended and restated on January 16, 2009 and further amended on December 17, 2010, November 30, 2011, December 20, 2012, August 6, 2013, March 19, 2014 and July 1, 2015.

3. This Second Amended and Restated Certificate of Incorporation restates, integrates and amends the Amended and Restated Certificate of Incorporation of this corporation, as amended.

4. This Second Amended and Restated Certificate of Incorporation was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law, and the stockholders of this corporation have given their consent hereto in accordance with Section 228 of the General Corporation Law.

5. The text of this corporation's Certificate of Incorporation is hereby amended and restated in full so as to read as follows:

FIRST: The name of this corporation is Cognition Therapeutics, Inc. (the "**Corporation**").

SECOND: The address of the registered office of the Corporation in the State of Delaware is at 2140 South DuPont Highway, in the City of Camden, County of Kent, 19934. The registered agent in charge thereof is Paracorp Incorporated.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock, that the Corporation shall have authority to issue is (i) Fifty Million Five Hundred Thousand (50,500,000) shares of Common Stock, $.001 par value per share ("**Common Stock**"), and (ii) Thirty Seven Million Two Hundred Fifty-Three Thousand Three Hundred Fifty-Eight (37,253,358) shares of Preferred Stock, $.001 par value per share.

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. PREFERRED STOCK

Three Million Sixty-Seven Thousand Five Hundred Nineteen (3,067,519) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A Convertible Preferred Stock**" (the "**Series A Preferred Stock**"); Three Million Nine Hundred Seventy Thousand Seven Hundred Seventy-Six (3,970,776) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-1 Convertible Preferred Stock**" (the "**Series A-1 Preferred Stock**"); Three Million Five Hundred Sixty-Five Thousand Sixty-Three (3,565,063) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-2 Convertible Preferred Stock**" (the "**Series A-2 Preferred Stock**"); and Twenty-Six Million Six Hundred Fifty Thousand (26,650,000) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series B Convertible Preferred Stock**" (the "**Series B Preferred Stock**"). The Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock and the Series B Preferred Stock are sometimes referred to herein collectively as the "**Preferred Stock**." Unless otherwise indicated, references to "Sections" or "Subsections" in this Part A of this Article Fourth refer to sections and subsections of Part A of this Article Fourth.

The Preferred Stock shall have the following rights, preferences, powers, privileges, restrictions, qualifications and limitations.

1. Dividends.

1.1. Accruing Dividends. From and after the date of the issuance of each respective share of the Preferred Stock, dividends at the rate of 8% per annum of the applicable Original Issue Price (as defined herein) compounded annually shall accrue on such share of the Preferred Stock ("**Accruing Dividends**"). Accruing Dividends shall accrue from day to day, whether or not declared, and shall be cumulative; provided however, (i) that such Accruing Dividends shall be payable only in connection with a liquidation, dissolution or winding up of the Corporation under Section 2 (including, without limitation, in connection with a Deemed Liquidation Event), a Mandatory Dividend under Section 1.3, or a redemption of the Preferred Stock under Section 6, and the Corporation shall not otherwise pay such Accruing Dividends and (ii) in the event a Mandatory Dividend is paid under Section 1.3, Accruing Dividends shall thereafter accrue only on the unreturned amount of the Original Issue Price after taking into account the payment of each Mandatory Dividend. As used herein, "**Original Issue Price**" means $.69 per share with respect to the Series A Preferred Stock and Series A-1 Preferred Stock, $.8415 per share with respect to the Series A-2 Preferred Stock and $.923 per share with respect to the Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization affecting such shares). After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount (as defined below), less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Accruing Dividends; provided that the holders of the Preferred Stock

will share in all dividends and distributions declared by the Board of Directors and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.2. Common Stock Dividends. The holders of the Preferred Stock shall be entitled to share in dividends payable with respect to the Common Stock as if converted and the Corporation shall not declare, pay or set aside any dividends on shares of Common Stock unless (in addition to obtaining any consents required elsewhere in this Amended and Restated Certificate of Incorporation, as amended) each holder of the Preferred Stock then outstanding shall first receive, or simultaneously receive, in each such instance, a dividend on each outstanding share of the Preferred Stock held by such holder as if such share of Preferred Stock had been converted into Common Stock, in an amount at least equal to the product of (a) the dividend payable on a share of Common Stock and (b) the number of shares of Common Stock issuable upon conversion of a share of the Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend.

1.3. Mandatory Dividend(s).

(a) If, prior to such time as the holders of shares of the Preferred Stock receive their full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the Corporation or any subsidiary of the Corporation shall consummate a sale, license or other disposition for value of any or all of the Corporation's intellectual property, in a single transaction or series of related transactions unrelated to the performance by the Corporation of research and development or other services (as determined in good faith by the Board of Directors of the Corporation, including both Preferred Directors) (a "**Strategic Event**"), at the written election of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, sent to the Corporation at least 15 days prior to the effective date of a Strategic Event, the Corporation shall distribute to the holders of shares of the Preferred Stock up to 35% of the aggregate payments (including, without limitation, all option and/or milestone payments and/or all success fees) received by the Corporation as consideration in such Strategic Event as soon as reasonably practicable following receipt by the Corporation of such payments ("**Mandatory Dividend**"). Such Mandatory Dividend shall be distributed to the holders of the Preferred Stock on a pari passu and an as-converted to Common Stock basis until the aggregate amount of all Mandatory Dividends paid to the holders of the Preferred Stock equals the full Preferred Liquidation Amount payable on the Preferred Stock held by such holders.

(b) The Corporation shall give each holder of record of the Preferred Stock written notice of an impending Strategic Event within ten days after the Board of Directors of the Corporation approves such Strategic Event. Such written notice shall describe the material terms and conditions of the impending Strategic Event and the provisions of this Section 1.3, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such

notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

(c) After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount for their respective shares of the Preferred Stock, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Mandatory Dividends; provided that the holders of the Preferred Stock will share in all dividends and distributions declared by the Board of Directors and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.4. Order of Dividend Payment. No dividends or other distributions shall be declared and/or paid on any class or series of capital stock, other than the Preferred Stock if any Mandatory Dividends have accrued and are unpaid or if any other dividends are declared and unpaid on the Preferred Stock.

2. Liquidation Preference.

2.1. Preferred Liquidation Amount. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, including, without limitation, any Deemed Liquidation Event (as defined below), each holder of shares of the Preferred Stock then outstanding shall be entitled to receive out of the assets legally available for distribution to its stockholders, whether from capital surplus, earnings or otherwise, on a pari passu and an as converted to Common Stock basis and prior and in preference to any distribution to the holders of any other series or class of the capital stock of the Corporation that is junior to the Preferred Stock, including, without limitation, the Common Stock, by reason of their ownership thereof, an amount per share of Preferred Stock then held by such holder equal to the Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock. If upon the occurrence of such event, the assets and funds of the Corporation shall be insufficient to permit the payment to such holders of Preferred Stock of the full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock, required by the preceding sentence, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Preferred Stock in proportion to the Preferred Liquidation Amount each such holder is otherwise entitled to receive on each such share, less any and all Mandatory Dividend(s) previously distributed with respect to each such share. "**Preferred Liquidation Amount**" means, with respect to a share of Preferred Stock, the applicable Original Issue Price for such share of Preferred Stock plus all Accruing Dividends on such share of Preferred Stock (plus any other dividends or distributions declared but not paid on such share of Preferred Stock).

2.2. Distribution of Remaining Assets. After payment has been made to the holders of the Preferred Stock of their full Preferred Liquidation Amount required by Section 2.1, less any and all Mandatory Dividend(s) previously distributed with respect to each such share, the remaining assets or surplus funds of the Corporation available for distribution to stockholders shall be distributed among the holders of the Common Stock and the holders of the

Preferred Stock pro rata based on the number of shares of Common Stock held by each (assuming conversion of all shares of the Preferred Stock into Common Stock).

2.3. Deemed Liquidation Events. At the option of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, the occurrence of each of the following events shall be deemed to be a liquidation, dissolution or winding up within the meaning of this Section 2 (each, a "**Deemed Liquidation Event**"):

(a) either a transaction or series of related transactions in which any individual, corporation, partnership, trust, limited liability company, association or other entity (each, a "**Person**"), or group of related Persons, acquires from the stockholders of the Corporation, shares representing at least a majority of the outstanding voting power of the Corporation;

(b) a sale and/or issuance (or series of sales and/or issuances) by the Corporation of securities of the Corporation representing, after the issuance of such securities, more than fifty percent (50%) of all voting securities of the Corporation to persons other than stockholders of the Corporation as of immediately prior to such sale(s) and/or issuance(s);

(c) a sale, conveyance or disposition (in one or a series of related transactions) by the Corporation or any subsidiary of the Corporation of all or substantially all of the assets of the Corporation and its subsidiaries taken as a whole;

(d) a grant of an exclusive license or other transfer (in one or a series of related transactions) by the Corporation and/or any subsidiary of the Corporation of a material amount of the technology or intellectual property of the Corporation and its subsidiaries taken as a whole; or

(e) a consolidation or merger of the Corporation with or into any other entity or entities or a reorganization of the Corporation or similar transactions, provided, however, that a consolidation, merger, reorganization or similar transaction involving the Corporation shall not constitute a Deemed Liquidation Event if following completion of the transaction, the holders of shares of the Corporation immediately prior to the transaction own shares that represent a majority of the voting power of the surviving corporation.

2.4. Amount Paid Deemed Paid or Distributed. Whenever the distribution provided for in Subsection 1.3 or in this Section 2 shall be payable in any assets other than cash, the value of the assets to be distributed shall be the fair market value thereof, determined as follows:

(a) Freely traded securities:

(i) If traded on a securities exchange, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing prices of the securities on such exchange or system over the 30-day period ending three days prior to the closing;

(ii) If actively traded over-the-counter, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the 30-day period ending three days prior to the closing; and

(iii) If there is no active public market, the value shall be the fair market value thereof, as so determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors).

(b) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as above in Subsection 2.4(a) to reflect the approximate fair market value thereof.

(c) In the event the requirements of this Section 2 are not complied with, the Corporation shall forthwith either:

(i) cause such closing to be postponed until such time as the requirements of this Section 2 have been complied with; or

(ii) cancel such transaction, in which event the rights, preferences and privileges of the holders of the Preferred Stock shall revert to and be the same as such rights, preferences and privileges existing immediately prior to the date of the first notice referred to in Subsection 2.4(d).

(d) The Corporation shall give each holder of record of the Preferred Stock written notice of such impending transaction within ten days after the Board of Directors of the Corporation approves such transaction or within ten days after the commencement of any involuntary proceeding, whichever is earlier. Such written notice shall describe the material terms and conditions of the impending transaction and the provisions of this Section 2, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

3. Voting.

3.1. General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of the Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of the Preferred Stock held by such holder are convertible

as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, as amended, the holders of the Preferred Stock shall vote together with the holders of Common Stock as a single class on an as-converted to Common Stock basis.

3.2. Election of Directors. For as long as there are any shares of the Preferred Stock outstanding, the holders of record of a majority of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect three directors of the Corporation (the "**Preferred Directors**"). The holders of record of a majority of the then outstanding shares of Common Stock, voting together as a single class, shall be entitled to elect one director of the Corporation. If the holders of shares of the Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors pursuant to the first two sentences of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Preferred Stock or Common Stock, as the case may be, elect an individual to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect an individual to fill such directorship. The holders of a majority of the then outstanding shares of Common Stock and/or the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect all remaining members of the Board of Directors of the Corporation. Any director elected as provided in this Subsection 3.2 may be removed without cause, and any vacancy caused by the resignation, death or removal of such director may be filled, by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the then outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director.

3.3. Preferred Stock Protective Provisions. At any time when shares of the Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation, as amended) the written consent or affirmative vote of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, pursuant to consent given in writing or by vote at a meeting:

(a) liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event or any recapitalization or reorganization of the Corporation or other transaction in which control of the Corporation is transferred, or sell, transfer, license or encumber the Corporation's technology or intellectual property, or consent to any of the foregoing, other than licenses of the Corporation's technology or intellectual property in the ordinary course of business;

(b) amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation of the Corporation, as amended, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(c) amend, alter or repeal any provision of the By-Laws of the Corporation, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(d) increase or decrease the authorized number of shares of the Preferred Stock or Common Stock;

(e) reclassify, alter or amend any existing security of the Corporation in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Preferred Stock in respect of any such right, preference or privilege (to the extent such rights preferences or privileges are not then currently in effect);

(f) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, or (ii) repurchases of stock pursuant to stock restriction agreements or vesting agreements approved by the Board of Directors (including the Preferred Directors) that grant to the Corporation a right of repurchase upon termination of the service or employment of a consultant, director or employee;

(g) borrow or guaranty or otherwise authorize any amount of indebtedness, other than (i) inventory financing in the ordinary course of business, and (ii) any indebtedness in an amount of up to $250,000 in the aggregate that is approved by the Board of Directors, including both Preferred Directors;

(h) increase or decrease the authorized number of directors of the Board of Directors from seven members;

(i) effect a change in the nature of the Corporation’s business from the discovery and development of small molecule therapeutics targeting the toxic proteins that cause the cognitive decline associated with Alzheimer's disease and other neurodegenerative diseases;

(j) enter into any transaction with any person or entity, including, without limitation, any of its founders, officers, directors or employees other than in the ordinary course of business on an arm’s length basis (as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors));

(k) increase the number of shares of Common Stock reserved for issuance under the Corporation’s Amended and Restated 2007 Equity Incentive Plan, as amended from time to time, or any other equity-based incentive or compensation plan;

(l) make, or permit any subsidiary to make, any loan or advance to any person or entity, including, without limitation, any founder, officer, employee or director of the Corporation or any subsidiary, except (i) advances in the ordinary course of business or (ii) advances up to $50,000 in the aggregate under the terms of an employment or service arrangement approved by the Board of Directors, including both Preferred Directors;

(m) hire, terminate, or change the compensation in excess of $100,000 of any of its officers, directors or employees, unless such hiring, termination or compensation is approved by the Board of Directors, including both Preferred Directors;

(n) own any stock or other securities of any other corporation, partnership, or other entity, unless approved by the Board of Directors, including both Preferred Directors;

(o) guarantee, or permit any subsidiary to guarantee, any indebtedness except for (i) trade accounts of the Corporation or any subsidiary arising in the ordinary course of business, or (ii) any guarantee approved by the Board of Directors, including both Preferred Directors; or

(p) make any investment other than investments in prime commercial paper, money market funds, certificates of deposit in any United States bank having a net worth in excess of $100,000,000 or obligations issued or guaranteed by the United States of America, in each case having a maturity not in excess of one year, unless approved by the Board of Directors, including both Preferred Directors.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1. Right to Convert.

4.1.1 Conversion Ratio. Each share of the Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price applicable to such share of Preferred Stock by the Conversion Price (as defined below) applicable to such share of Preferred Stock in effect at the time of conversion. The "**Conversion Price**" shall initially be equal to $.69 for the Series A Preferred Stock and Series A-1 Preferred Stock, .$8415 for the Series A-2 Preferred Stock and .$923 for the Series B Preferred Stock. Such initial Conversion Price, and the rate at which shares of the Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a notice of redemption of any shares of the Preferred Stock pursuant to Section 6, the Conversion Rights of the shares of Preferred Stock designated for redemption shall terminate at the close of business on the last full day preceding the date fixed for redemption of such shares, unless the Redemption Price (as defined below) is not fully paid on such Redemption Date (as defined

below), in which case the Conversion Rights for such shares of Preferred Stock shall continue until the price is paid in full. The Conversion Rights shall not terminate in connection with a Deemed Liquidation Event.

4.2. Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation (including the Preferred Directors). Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of the Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3. Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of the Preferred Stock to voluntarily convert shares of the Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of the Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (a) issue and deliver to such holder of the Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of the Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, and (b) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to

effect the conversion of all the Preferred Stock then outstanding; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all of the then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended and Restated Certificate of Incorporation, as amended. Before taking any action that would cause an adjustment reducing the Conversion Price of any series of Preferred Stock below the then par value of the shares of Common Stock issuable upon conversion of the Preferred Stock, the Corporation will take any corporate action that may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Conversion Price.

4.3.3 Effect of Conversion. All shares of the Preferred Stock that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except with respect to the right of the holders thereof to receive shares of Common Stock in exchange therefor and to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2. Any shares of the Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of the Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of the Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4. Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Original Issue Date**" shall mean, with respect to the Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock and the Series B Preferred Stock, the date on which the first share of such series of Preferred Stock, respectively, was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean, with respect to the determination of adjustments to the Conversion Price for each series of Preferred Stock, all shares of Common Stock issued (or, pursuant to Subsection 4.4.3, deemed to be issued) by the Corporation on or after the Original Issue Date of such Series of Preferred Stock, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) shares of Common Stock, Options or Convertible Securities issued upon the conversion of the Preferred Stock or by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6 or 4.7;

(ii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation, including both Preferred Directors;

(iii) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options, or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided that such issuance is pursuant to the terms of such Option or Convertible Security;

(iv) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, including both Preferred Directors, that do not exceed an aggregate of 1,000,000 shares of Common Stock;

(v) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation, including both Preferred Directors;

(vi) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation (or the assets of another corporation) by the Corporation whether by merger, reorganization or otherwise, provided, that such issuances are approved by the Board of Directors of the Corporation, including both Preferred Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation, including both Preferred Directors;

(viii) shares of Common Stock issued or issuable pursuant to currently outstanding Options granted under the Corporation's Amended and Restated 2007 Equity Incentive Plan, as amended from time to time, with such amendment as approved by the Board of Directors, including both Preferred Directors;

(ix) shares of Common Stock issued or issuable upon the closing of a public offering of the Corporation's securities pursuant to the Securities Act of 1933, as amended (the "**Securities Act**"), in which all shares of the Preferred Stock are automatically converted to Common Stock pursuant to Subsection 5.1(a);

(x) shares of Common Stock issued or issuable upon conversion of any shares of the Series B Preferred Stock issued under that certain Series B Stock Purchase Agreement dated as of March 20, 2014, as amended, and the Series B Preferred Stock Purchase Agreement dated as of November 16, 2016, as it may be amended, among the Corporation and the other parties listed therein;

(xi) shares of Common Stock issued or issuable upon conversion of one or more Convertible Promissory Note(s) or upon exercise of one or more Warrant(s) issued by the Corporation to the Alzheimer Drug Development Foundation, Inc. under that certain Agreement to Accept Conditions for Biotechnology Grant Funding dated as of July 6, 2010;

(xii) shares of Preferred Stock issued or issuable upon conversion of one or more Convertible Promissory Notes (and shares of Common Stock issued upon conversion of such shares of Preferred Stock) and Common Stock Purchase Warrants (and shares of Common Stock issued upon exercise of such Warrants) issued by the Corporation under that certain Note and Warrant Purchase Agreement, among the Corporation and the purchasers named therein, dated as of March 11, 2016, as amended; and

(xiii) shares of Common Stock issued or issuable upon the conversion, exercise or exchange of all other Options and Convertible Securities outstanding as of November 16, 2016.

4.4.2 No Adjustment of Conversion Price. No adjustment in the Conversion Price applicable to a share of Preferred Stock shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock unless the consideration per share (determined pursuant to Subsection 4.4.5 for an Additional Share of Common Stock issued or deemed to be issued by the Corporation) is less than the Conversion Price for such share of Preferred Stock in effect on the date of, and immediately prior to, the issue of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Original Issue Date applicable to a series of Preferred Stock shall issue any Options or Convertible Securities (excluding Options or Convertible Securities that are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of the issuance of such Convertible Security or Option or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (hut excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (ii) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Conversion Price of such series of Preferred Stock computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have been obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this Subsection 4.4.3(b) shall have the effect of increasing the Conversion Price of any series of Preferred Stock to an amount that exceeds the lower of (A) such Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (B) such Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities that are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Conversion Price of a series of Preferred Stock pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than such Conversion Price then in effect with respect to such series of Preferred Stock, or because such Option or Convertible Security was issued before the Original Issue Date of such series of Preferred Stock), are revised after Original Issue Date of such series of Preferred Stock as a result of an amendment to such terms or any other adjustment pursuant to

the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (ii) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) that resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, such Conversion Price shall be readjusted to the Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Conversion Price of a series of Preferred Stock provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Conversion Price of a series of Preferred Stock that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to such Conversion Price that such Issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Original Issue Date applicable to a series of Preferred Stock issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than Conversion Price of such series of Preferred Stock in effect immediately prior to such issue, then the Conversion Price applicable to each share of such series of Preferred Stock shall be reduced, concurrently with such issue, to a price per share (calculated to the nearest one-hundredth of a cent) in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(i) "**CP_2**" shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately after such issue of Additional Shares of Common Stock;

(ii) "**CP_1**" shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately prior to such issue of Additional Shares of Common Stock;

(iii) "**A**" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock, treating for this purpose as outstanding shares of Common Stock underlying only those Options or Convertible Securities that (x) are outstanding immediately prior to such issue and (y) are vested or otherwise exercisable;

(iv) "**B**" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(v) "**C**" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) For cash and property, such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors); and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration that covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors).

(b) For Options and Convertible Securities, the consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been

issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than 90 days from the first such issuance to the final such issuance, then, upon the final such issuance, the Conversion Price of such series of Preferred Stock shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5. Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time on or after the Original Issue Date of any series of Preferred Stock effect a subdivision of the outstanding Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding, If the Corporation shall at any time or from time to time after the Original Issue Date of any series of Preferred Stock combine the outstanding shares of Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this Subsection 4.5 shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6. Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time on or after the Original Issue Date of any series of Preferred Stock shall make or issue, or fix a record date for the determination of holders of

Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation or in cash or other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of such series of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities, cash or other property in an amount equal to the amount of such securities, cash or other property as they would have received if all outstanding shares of such series of Preferred Stock had been converted into Common Stock on the date of such event.

4.7. Adjustment for Merger or Reorganization, etc. If there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.5 or 4.6), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of the Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property that a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of the Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors)) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price of each series of Preferred Stock) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.8. Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 30 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of the Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of the Preferred Stock (but in any event not later than 15 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (a) the Conversion Price of such series of Preferred Stock then in effect, and (b) the number of shares of Common Stock and the amount, if any, of other securities, cash or property that then would be received upon the conversion of the Preferred Stock.

4.9. Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution,

or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock, Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1. Trigger Events. Upon the initial closing of the Corporation's first firmly underwritten public offering of its Common Stock pursuant to a registration statement filed with the Securities and Exchange Commission ("**SEC**"), and declared effective under the Securities Act, in which the Corporation's Common Stock is listed on a national securities exchange (other than a registration statement relating either to the sale of securities to employees of the Corporation pursuant to its stock option, stock purchase or similar plan or an SEC Rule 145 transaction) covering the offer and sale of Common Stock for the account of the Corporation to the public at a price per share of not less than three times the highest then applicable Conversion Price resulting in offering proceeds to the Corporation of a least $30,000,000 net of underwriting discounts and commissions (the time of such closing is referred to herein as the "**Mandatory Conversion Time**"), (i) all outstanding shares of the Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective Conversion Price and (ii) such shares may not be reissued by the Corporation.

5.2. Procedural Requirements. All holders of record of shares of the Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of the Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of the Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such

certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for the Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of the Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

6. Redemption.

6.1. Redemption. Shares of the Preferred Stock shall be redeemed by the Corporation out of funds lawfully available therefor at a price equal to the Preferred Liquidation Amount applicable to the shares of Preferred Stock, less all Mandatory Dividend(s) previously distributed with respect to each such share (the "**Redemption Price**"), in three annual installments commencing not more than 60 days after receipt by the Corporation at any time on or after March 20, 2021, from the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, of written notice requesting redemption of all shares of the Preferred Stock. The date of each such installment shall be referred to as a "**Redemption Date**." On each Redemption Date, the Corporation shall redeem, on a pro rata basis in accordance with the number of shares of the Preferred Stock owned by each holder, that number of outstanding shares of the Preferred Stock determined by dividing (a) the total number of shares of the Preferred Stock outstanding immediately prior to such Redemption Date by (b) the number of remaining Redemption Dates (including the Redemption Date to which such calculation applies); provided, however, that Excluded Shares (as such term is defined in Subsection 6.2) shall not be redeemed and shall be excluded from the calculations set forth in this sentence. If the Corporation does not have sufficient funds legally available to redeem on any Redemption Date all shares of the Preferred Stock to be redeemed on such Redemption Date, the Corporation shall redeem a pro rata portion of each holder's redeemable shares of such capital stock out of funds legally available therefor, based on the respective amounts that would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor. No other capital stock of the Corporation may be redeemed

or repurchased by the Corporation prior to the redemption of the Preferred Stock without the approval of the holders of at least 60% of the then issued and outstanding shares of Preferred Stock voting as a single class on an as-converted basis. The Corporation shall take all commercially reasonable action to have funds legally available for payment of the Redemption Price.

6.2. Redemption Notice. The Corporation shall send written notice of the mandatory redemption (the "**Redemption Notice**") to each holder of record of the Preferred Stock not less than 40 days prior to each Redemption Date. Each Redemption Notice shall state:

(a) the series and number of shares of the Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice;

(b) the Redemption Date and the Redemption Price;

(c) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1); and

(d) that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of the Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the 20th day after the date of delivery of the Redemption Notice to a holder of the Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6, then the shares of the Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "**Excluded Shares**." Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6, whether on such Redemption Date or thereafter.

6.3. Surrender of Certificates; Payment. On or before the applicable Redemption Date, each holder of shares of the Preferred Stock to be redeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person or entity whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of the Preferred Stock represented by a certificate are redeemed, a new certificate representing the unredeemed shares of the Preferred Stock shall promptly be issued to such holder.

6.4. Rights Subsequent to Redemption. If the Redemption Notice shall have been duly given, and if on the applicable Redemption Date the Redemption Price payable upon redemption of the shares of the Preferred Stock to be redeemed on such Redemption Date is paid

or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of the Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of the Preferred Stock shall cease to accrue after such Redemption Date and all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of their certificate or certificates therefor.

6.5. Redeemed or Otherwise Acquired Shares. Any shares of the Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of the Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of the Preferred Stock, the Series B Preferred Stock, the Series A-2 Preferred Stock, the Series A-1 Preferred Stock or the Series A Preferred Stock, as the case may be, by the requisite percentage (as set forth in the applicable provision(s) of this Amended and Restated Certificate of Incorporation, as amended) of such stockholders of the Corporation that are entitled to a vote upon or consent with respect to any such right, power, preference or other term.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of the Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

9. No Reissuance of Preferred Stock. No share or shares of any series of the Preferred Stock acquired by the Corporation by reason of purchase, conversion, redemption or otherwise shall be reissued, and all such shares shall be canceled, retired and eliminated from the shares which the Corporation shall be authorized to issue. This Amended and Restated Certificate of Incorporation, as amended, shall be appropriately amended to effect the corresponding reduction in the Corporation's capital stock.

B. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of the Preferred Stock that may be required by the terms of this Amended and Restated Certificate of Incorporation, as amended) the affirmative vote of the holders of shares of capital

stock of the Corporation (voting as a single class) representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote (the Preferred Stock voting on an as if converted to Common Stock basis) and without a separate class vote by the holders of the Common Stock, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

FIFTH: Subject to any additional vote required by the Certificate of Incorporation or By-Laws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the By-Laws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the By-Laws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the By-Laws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the By-Laws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the By-Laws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through By-Law provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

ELEVENTH: The Corporation renounces any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of, (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Series A Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, or an Affiliate of any holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, "**Covered Persons**"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation. As used herein, "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer or director of such Person or any venture capital fund now or hereafter existing that is controlled by such Person, or solely in the case of Ogden CAP Associates, LLC ("**Ogden**"): (a) with respect to which investment discretion is exercised by one or more general partners or managing members of, or shares the same management company with, Ogden; or (b) any employee of Ogden or Ogden's Affiliate who holds (or will by virtue of an immediately succeeding transfer will hold) at least 100,000 shares of Series A Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization affecting such shares).

TWELFTH: The Corporation expressly elects not to be governed by Section 203 of the General Corporation Law.

[Signature Page Follows]

IN WITNESS WHEREOF, this Second Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of the Corporation on this 1st day of November, 2016.

COGNITION THERAPEUTICS, INC.

By: /s/ Kenneth I. Moch

Name: Kenneth I. Moch
Title: President and Chief Executive Officer

Exhibit 3.2

CERTIFICATE OF AMENDMENT

OF

SECOND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

COGNITION THERAPEUTICS, INC.

Cognition Therapeutics, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "DGCL"),

DOES HEREBY CERTIFY THAT:

FIRST: The Board of Directors (the "Board") of Cognition Therapeutics, Inc. (the "Corporation"), pursuant to a meeting of the Board held on December 2, 2016, duly adopted the following resolution setting forth a proposed amendment to the Second Amended and Restated Certificate of Incorporation of the Corporation, declaring such amendment to be advisable and calling for consideration thereof by the stockholders of the Corporation. The resolution setting forth the proposed amendment is as follows:

RESOLVED, that Article Fourth of the Second Amended and Restated Certificate of Incorporation of the Company (the "Certificate"), shall be amended pursuant to the Certificate of Amendment in the form attached as Exhibit A hereto.

SECOND: Thereafter, pursuant to a resolution of the Board, the holders of a majority of the outstanding shares of all classes of capital stock of the Corporation, voting together as a single class, and the holders of at least 60% of the outstanding shares of the Corporation's Series A Convertible Preferred Stock, Series A-1 Convertible Preferred Stock, Series A-2 Convertible Preferred Stock and Series B Convertible Preferred Stock, voting together as a separate class, voted in favor of the amendment.

THIRD: The amendment was duly adopted in accordance with the provisions of Section 242 of the DGCL. With respect to such adoption, written consent has been given by the stockholders of the Corporation in accordance with the provisions of Section 228 of the DGCL and written notice has been given as provided in Section 228 of the DGCL.

[Signature follows on next page.]

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be signed by its duly authorized officer, this 10th day of January, 2017.

COGNITION THERAPEUTICS, INC.

By: /s/ Kenneth I. Moch
Kenneth I. Moch
President and Chief Executive Officer

EXHIBIT A

FOURTH: The total number of shares of all classes of stock that the Corporation shall have authority to issue is (i) Fifty-Six Million (56,000,000) shares of Common Stock, $.001 par value per share ("**Common Stock**"), and (ii) Thirty-Nine Million Four Hundred Twenty- Three Thousand Three Hundred Fifty-Eight (39,423,358) shares of Preferred Stock, $.001 par value per share.

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. PREFERRED STOCK

Three Million Sixty-Seven Thousand Five Hundred Nineteen (3,067,519) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A Convertible Preferred Stock**" (the "**Series A Preferred Stock**"); Three Million Nine Hundred Seventy Thousand Seven Hundred Seventy-Six (3,970,776) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-1 Convertible Preferred Stock**" (the "**Series A-1 Preferred Stock**"); Three Million Five Hundred Sixty-Five Thousand Sixty-Three (3,565,063) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-2 Convertible Preferred Stock**" (the "**Series A-2 Preferred Stock**"); and Twenty-Eight Million Eight Hundred Twenty Thousand (28,820,000) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series B Convertible Preferred Stock**" (the "**Series B Preferred Stock**"). The Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock and the Series B Preferred Stock are sometimes referred to herein collectively as the "**Preferred Stock**." Unless otherwise indicated, references to "Sections" or "Subsections" in this Part A of this Article Fourth refer to sections and subsections of Part A of this Article Fourth.

The Preferred Stock shall have the following rights, preferences, powers, privileges, restrictions, qualifications and limitations.

1. Dividends.

1.1. Accruing Dividends. From and after the date of the issuance of each respective share of the Preferred Stock, dividends at the rate of 8% per annum of the applicable Original Issue Price (as defined herein) compounded annually shall accrue on such share of the Preferred Stock ("**Accruing Dividends**"). Accruing Dividends shall accrue from day to day, whether or not declared, and shall be cumulative; provided however, (i) that such Accruing Dividends shall be payable only in connection with a liquidation, dissolution or winding up of the Corporation under Section 2 (including, without limitation, in connection with a Deemed Liquidation Event), a Mandatory Dividend under Section 1.3, or a redemption of the Preferred Stock under Section 6, and the Corporation shall not otherwise pay such Accruing Dividends and (ii) in the event a Mandatory Dividend is paid under Section 1.3, Accruing Dividends shall thereafter accrue only on the unreturned amount of the Original Issue Price after taking into

account the payment of each Mandatory Dividend. As used herein, "**Original Issue Price**" means $.69 per share with respect to the Series A Preferred Stock and Series A-1 Preferred Stock, $.8415 per share with respect to the Series A-2 Preferred Stock and $.923 per share with respect to the Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization affecting such shares). After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount (as defined below), less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Accruing Dividends; provided that the holders of the Preferred Stock will share in all dividends and distributions declared by the Board of Directors and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.2. Common Stock Dividends. The holders of the Preferred Stock shall be entitled to share in dividends payable with respect to the Common Stock as if converted and the Corporation shall not declare, pay or set aside any dividends on shares of Common Stock unless (in addition to obtaining any consents required elsewhere in this Amended and Restated Certificate of Incorporation, as amended) each holder of the Preferred Stock then outstanding shall first receive, or simultaneously receive, in each such instance, a dividend on each outstanding share of the Preferred Stock held by such holder as if such share of Preferred Stock had been converted into Common Stock, in an amount at least equal to the product of (a) the dividend payable on a share of Common Stock and (b) the number of shares of Common Stock issuable upon conversion of a share of the Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend.

1.3. Mandatory Dividend(s).

(a) If, prior to such time as the holders of shares of the Preferred Stock receive their full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the Corporation or any subsidiary of the Corporation shall consummate a sale, license or other disposition for value of any or all of the Corporation's intellectual property, in a single transaction or series of related transactions unrelated to the performance by the Corporation of research and development or other services (as determined in good faith by the Board of Directors of the Corporation, including both Preferred Directors) (a "**Strategic Event**"), at the written election of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, sent to the Corporation at least 15 days prior to the effective date of a Strategic Event, the Corporation shall distribute to the holders of shares of the Preferred Stock up to 35% of the aggregate payments (including, without limitation, all option and/or milestone payments and/or all success fees) received by the Corporation as consideration in such Strategic Event as soon as reasonably practicable following receipt by the Corporation of such payments ("**Mandatory Dividend**"). Such Mandatory Dividend shall be distributed to the holders of the Preferred Stock on a pari passu and an as-converted to Common Stock basis until the aggregate amount of all Mandatory Dividends paid to the holders of the

Preferred Stock equals the full Preferred Liquidation Amount payable on the Preferred Stock held by such holders.

(b) The Corporation shall give each holder of record of the Preferred Stock written notice of an impending Strategic Event within ten days after the Board of Directors of the Corporation approves such Strategic Event. Such written notice shall describe the material terms and conditions of the impending Strategic Event and the provisions of this Section 1.3, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

(c) After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount for their respective shares of the Preferred Stock, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Mandatory Dividends; provided that the holders of the Preferred Stock will share in all dividends and distributions declared by the Board of Directors and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.4. Order of Dividend Payment. No dividends or other distributions shall be declared and/or paid on any class or series of capital stock, other than the Preferred Stock if any Mandatory Dividends have accrued and are unpaid or if any other dividends are declared and unpaid on the Preferred Stock.

2. Liquidation Preference.

2.1. Preferred Liquidation Amount. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, including, without limitation, any Deemed Liquidation Event (as defined below), each holder of shares of the Preferred Stock then outstanding shall be entitled to receive out of the assets legally available for distribution to its stockholders, whether from capital surplus, earnings or otherwise, on a pari passu and an as converted to Common Stock basis and prior and in preference to any distribution to the holders of any other series or class of the capital stock of the Corporation that is junior to the Preferred Stock, including, without limitation, the Common Stock, by reason of their ownership thereof, an amount per share of Preferred Stock then held by such holder equal to the Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock. If upon the occurrence of such event, the assets and funds of the Corporation shall be insufficient to permit the payment to such holders of Preferred Stock of the full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock, required by the preceding sentence, then the entire assets and funds of the Corporation legally available for

distribution shall be distributed ratably among the holders of the Preferred Stock in proportion to the Preferred Liquidation Amount each such holder is otherwise entitled to receive on each such share, less any and all Mandatory Dividend(s) previously distributed with respect to each such share. "**Preferred Liquidation Amount**" means, with respect to a share of Preferred Stock, the applicable Original Issue Price for such share of Preferred Stock plus all Accruing Dividends on such share of Preferred Stock (plus any other dividends or distributions declared but not paid on such share of Preferred Stock).

2.2. Distribution of Remaining Assets. After payment has been made to the holders of the Preferred Stock of their full Preferred Liquidation Amount required by Section 2.1, less any and all Mandatory Dividend(s) previously distributed with respect to each such share, the remaining assets or surplus funds of the Corporation available for distribution to stockholders shall be distributed among the holders of the Common Stock and the holders of the Preferred Stock pro rata based on the number of shares of Common Stock held by each (assuming conversion of all shares of the Preferred Stock into Common Stock).

2.3. Deemed Liquidation Events. At the option of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, the occurrence of each of the following events shall be deemed to be a liquidation, dissolution or winding up within the meaning of this Section 2 (each, a "**Deemed Liquidation Event**"):

(a) either a transaction or series of related transactions in which any individual, corporation, partnership, trust, limited liability company, association or other entity (each, a "**Person**"), or group of related Persons, acquires from the stockholders of the Corporation, shares representing at least a majority of the outstanding voting power of the Corporation;

(b) a sale and/or issuance (or series of sales and/or issuances) by the Corporation of securities of the Corporation representing, after the issuance of such securities, more than fifty percent (50%) of all voting securities of the Corporation to persons other than stockholders of the Corporation as of immediately prior to such sale(s) and/or issuance(s);

(c) a sale, conveyance or disposition (in one or a series of related transactions) by the Corporation or any subsidiary of the Corporation of all or substantially all of the assets of the Corporation and its subsidiaries taken as a whole;

(d) a grant of an exclusive license or other transfer (in one or a series of related transactions) by the Corporation and/or any subsidiary of the Corporation of a material amount of the technology or intellectual property of the Corporation and its subsidiaries taken as a whole; or

(e) a consolidation or merger of the Corporation with or into any other entity or entities or a reorganization of the Corporation or similar transactions, provided, however, that a consolidation, merger, reorganization or similar transaction involving the Corporation shall not constitute a Deemed Liquidation Event if following completion of the

transaction, the holders of shares of the Corporation immediately prior to the transaction own shares that represent a majority of the voting power of the surviving corporation.

2.4. Amount Paid Deemed Paid or Distributed. Whenever the distribution provided for in Subsection 1.3 or in this Section 2 shall be payable in any assets other than cash, the value of the assets to be distributed shall be the fair market value thereof, determined as follows:

(a) Freely traded securities:

(i) If traded on a securities exchange, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing prices of the securities on such exchange or system over the 30-day period ending three days prior to the closing;

(ii) If actively traded over-the-counter, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the 30-day period ending three days prior to the closing; and

(iii) If there is no active public market, the value shall be the fair market value thereof, as so determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors).

(b) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as above in Subsection 2.4(a) to reflect the approximate fair market value thereof.

(c) In the event the requirements of this Section 2 are not complied with, the Corporation shall forthwith either:

(i) cause such closing to be postponed until such time as the requirements of this Section 2 have been complied with; or

(ii) cancel such transaction, in which event the rights, preferences and privileges of the holders of the Preferred Stock shall revert to and be the same as such rights, preferences and privileges existing immediately prior to the date of the first notice referred to in Subsection 2.4(d).

(d) The Corporation shall give each holder of record of the Preferred Stock written notice of such impending transaction within ten days after the Board of Directors of the Corporation approves such transaction or within ten days after the commencement of any

involuntary proceeding, whichever is earlier. Such written notice shall describe the material terms and conditions of the impending transaction and the provisions of this Section 2, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

3. Voting.

3.1. General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of the Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of the Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, as amended, the holders of the Preferred Stock shall vote together with the holders of Common Stock as a single class on an as-converted to Common Stock basis.

3.2. Election of Directors. For as long as there are any shares of the Preferred Stock outstanding, the holders of record of a majority of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect three directors of the Corporation (the "**Preferred Directors**"). The holders of record of a majority of the then outstanding shares of Common Stock, voting together as a single class, shall be entitled to elect one director of the Corporation. If the holders of shares of the Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors pursuant to the first two sentences of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Preferred Stock or Common Stock, as the case may be, elect an individual to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect an individual to fill such directorship. The holders of a majority of the then outstanding shares of Common Stock and/or the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect all remaining members of the Board of Directors of the Corporation. Any director elected as provided in this Subsection 3.2 may be removed without cause, and any vacancy caused by the resignation, death or removal of such director may be filled, by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the then outstanding

shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director.

3.3. Preferred Stock Protective Provisions. At any time when shares of the Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation, as amended) the written consent or affirmative vote of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, pursuant to consent given in writing or by vote at a meeting:

(a) liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event or any recapitalization or reorganization of the Corporation or other transaction in which control of the Corporation is transferred, or sell, transfer, license or encumber the Corporation's technology or intellectual property, or consent to any of the foregoing, other than licenses of the Corporation's technology or intellectual property in the ordinary course of business;

(b) amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation of the Corporation, as amended, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(c) amend, alter or repeal any provision of the By-Laws of the Corporation, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(d) increase or decrease the authorized number of shares of the Preferred Stock or Common Stock;

(e) reclassify, alter or amend any existing security of the Corporation in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Preferred Stock in respect of any such right, preference or privilege (to the extent such rights preferences or privileges are not then currently in effect);

(f) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, or (ii) repurchases of stock pursuant to stock restriction agreements or vesting agreements approved by the Board of Directors (including the Preferred Directors) that grant to the Corporation a right of repurchase upon termination of the service or employment of a consultant, director or employee;

(g) borrow or guaranty or otherwise authorize any amount of indebtedness, other than (i) inventory financing in the ordinary course of business, and (ii) any

indebtedness in an amount of up to $250,000 in the aggregate that is approved by the Board of Directors, including both Preferred Directors;

(h) increase or decrease the authorized number of directors of the Board of Directors from seven members;

(i) effect a change in the nature of the Corporation's business from the discovery and development of small molecule therapeutics targeting the toxic proteins that cause the cognitive decline associated with Alzheimer's disease and other neurodegenerative diseases;

(j) enter into any transaction with any person or entity, including, without limitation, any of its founders, officers, directors or employees other than in the ordinary course of business on an arm's length basis (as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors));

(k) increase the number of shares of Common Stock reserved for issuance under the Corporation's Amended and Restated 2007 Equity Incentive Plan, as amended from time to time, or any other equity-based incentive or compensation plan;

(l) make, or permit any subsidiary to make, any loan or advance to any person or entity, including, without limitation, any founder, officer, employee or director of the Corporation or any subsidiary, except (i) advances in the ordinary course of business or (ii) advances up to $50,000 in the aggregate under the terms of an employment or service arrangement approved by the Board of Directors, including both Preferred Directors;

(m) hire, terminate, or change the compensation in excess of $100,000 of any of its officers, directors or employees, unless such hiring, termination or compensation is approved by the Board of Directors, including both Preferred Directors;

(n) own any stock or other securities of any other corporation, partnership, or other entity, unless approved by the Board of Directors, including both Preferred Directors;

(o) guarantee, or permit any subsidiary to guarantee, any indebtedness except for (i) trade accounts of the Corporation or any subsidiary arising in the ordinary course of business, or (ii) any guarantee approved by the Board of Directors, including both Preferred Directors; or

(p) make any investment other than investments in prime commercial paper, money market funds, certificates of deposit in any United States bank having a net worth in excess of $100,000,000 or obligations issued or guaranteed by the United States of America, in each case having a maturity not in excess of one year, unless approved by the Board of Directors, including both Preferred Directors.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1. Right to Convert.

4.1.1. Conversion Ratio. Each share of the Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price applicable to such share of Preferred Stock by the Conversion Price (as defined below) applicable to such share of Preferred Stock in effect at the time of conversion. The **"Conversion Price"** shall initially be equal to $.69 for the Series A Preferred Stock and Series A-1 Preferred Stock, .$8415 for the Series A-2 Preferred Stock and .$923 for the Series B Preferred Stock. Such initial Conversion Price, and the rate at which shares of the Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2. Termination of Conversion Rights. In the event of a notice of redemption of any shares of the Preferred Stock pursuant to Section 6, the Conversion Rights of the shares of Preferred Stock designated for redemption shall terminate at the close of business on the last full day preceding the date fixed for redemption of such shares, unless the Redemption Price (as defined below) is not fully paid on such Redemption Date (as defined below), in which case the Conversion Rights for such shares of Preferred Stock shall continue until the price is paid in full. The Conversion Rights shall not terminate in connection with a Deemed Liquidation Event.

4.2. Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation (including the Preferred Directors). Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of the Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3. Mechanics of Conversion.

4.3.1. Notice of Conversion. In order for a holder of the Preferred Stock to voluntarily convert shares of the Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of the Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent),

together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (a) issue and deliver to such holder of the Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of the Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, and (b) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion.

4.3.2. Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all the Preferred Stock then outstanding; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all of the then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended and Restated Certificate of Incorporation, as amended. Before taking any action that would cause an adjustment reducing the Conversion Price of any series of Preferred Stock below the then par value of the shares of Common Stock issuable upon conversion of the Preferred Stock, the Corporation will take any corporate action that may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Conversion Price.

4.3.3. Effect of Conversion. All shares of the Preferred Stock that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except with respect to the right of the holders thereof to receive shares of Common Stock in exchange therefor and to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2. Any shares of the Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need

for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

4.3.4. No Further Adjustment. Upon any such conversion, no adjustment to the Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5. Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of the Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of the Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4. Adjustments to Conversion Price for Diluting Issues.

4.4.1. Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) **"Option"** shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Original Issue Date**" shall mean, with respect to the Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock and the Series B Preferred Stock, the date on which the first share of such series of Preferred Stock, respectively, was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean, with respect to the determination of adjustments to the Conversion Price for each series of Preferred Stock, all shares of Common Stock issued (or, pursuant to Subsection 4.4.3, deemed to be issued) by the Corporation on or after the Original Issue Date of such Series of Preferred Stock, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) shares of Common Stock, Options or Convertible Securities issued upon the conversion of the Preferred Stock or by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6 or 4.7;

(ii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation, including both Preferred Directors;

(iii) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options, or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided that such issuance is pursuant to the terms of such Option or Convertible Security;

(iv) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, including both Preferred Directors, that do not exceed an aggregate of 1,000,000 shares of Common Stock;

(v) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation, including both Preferred Directors;

(vi) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation (or the assets of another corporation) by the Corporation whether by merger, reorganization or otherwise, provided, that such issuances are approved by the Board of Directors of the Corporation, including both Preferred Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation, including both Preferred Directors;

(viii) shares of Common Stock issued or issuable pursuant to currently outstanding Options granted under the Corporation's Amended and Restated 2007 Equity Incentive Plan, as amended from time to time, with such amendment as approved by the Board of Directors, including both Preferred Directors;

(ix) shares of Common Stock issued or issuable upon the closing of a public offering of the Corporation's securities pursuant to the Securities Act of 1933, as amended (the "**Securities Act**"), in which all shares of the Preferred Stock are automatically converted to Common Stock pursuant to Subsection 5.1(a);

(x) shares of Common Stock issued or issuable upon conversion of any shares of the Series B Preferred Stock issued under that certain Series B Stock Purchase Agreement dated as of March 20, 2014, as amended, and the Series B Preferred Stock Purchase Agreement dated as of November 16, 2016, as it may be amended, among the Corporation and the other parties listed therein;

(xi) shares of Common Stock issued or issuable upon conversion of one or more Convertible Promissory Note(s) or upon exercise of one or more Warrant(s) issued by the Corporation to the Alzheimer Drug Development Foundation, Inc. under that certain Agreement to Accept Conditions for Biotechnology Grant Funding dated as of July 6, 2010;

(xii) shares of Preferred Stock issued or issuable upon conversion of one or more Convertible Promissory Notes (and shares of Common Stock issued upon conversion of such shares of Preferred Stock) and Common Stock Purchase Warrants (and shares of Common Stock issued upon exercise of such Warrants) issued by the Corporation under that certain Note and Warrant Purchase Agreement, among the Corporation and the purchasers named therein, dated as of March 11, 2016, as amended; and

(xiii) shares of Common Stock issued or issuable upon the conversion, exercise or exchange of all other Options and Convertible Securities outstanding as of November 16, 2016.

4.4.2. No Adjustment of Conversion Price. No adjustment in the Conversion Price applicable to a share of Preferred Stock shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock unless the consideration per share (determined pursuant to Subsection 4.4.5 for an Additional Share of Common Stock issued or deemed to be issued by the Corporation) is less than the Conversion Price for such share of Preferred Stock in effect on the date of, and immediately prior to, the issue of such Additional Shares of Common Stock.

4.4.3. Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Original Issue Date applicable to a series of Preferred Stock shall issue any Options or Convertible Securities (excluding Options or Convertible Securities that are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of the issuance of such Convertible Security or Option or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of

such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (ii) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Conversion Price of such series of Preferred Stock computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have been obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this Subsection 4.4.3(b) shall have the effect of increasing the Conversion Price of any series of Preferred Stock to an amount that exceeds the lower of (A) such Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (B) such Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities that are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Conversion Price of a series of Preferred Stock pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than such Conversion Price then in effect with respect to such series of Preferred Stock, or because such Option or Convertible Security was issued before the Original Issue Date of such series of Preferred Stock), are revised after Original Issue Date of such series of Preferred Stock as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (ii) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) that resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, such Conversion Price shall be readjusted to the Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the

time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Conversion Price of a series of Preferred Stock provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Conversion Price of a series of Preferred Stock that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to such Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4. Adjustment of Conversion Price upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Original Issue Date applicable to a series of Preferred Stock issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than Conversion Price of such series of Preferred Stock in effect immediately prior to such issue, then the Conversion Price applicable to each share of such series of Preferred Stock shall be reduced, concurrently with such issue, to a price per share (calculated to the nearest one-hundredth of a cent) in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(i) "**CP_2**" shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately after such issue of Additional Shares of Common Stock;

(ii) "**CP_1**" shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately prior to such issue of Additional Shares of Common Stock;

(iii) "**A**" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock, treating for this purpose as outstanding shares of Common Stock underlying only those Options or Convertible Securities that (x) are outstanding immediately prior to such issue and (y) are vested or otherwise exercisable;

(iv) "**B**" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(v) "**C**" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5. Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) For cash and property, such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors); and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration that covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors).

(b) For Options and Convertible Securities, the consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible

Securities and the conversion or exchange of such Convertible Securities.

4.4.6. Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than 90 days from the first such issuance to the final such issuance, then, upon the final such issuance, the Conversion Price of such series of Preferred Stock shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5. Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time on or after the Original Issue Date of any series of Preferred Stock effect a subdivision of the outstanding Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Original Issue Date of any series of Preferred Stock combine the outstanding shares of Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this Subsection 4.5 shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6. Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time on or after the Original Issue Date of any series of Preferred Stock shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation or in cash or other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of such series of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities, cash or other property in an amount equal to the amount of such securities, cash or other property as they would have received if all outstanding shares of such series of Preferred Stock had been converted into Common Stock on the date of such event.

4.7. Adjustment for Merger or Reorganization, etc. If there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.5 or 4.6), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of the Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount

of securities, cash or other property that a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of the Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors)) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price of each series of Preferred Stock) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.8. Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 30 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of the Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of the Preferred Stock (but in any event not later than 15 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (a) the Conversion Price of such series of Preferred Stock then in effect, and (b) the number of shares of Common Stock and the amount, if any, of other securities, cash or property that then would be received upon the conversion of the Preferred Stock.

4.9. Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding- up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or

securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1. Trigger Events. Upon the initial closing of the Corporation's first firmly underwritten public offering of its Common Stock pursuant to a registration statement filed with the Securities and Exchange Commission **("SEC"),** and declared effective under the Securities Act, in which the Corporation's Common Stock is listed on a national securities exchange (other than a registration statement relating either to the sale of securities to employees of the Corporation pursuant to its stock option, stock purchase or similar plan or an SEC Rule 145 transaction) covering the offer and sale of Common Stock for the account of the Corporation to the public at a price per share of not less than three times the highest then applicable Conversion Price resulting in offering proceeds to the Corporation of a least $30,000,000 net of underwriting discounts and commissions (the time of such closing is referred to herein as the "**Mandatory Conversion Time**"), (i) all outstanding shares of the Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective Conversion Price and (ii) such shares may not be reissued by the Corporation.

5.2. Procedural Requirements. All holders of record of shares of the Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of the Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of the Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for the Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates

for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of the Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

6. Redemption.

6.1. Redemption. Shares of the Preferred Stock shall be redeemed by the Corporation out of funds lawfully available therefor at a price equal to the Preferred Liquidation Amount applicable to the shares of Preferred Stock, less all Mandatory Dividend(s) previously distributed with respect to each such share (the "**Redemption Price**"), in three annual installments commencing not more than 60 days after receipt by the Corporation at any time on or after March 20, 2021, from the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, of written notice requesting redemption of all shares of the Preferred Stock. The date of each such installment shall be referred to as a "**Redemption Date**." On each Redemption Date, the Corporation shall redeem, on a pro rata basis in accordance with the number of shares of the Preferred Stock owned by each holder, that number of outstanding shares of the Preferred Stock determined by dividing (a) the total number of shares of the Preferred Stock outstanding immediately prior to such Redemption Date by (b) the number of remaining Redemption Dates (including the Redemption Date to which such calculation applies); provided, however, that Excluded Shares (as such term is defined in Subsection 6.2) shall not be redeemed and shall be excluded from the calculations set forth in this sentence. If the Corporation does not have sufficient funds legally available to redeem on any Redemption Date all shares of the Preferred Stock to be redeemed on such Redemption Date, the Corporation shall redeem a pro rata portion of each holder's redeemable shares of such capital stock out of funds legally available therefor, based on the respective amounts that would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor. No other capital stock of the Corporation may be redeemed or repurchased by the Corporation prior to the redemption of the Preferred Stock without the approval of the holders of at least 60% of the then issued and outstanding shares of Preferred Stock voting as a single class on an as-converted basis. The Corporation shall take all commercially reasonable action to have funds legally available for payment of the Redemption Price.

6.2. Redemption Notice. The Corporation shall send written notice of the mandatory redemption (the "**Redemption Notice**") to each holder of record of the Preferred Stock not less than 40 days prior to each Redemption Date. Each Redemption Notice shall state:

(a) the series and number of shares of the Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice;

(b) the Redemption Date and the Redemption Price;

(c) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1); and

(d) that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of the Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the 20th day after the date of delivery of the Redemption Notice to a holder of the Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6, then the shares of the Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be **"Excluded Shares**." Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6, whether on such Redemption Date or thereafter.

6.3. Surrender of Certificates; Payment. On or before the applicable Redemption Date, each holder of shares of the Preferred Stock to be redeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person or entity whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of the Preferred Stock represented by a certificate are redeemed, a new certificate representing the unredeemed shares of the Preferred Stock shall promptly be issued to such holder.

6.4. Rights Subsequent to Redemption. If the Redemption Notice shall have been duly given, and if on the applicable Redemption Date the Redemption Price payable upon redemption of the shares of the Preferred Stock to be redeemed on such Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of the Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of the Preferred Stock shall cease to accrue after such Redemption Date and all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of their certificate or certificates therefor.

6.5. Redeemed or Otherwise Acquired Shares. Any shares of the Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of the Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of the Preferred Stock, the Series B Preferred Stock, the Series A-2 Preferred Stock, the Series A-1 Preferred Stock or the Series A Preferred Stock, as the case may be, by the requisite percentage (as set forth in the applicable provision(s) of this Amended and Restated Certificate of Incorporation, as amended) of such stockholders of the Corporation that are entitled to a vote upon or consent with respect to any such right, power, preference or other term.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of the Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

9. No Reissuance of Preferred Stock. No share or shares of any series of the Preferred Stock acquired by the Corporation by reason of purchase, conversion, redemption or otherwise shall be reissued, and all such shares shall be canceled, retired and eliminated from the shares which the Corporation shall be authorized to issue. This Amended and Restated Certificate of Incorporation, as amended, shall be appropriately amended to effect the corresponding reduction in the Corporation's capital stock.

B. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of the Preferred Stock that may be required by the terms of this Amended and Restated Certificate of Incorporation, as amended) the affirmative vote of the holders of shares of capital stock of the Corporation (voting as a single class) representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote (the Preferred Stock voting on an as if converted to Common Stock basis) and without a separate class vote by the holders of the Common Stock, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

Exhibit 3.3

SECOND CERTIFICATE OF AMENDMENT

OF

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

COGNITION THERAPEUTICS, INC.

Cognition Therapeutics, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "DGCL"),

DOES HEREBY CERTIFY THAT:

FIRST: The Board of Directors (the "Board") of Cognition Therapeutics, Inc. (the "Corporation"), pursuant to a unanimous written consent of the directors dated as of November 10, 2011, duly adopted the following resolution setting forth a proposed amendment to the Amended and Restated Certificate of Incorporation of the Corporation, as amended, declaring such amendment to be advisable and calling for consideration thereof by the stockholders of the Corporation. The resolution setting forth the proposed amendment is as follows:

RESOLVED, that Article Fourth of the Amended and Restated Certificate of Incorporation, as amended, of Cognition Therapeutics, Inc. shall be amended and restated in its entirety to provide as set forth on Exhibit A hereto.

SECOND: Thereafter, pursuant to a resolution of the Board, the holders of a majority of the outstanding shares of all classes of capital stock of the Corporation, voting together as a single class, and the holders of at least 60% of the outstanding shares of the Corporation's Series A Preferred Stock and Series A-1 Preferred Stock, voting together as a separate series, voted in favor of the amendment.

THIRD: The amendment was duly adopted in accordance with the provisions of Section 242 of the DGCL. With respect to such adoption, written consent has been given by the stockholders of the Corporation in accordance with the provisions of Section 228 of the DGCL and written notice has been given as provided in Section 228 of the DGCL.

IN WITNESS WHEREOF, the Corporation has caused this Second Certificate of Amendment to be signed by its duly authorized officer, this 30th day of November 2011.

COGNITION THERAPEUTICS, INC.

By: /s/ Harold T. Safferstein
Harold T. Safferstein
President and Chief Executive Officer

EXHIBIT A

FOURTH; The total number of shares of all classes of stock that the Corporation shall have authority to issue is (i) Sixteen Million One Hundred Ninety Four Thousand Four Hundred Sixty Four (16,194,464) shares of Common Stock, $.001 par value per share ("**Common Stock**"), and (ii) Ten Million Six Hundred Three Thousand Three Hundred Sixty (10,603,360) shares of Preferred Stock, $.001 par value per share.

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. PREFERRED STOCK

Three Million Sixty-Seven Thousand Five Hundred Nineteen (3,067,519) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A Convertible Preferred Stock**" (the "**Series A Preferred Stock**"); Three Million Nine Hundred Seventy Thousand Seven Hundred Seventy-Six (3,970,776) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-1 Convertible Preferred Stock**" (the "**Series A-1 Preferred Stock**"); and Three Million Five Hundred Sixty Five Thousand Sixty Five (3,565,065) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-2 Convertible Preferred Stock**" (the "**Series A-2 Preferred Stock**"). The Series A Preferred Stock, the Series A-1 Preferred Stock and the Series A-2 Preferred Stock, are sometimes referred to herein collectively as the "**Preferred Stock**." Unless otherwise indicated, references to "Sections" or "Subsections" in this Part A of this Article Fourth refer to sections and subsections of Part A of this Article Fourth.

The Preferred Stock shall have the following rights, preferences, powers, privileges, restrictions, qualifications and limitations.

1. Dividends.

1.1. Accruing Dividends. From and after the date of the issuance of each respective share of the Preferred Stock, dividends at the rate of 8% per annum of the applicable Original Issue Price (as defined herein) compounded annually shall accrue on such share of the Preferred Stock ("**Accruing Dividends**"). Accruing Dividends shall accrue from day to day, whether or not declared, and shall be cumulative; provided however, (i) that such Accruing Dividends shall be payable only in connection with a liquidation, dissolution or winding up of the Corporation under Section 2 (including, without limitation, in connection with a Deemed Liquidation Event), a Mandatory Dividend under Section 1.3, or a redemption of the Preferred Stock under Section 6, and the Corporation shall not otherwise pay such Accruing Dividends and (ii) in the event a Mandatory Dividend is paid under Section 1.3, Accruing Dividends shall thereafter accrue only on the unreturned amount of the Original Issue Price after taking into account the payment of each Mandatory Dividend. As used herein, "**Original Issue Price**" means $.69 per share with respect to the Series A Preferred Stock and Series A-1 Preferred Stock and $.8415 per share with respect to the Series A-2 Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization affecting such shares). After such time as the holders of the Preferred Stock

receive their full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Accruing Dividends but will share in all dividends and distributions declared by the Board of Directors and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.2. Common Stock Dividends. The holders of the Preferred Stock shall be entitled to share in dividends payable with respect to the Common Stock as if converted and the Corporation shall not declare, pay or set aside any dividends on shares of Common Stock unless (in addition to obtaining any consents required elsewhere in this Amended and Restated Certificate of Incorporation) each holder of the Preferred Stock then outstanding shall first receive, or simultaneously receive, in each such instance, a dividend on each outstanding share of the Preferred Stock held by such holder as if such share of Preferred Stock had been converted into Common Stock, in an amount at least equal to the product of (a) the dividend payable on a share of Common Stock and (b) the number of shares of Common Stock issuable upon conversion of a share of the Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend.

1.3. Mandatory Dividend(s).

(a) If, prior to such time as the holders of shares of the Preferred Stock receive their full Preferred Liquidation Amount (as defined below), less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the Corporation or any subsidiary of the Corporation shall consummate a sale, license or other disposition for value of any or all of the Corporation's intellectual property, in a single transaction or series of related transactions unrelated to the performance by the Company of research and development or other services (as determined in good faith by the Board of Directors of the Corporation, including both Preferred Directors) (a "**Strategic Event**"), at the written election of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, sent to the Corporation at least 15 days prior to the effective date of a Strategic Event, the Corporation shall distribute to the holders of shares of the Preferred Stock up to 35% of the aggregate payments (including, without limitation, all option and/or milestone payments and/or all success fees) received by the Corporation as consideration in such Strategic Event as soon as reasonably practicable following receipt by the Corporation of such payments ("**Mandatory Dividend**"). Such Mandatory Dividend shall be distributed to the holders of the Preferred Stock on a pari passu and an as-converted to Common Stock basis until the aggregate amount of all Mandatory Dividends paid to the holders of the Preferred Stock equals the full Preferred Liquidation Amount payable on the Preferred Stock held by such holders.

(b) The Corporation shall give each holder of record of the Preferred Stock written notice of an impending Strategic Event within ten days after the Board of Directors of the Corporation approves such Strategic Event. Such written notice shall describe the material terms and conditions of the impending Strategic Event and the provisions of this Section 1.3, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of

any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

(c) After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount for their respective shares of the Preferred Stock, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Mandatory Dividends but will share in all dividends and distributions declared by the Board of Directors and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.4. Order of Dividend Payment. No dividends or other distributions shall be declared and/or paid on any class or series of capital stock other than the Preferred Stock if any Mandatory Dividends have accrued and are unpaid or if any other dividends are declared and unpaid on the Preferred Stock.

2. Liquidation Preference.

2.1. Preferential Payments to Holders of the Preferred Stock. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, including, without limitation, any Deemed Liquidation Event (as defined below), each holder of shares of the Preferred Stock then outstanding shall be entitled to receive out of the assets legally available for distribution to its stockholders, whether from capital surplus, earnings or otherwise, on a pari passu and an as-converted to Common Stock basis and prior and in preference to any distribution to the holders of any other series or class of the capital stock of the Corporation that is junior to the Preferred Stock, including, without limitation, the Common Stock, by reason of their ownership thereof, an amount per share of Preferred Stock then held by such holder equal to the Preferred Liquidation Amount (as defined below), less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock. If upon the occurrence of such event, the assets and funds of the Corporation shall be insufficient to permit the payment to such holders of the full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock, on the Preferred Stock required by the preceding sentence, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Preferred Stock in proportion to the Preferred Liquidation Amount each such holder is otherwise entitled to receive on each such share, less any and all Mandatory Dividend(s) previously distributed with respect to each such share. "**Preferred Liquidation Amount**" means, with respect to a share of Preferred Stock, the applicable Original Issue Price for such share of Preferred Stock plus all Accruing Dividends on such share of Preferred Stock (plus any other dividends or distributions declared but not paid on such share of Preferred Stock).

2.2. Distribution of Remaining Assets. After payment has been made to the holders of the Preferred Stock of their full Preferred Liquidation Amount required by Section 2.1, less any and all Mandatory Dividend(s) previously distributed with respect to each such

share, the remaining assets or surplus funds of the Corporation available for distribution to stockholders shall be distributed among the holders of the Common Stock and the holders of the Preferred Stock, pro rata based on the number of shares of Common Stock held by each (assuming conversion of all shares of the Preferred Stock into Common Stock).

2.3. Deemed Liquidation Events. At the option of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as- converted to Common Stock basis, the occurrence of each of the following events shall be deemed to be a liquidation, dissolution or winding up within the meaning of this Section 2 (each, a "Deemed Liquidation Event"):

(a) either a transaction or series of related transactions in which any individual, corporation, partnership, trust, limited liability company, association or other entity ("each, a "Person"), or group of related Persons, acquires from the stockholders of the Corporation, shares representing at least a majority of the outstanding voting power of the Corporation;

(b) a sale and/or issuance (or series of sales and/or issuances) by the Corporation of securities of the Corporation representing, after the issuance of such securities, more than fifty percent (50%) of all voting securities of the Corporation to persons other than stockholders of the Corporation as of immediately prior to such sale(s) and/or issuance(s);

(c) a sale, conveyance or disposition (in one or a series of related transactions) by the Corporation or any subsidiary of the Corporation of all or substantially all of the assets of the Corporation and its subsidiaries taken as a whole;

(d) a grant of an exclusive license or other transfer (in one or a series of related transactions) by the Corporation and/or any subsidiary of the Corporation of a material amount of the technology or intellectual property of the Corporation and its subsidiaries taken as a whole; or

(e) a consolidation or merger of the Corporation with or into any other entity or entities or a reorganization of the Corporation or similar transactions, provided, however, that a consolidation, merger, reorganization or similar transaction involving the Corporation shall not constitute a Deemed Liquidation Event if following completion of the transaction, the holders of shares of the Corporation immediately prior to the transaction own shares that represent a majority of the voting power of the surviving corporation.

2.4. Amount Paid Deemed Paid or Distributed. Whenever the distribution provided for in Subsection 1.3 or in this Section 2 shall be payable in any assets other than cash, the value of the assets to be distributed shall be the fair market value thereof, determined as follows:

(a) Freely traded securities:

(i) If traded on a securities exchange, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the

closing prices of the securities on such exchange or system over the 30-day period ending three days prior to the closing;

(ii) If actively traded over-the-counter, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the 30-day period ending three days prior to the closing; and

(iii) If there is no active public market, the value shall be the fair market value thereof, as so determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors).

(b) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as above in Subsection 2.4(a) to reflect the approximate fair market value thereof.

(c) In the event the requirements of this Section 2 are not complied with, the Corporation shall forthwith either:

(i) cause such closing to be postponed until such time as the requirements of this Section 2 have been complied with; or

(ii) cancel such transaction, in which event the rights, preferences and privileges of the holders of the Preferred Stock shall revert to and be the same as such rights, preferences and privileges existing immediately prior to the date of the first notice referred to in Subsection 2.4(d).

(d) The Corporation shall give each holder of record of the Preferred Stock written notice of such impending transaction within ten days after the Board of Directors of the Corporation approves such transaction or within ten days after the commencement of any involuntary proceeding, whichever is earlier. Such written notice shall describe the material terms and conditions of the impending transaction and the provisions of this Section 2, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

3. Voting.

3.1. General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written

consent of stockholders in lieu of meeting), each holder of outstanding shares of the Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of the Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, the holders of the Preferred Stock shall vote together with the holders of Common Stock as a single class on an as-converted to Common Stock basis.

3.2. Election of Directors. For as long as there are any shares of the Preferred Stock outstanding, the holders of record of a majority of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect two directors of the Corporation (the "**Preferred Directors**"). The holders of record of a majority of the then outstanding shares of Common Stock, voting together as a single class, shall be entitled to elect one director of the Corporation. If the holders of shares of the Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors pursuant to the first two sentences of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Preferred Stock or Common Stock, as the case may be, elect an individual to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect an individual to fill such directorship. The holders of a majority of the then outstanding shares of Common Stock and/or the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect all remaining members of the Board of Directors of the Corporation. Any director elected as provided in this Subsection 3.2, may be removed without cause, and any vacancy caused by the resignation, death or removal of such director may be filled, by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the then outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director.

3.3. Preferred Stock Protective Provisions. At any time when shares of the Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, pursuant to consent given in writing or by vote at a meeting:

(a) liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event or any recapitalization or reorganization of the Corporation or other transaction in which control of the Company is transferred, or sell, transfer, license or encumber the Corporation's technology or intellectual property, or consent to any of the foregoing, other than licenses of the Corporation's technology or intellectual property in the ordinary course of business;

(b) amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation of the Corporation, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(c) amend, alter or repeal any provision of the By-Laws of the Corporation, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(d) increase or decrease the authorized number of shares of the Preferred Stock or Common Stock;

(e) reclassify, alter or amend any existing security of the Corporation in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Preferred Stock in respect of any such right, preference or privilege;

(f) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, or (ii) repurchases of stock pursuant to stock restriction agreements or vesting agreements approved by the Board of Directors (including the Preferred Directors) that grant to the Corporation a right of repurchase upon termination of the service or employment of a consultant, director or employee;

(g) borrow or guaranty or otherwise authorize any amount of indebtedness, other than (i) inventory financing in the ordinary course of business, and (ii) any indebtedness in an amount of up to $250,000 in the aggregate that is approved by the Board of Directors, including both Preferred Directors;

(h) increase or decrease the authorized number of directors of the Board of Directors from seven members;

(i) effect a change in the nature of the Corporation's business from the discovery and development of small molecule therapeutics targeting the toxic proteins that cause the cognitive decline associated with Alzheimer's disease and other neurodegenerative diseases;

(j) enter into any transaction with any person or entity, including, without limitation, any of its founders, officers, directors or employees other than in the ordinary course of business on an arm's length basis (as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors);

(k) increase the number of shares of Common Stock reserved for issuance under the Corporation's Amended and Restated 2007 Equity Incentive Plan, as amended from time to time, or any other equity-based incentive or compensation plan;

(l) make, or permit any subsidiary to make, any loan or advance to any person or entity, including, without limitation, any founder, officer, employee or director of

the Corporation or any subsidiary, except (i) advances in the ordinary course of business or (ii) advances up to $50,000 in the aggregate under the terms of an employment or service arrangement approved by the Board of Directors, including both Preferred Directors;

(m) hire, terminate, or change the compensation in excess of $100,000 of any of its officers, directors or employees, unless such hiring, termination or compensation is approved by the Board of Directors, including both Preferred Directors;

(n) own any stock or other securities of any other corporation, partnership, or other entity, unless approved by the Board of Directors, including both Preferred Directors;

(o) guarantee, or permit any subsidiary to guarantee, any indebtedness except for (i) trade accounts of the Corporation or any subsidiary arising in the ordinary course of business, or (ii) any guarantee approved by the Board of Directors, including both Preferred Directors; or

(p) make any investment other than investments in prime commercial paper, money market funds, certificates of deposit in any United States bank having a net worth in excess of $100,000,000 or obligations issued or guaranteed by the United States of America, in each case having a maturity not in excess of one year, unless approved by the Board of Directors, including both Preferred Directors.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1. Right to Convert.

4.1.1. Conversion Ratio. Each share of the Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price applicable to such share of Preferred Stock by the Conversion Price (as defined below) applicable to such share of Preferred Stock in effect at the time of conversion. The "**Conversion Price**" shall initially be equal to $.69 for the Series A Preferred Stock and Series A-1 Preferred Stock and .$8415 for the Series A-2 Preferred Stock Such initial Conversion Price, and the rate at which shares of the Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2. Termination of Conversion Rights. In the event of a notice of redemption of any shares of the Preferred Stock pursuant to Section 6, the Conversion Rights of the shares designated for redemption shall terminate at the close of business on the last full day preceding the date fixed for redemption of such shares, unless the Redemption Price (as defined below) is not fully paid on such Redemption Date (as defined below), in which case the Conversion Rights for such shares shall continue until the price is paid in full. The Conversion Rights shall not terminate in connection with a Deemed Liquidation Event.

4.2. Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors). Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of the Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3. Mechanics of Conversion.

4.3.1. Notice of Conversion. In order for a holder of the Preferred Stock to voluntarily convert shares of the Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of the Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (a) issue and deliver to such holder of the Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of the Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, and (b) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion.

4.3.2. Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all the Preferred Stock then outstanding; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all of the then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common

Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended and Restated Certificate of Incorporation. Before taking any action that would cause an adjustment reducing the Conversion Price of any series of Preferred Stock below the then par value of the shares of Common Stock issuable upon conversion of the Preferred Stock, the Corporation will take any corporate action that may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Conversion Price.

4.3.3. Effect of Conversion. All shares of the Preferred Stock that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except with respect to the right of the holders thereof to receive shares of Common Stock in exchange therefor and to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2. Any shares of the Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

4.3.4. No Further Adjustment. Upon any such conversion, no adjustment to the Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5. Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of the Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of the Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid,

4.4. Adjustments to Conversion Price for Diluting Issues.

4.4.1. Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Original Issue Date**" shall mean, with respect to the Series A Preferred Stock and the Series A-1 Preferred Stock, the date on which the first share of the Series A Preferred Stock was issued and, with respect to the Series A-2 Preferred Stock, the date on which the first share of the Series A-2 Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean, with respect to the determination of adjustments to the Conversion Price for each series of Preferred Stock, all shares of Common Stock issued (or, pursuant to Subsection 4.4.3, deemed to be issued) by the Corporation on or after the Original Issue Date of such Series of Preferred Stock, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) shares of Common Stock, Options or Convertible Securities issued upon the conversion of the Preferred Stock or by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6 or 4.7;

(ii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation, including both Preferred Directors;

(iii) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options, or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided that such issuance is pursuant to the terms of such Option or Convertible Security;

(iv) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, including both Preferred Directors, that do not exceed an aggregate of 1,000,000 shares of Common Stock;

(v) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation, including both Preferred Directors;

(vi) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation (or the assets of another corporation) by the Corporation whether by merger, reorganization or otherwise, provided, that such issuances are approved by the Board of Directors of the Corporation, including both Preferred Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation, including both Preferred Directors;

(viii) shares of Common Stock issued or issuable pursuant to currently outstanding Options granted under the Corporation's Amended and Restated 2007 Equity Incentive Plan, as amended from time to time, with such amendment as approved by the Board of Directors, including both Preferred Directors;

(ix) shares of Common Stock issued or issuable upon the closing of a public offering of the Corporation's securities pursuant to the Securities Act of 1933, as amended (the "**Securities Act**"), in which all shares of the Preferred Stock are automatically converted to Common Stock pursuant to Subsection 5.1(a);

(x) shares of Common Stock issued or issuable upon conversion of any shares of the Series A-1 Preferred Stock issued under that certain Series A-1 Stock Purchase Agreement dated as of December 17, 2010 among the Corporation and the other parties listed therein (the "**Series A-1 Purchase Agreement**");

(xi) shares of Common Stock issued or issuable upon conversion of any shares of the Series A-2 Preferred Stock issued under that certain Series A-2 Stock Purchase Agreement dated as of December 1,2011 among the Corporation and the other parties listed therein (the "**Series A-2 Purchase Agreement**");

(xii) shares of Common Stock issued or issuable upon conversion of one or more Convertible Promissory Note(s) or upon exercise of one or more Warrant(s) issued by the Corporation to the Alzheimer Drug Development Foundation, Inc. under that certain Agreement to Accept Conditions for Biotechnology Grant Funding dated as of July 6, 2010; and

(xiii) shares of Common Stock issued or issuable upon the conversion, exercise or exchange of all other Options and Convertible Securities outstanding as of December 1, 2011.

4.4.2. No Adjustment of Conversion Price. No adjustment in the Conversion Price applicable to a share of Preferred Stock shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock unless the consideration per share (determined pursuant to Subsection 4.4.5 for an Additional Share of Common Stock issued or deemed to be issued by the Corporation) is less than the Conversion Price for such share of Preferred Stock in effect on the date of, and immediately prior to, the issue of such Additional Shares of Common Stock.

4.4.3. Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Original Issue Date applicable to a Series of Preferred Stock shall issue any Options or Convertible Securities (excluding Options or Convertible Securities that are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable

upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of the issuance of such Convertible Security or Option or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (ii) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Conversion Price of such series of Preferred Stock computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have been obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this Subsection 4.4.3(b) shall have the effect of increasing the Conversion Price of any series of Preferred Stock to an amount that exceeds the lower of (A) such Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (B) such Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities that are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Conversion Price of a series of Preferred Stock pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than such Conversion Price then in effect with respect to such series of Preferred Stock, or because such Option or Convertible Security was issued before the Original Issue Date of such series of Preferred Stock), are revised after Original Issue Date of such series of Preferred Stock as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (ii) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) that resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, such Conversion Price shall be readjusted to the Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Conversion Price of a series of Preferred Stock provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Conversion Price of a series of Preferred Stock that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to such Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4. Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Original Issue Date applicable to a series of Preferred Stock issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than Conversion Price of such Series of Preferred Stock in effect immediately prior to such issue, then the Conversion Price applicable to each share of such series of Preferred Stock shall be reduced, concurrently with such issue, to a price per share (calculated to the nearest one-hundredth of a cent) as follows:

(a) with respect to the Series A Preferred Stock and the Series A-1 Preferred Stock, until the earlier to occur of (i) the receipt by the Corporation of aggregate net proceeds pursuant to any priced debt or equity financing after the **Original Issue Date** of the Series A-1 Preferred Stock of at least five million dollars ($5,000,000) exclusive of proceeds received in respect of any shares of Series A-1 Preferred Stock issued under the Series A-1 Purchase Agreement, but inclusive of proceeds received in respect of any shares of Series A-2 Preferred Stock issued under the Series A-2 Purchase Agreement and (ii) December 23, 2012 (the "**Series A and A-1 Full Ratchet Termination Date**"), equal to the consideration per share received or deemed to have been received by the Corporation in such issuance; and

(b) with respect to the Series A-2 Preferred Stock, until the earlier to occur of (i) the receipt by the Corporation of aggregate net proceeds pursuant to any priced debt

or equity financing after the Original Issue Date of the Series A-2 Preferred Stock of at least five million dollars ($5,000,000) inclusive of proceeds received in respect of any shares of Series A-2 Preferred Stock issued under the Series A-2 Purchase Agreement, and (ii) the second anniversary of the final closing under the Series A-2 Purchase Agreement (the "**Series A-2 Full Ratchet Termination Date**"), equal to the consideration per share received or deemed to have been received by the Corporation in such issuance; and

(c) (x) after the Series A and A-1 Full Ratchet Termination Date with respect to the Series A Preferred Stock and Series A-1 Preferred Stock and (y) after the Series A- 2 Full Ratchet Termination Date with respect to the Series A-2 Preferred Stock, in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(i) "**CP_2**" shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately after such issue of Additional Shares of Common Stock;

(ii) "**CP_1**" shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such Series of Preferred Stock in effect immediately prior to such issue of Additional Shares of Common Stock;

(iii) "**A**" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock, treating for this purpose as outstanding shares of Common Stock underlying only those Options or Convertible Securities that (x) are outstanding immediately prior to such issue and (y) are vested or otherwise exercisable;

(iv) "**B**" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(v) "**C**" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5. Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) For cash and property, such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors); and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration that covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors).

(b) For Options and Convertible Securities, the consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.43, relating to Options and Convertible Securities, shall be determined by dividing

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6. Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than 90 days from the first such issuance to the final such issuance, then, upon the final such issuance, the Conversion Price of such series of Preferred Stock shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5. Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time on or after the Original Issue Date of any Series of

Preferred Stock effect a subdivision of the outstanding Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Original Issue Date of any series of Preferred Stock combine the outstanding shares of Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this Subsection 4.5 shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6. Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time on or after the Original Issue Date of any Series of Preferred Stock shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation or in cash or other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of such series of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities, cash or other property in an amount equal to the amount of such securities, cash or other property as they would have received if all outstanding shares of such series of Preferred Stock had been converted into Common Stock on the date of such event.

4.7. Adjustment for Merger or Reorganization, etc. If there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.5 or 4.6), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of the Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property that a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of the Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation (including both Preferred Directors)) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price of each series of Preferred Stock) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.8. Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 30 days thereafter, compute such adjustment or readjustment in accordance with the

terms hereof and furnish to each holder of the Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of the Preferred Stock (but in any event not later than 15 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (a) the Conversion Price of such series of Preferred Stock then in effect, and (b) the number of shares of Common Stock and the amount, if any, of other securities, cash or property that then would be received upon the conversion of the Preferred Stock.

4.9. Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding- up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1. Trigger Events. Upon the initial closing of the Corporation's first firmly underwritten public offering of its Common Stock pursuant to a registration statement filed with the Securities and Exchange Commission ("SEC"), and declared effective under the Securities Act, in which the Corporation's Common Stock is listed on a national securities exchange (other than a registration statement relating either to the sale of securities to employees of the Corporation pursuant to its stock option, stock purchase or similar plan or an SEC Rule 145 transaction) covering the offer and sale of Common Stock for the account of the Corporation to the public at a price per share of not less than three times the highest then applicable Conversion

Price resulting in offering proceeds to the Corporation of a least $25,000,000 net of underwriting discounts and commissions (the time of such closing is referred to herein as the "**Mandatory Conversion Time**"), (i) all outstanding shares of the Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective Conversion Price and (ii) such shares may not be reissued by the Corporation.

5.2. Procedural Requirements. All holders of record of shares of the Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of the Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of the Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for the Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of the Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

6. Redemption.

6.1. Redemption. Shares of the Preferred Stock shall be redeemed by the Corporation out of funds lawfully available therefor at a price equal to the Preferred Liquidation Amount, less all Mandatory Dividend(s) previously distributed with respect to each such share (the "**Redemption Price**"), in three annual installments commencing not more than 60 days after receipt by the Corporation at any time on or after December 1, 2018, from the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, of written notice requesting redemption of all shares of the Preferred Stock The date of each such installment shall be referred to as a "**Redemption Date**."

On each Redemption Date, the Corporation shall redeem, on a pro rata basis in accordance with the number of shares of the Preferred Stock owned by each holder, that number of outstanding shares of the Preferred Stock determined by dividing (a) the total number of shares of the Preferred Stock outstanding immediately prior to such Redemption Date by (b) the number of remaining Redemption Dates (including fee Redemption Date to which such calculation applies); provided, however, that Excluded Shares (as such term is defined in Subsection 6.2) shall not be redeemed and shall be excluded from the calculations set forth in this sentence. If the Corporation does not have sufficient funds legally available to redeem on any Redemption Date all shares of the Preferred Stock to be redeemed on such Redemption Date, the Corporation shall redeem a pro rata portion of each holder's redeemable shares of such capital stock out of funds legally available therefor, based on the respective amounts that would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor. No other capital stock of the Corporation may be redeemed or repurchased by the Corporation prior to the redemption of the Preferred Stock without the approval of the holders of at least 60% of the then issued and outstanding shares of Preferred Stock voting as a single class on an as-converted basis. The Corporation shall take all commercially reasonable action to have funds legally available for payment of the Redemption Price.

6.2. Redemption Notice. The Corporation shall send written notice of the mandatory redemption (the "**Redemption Notice**") to each holder of record of the Preferred Stock not less than 40 days prior to each Redemption Date. Each Redemption Notice shall state:

(a) the series and number of shares of the Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice;

(b) the Redemption Date and the Redemption Price;

(c) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Subsection 4.1); and

(d) that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of the Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the 20th day after the date of delivery of the Redemption Notice to a holder of the Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6, then the shares of the Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "**Excluded Shares**." Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6, whether on such Redemption Date or thereafter.

6.3. Surrender of Certificates; Payment. On or before the applicable Redemption Date, each holder of shares of the Preferred Stock to be redeemed on such

Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person or entity whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of the Preferred Stock represented by a certificate are redeemed, a new certificate representing the unredeemed shares of the Preferred Stock shall promptly be issued to such holder.

6.4. Rights Subsequent to Redemption. If the Redemption Notice shall have been duly given, and if on the applicable Redemption Date the Redemption Price payable upon redemption of the shares of the Preferred Stock to be redeemed on such Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of the Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of the Preferred Stock shall cease to accrue after such Redemption Date and all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of their certificate or certificates therefor.

6.5. Redeemed or Otherwise Acquired Shares. Any shares of the Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of the Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of the Preferred Stock, the Series A-2 Preferred Stock, the Series A-1 Preferred Stock or the Series A Preferred Stock, as the case may be, by the requisite percentage (as set forth in the applicable provision(s) of this Amended and Restated Certificate of Incorporation) of such stockholders of the Corporation that are entitled to a vote upon or consent with respect to any such right, power, preference or other term.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of the Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

9. No Reissuance of Preferred Stock. No share or shares of any series of the Preferred Stock acquired by the Corporation by reason of purchase, conversion, redemption or otherwise shall be reissued, and all such shares shall be canceled, retired and eliminated from the shares which the Corporation shall be authorized to issue. This Amended and Restated

Certificate of Incorporation shall be appropriately amended to effect the corresponding reduction in the Corporation's capital stock.

B. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of the Preferred Stock that may be required by the terms of this Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation (voting as a single class) representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote (the Preferred voting on an as if converted to Common Stock basis) and without a separate class vote by the holders of the Common Stock, irrespective of the provisions of Section 242(bX2) of the General Corporation Law.

Exhibit 3.4

THIRD CERTIFICATE OF AMENDMENT

OF

SECOND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

COGNITION THERAPEUTICS, INC.

Cognition Therapeutics, Inc. (the **"Corporation"),** a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, as the same may be amended from time to time **("DGCL"),**

DOES HEREBY CERTIFY THAT:

FIRST: That the Board of Directors (the **"Board")** of the Corporation duly adopted resolutions declaring advisable the following amendment to the Second Amended and Restated Certificate of Incorporation of the Corporation, as amended, that was originally filed with the Secretary of State of the State of Delaware on November 14, 2016, and that this amendment was submitted to the stockholders of the Corporation for approval. The resolution setting forth the proposed amendment is as follows:

RESOLVED, that the Second Amended and Restated Certificate of Incorporation of the Corporation, as amended (the **"Certificate of Incorporation"),** shall be further amended pursuant to the Third Certificate of Amendment to the Certificate of Incorporation in the form attached as Exhibit A hereto.

SECOND: Thereafter, pursuant to a resolution of the Board, the holders of a majority of the outstanding shares of all classes of capital stock of the Corporation, voting together as a single class, and the holders of at least 60% of the outstanding shares of the Corporation's Series A Convertible Preferred Stock, Series A-1 Convertible Preferred Stock, Series A-2 Convertible Preferred Stock and Series B Convertible Preferred Stock, voting together as a separate class, voted in favor of the amendment.

THIRD: That the foregoing amendment was duly adopted in accordance with the provisions of § 228 and § 242 of the DGCL.

[Signature follows on next page]

IN WITNESS WHEREOF, the undersigned has caused this Third Certificate of Amendment of the Second Amended and Restated Certificate of Incorporation, as amended, to be signed this 28th day of July, 2020.

COGNITION THERAPEUTICS, INC.

By: /s/ Lisa Ricciardi
Name: Lisa Ricciardi
Title: President and Chief Executive Officer

Exhibit A

FOURTH: The total number of shares of all classes of stock that the Corporation shall have authority to issue is (i) Fifty-Eight Million (58,000,000) shares of common stock, par value $0.001 par value per share **("Common Stock"),** and (ii) Forty-One Million Fifty-Three Thousand Three Hundred Fifty-Eight (41,053,358) shares of preferred stock, $0,001 par value per share.

The following is a statement of the designations and the powers, privileges, and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. PREFERRED STOCK

Three Million Sixty-Seven Thousand Five Hundred Nineteen (3,067,519) shares of the authorized preferred stock of the Corporation are hereby designated as **"Series A Convertible Preferred Stock"** (the **"Series A Preferred Stock");** Three Million Nine Hundred Seventy Thousand Seven Hundred Seventy- Six (3,970,776) shares of the authorized preferred stock of the Corporation are hereby designated as **"Series A-1 Convertible Preferred Stock"** (the **"Series A-1 Preferred Stock");** Three Million Five Hundred Sixty-Five Thousand Sixty-Three (3,565,063) shares of the authorized preferred stock of the Corporation are hereby designated as **"Series A-2 Convertible Preferred Stock"** (the **"Series A-2 Preferred Stock");** and Thirty Million Four Hundred Fifty Thousand (30,450,000) shares of the authorized Preferred Stock of the Corporation are hereby designated as **"Series B Convertible Preferred Stock"** (the **"Series B Preferred Stock").** The Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock and the Series B Preferred Stock are sometimes referred to herein collectively as the **"Preferred Stock."** Unless otherwise indicated, references to "Sections" or "Subsections" in this Part A of this Article Fourth refer to sections and subsections of Part A of this Article Fourth.

The Preferred Stock shall have the following rights, preferences, powers, privileges, restrictions, qualifications and limitations.

1. Dividends.

1.1. Accruing Dividends. From and after the date of the issuance of each respective share of the Preferred Stock, dividends at the rate of 8% per annum of the applicable Original Issue Price (as defined herein) compounded annually shall accrue on such share of the Preferred Stock **("Accruing Dividends").** Accruing Dividends shall accrue from day to day, whether or not declared, and shall be cumulative; provided however, (i) that such Accruing Dividends shall be payable only in connection with a liquidation, dissolution or winding up of the Corporation under Section 2 (including, without limitation, in connection with a Deemed Liquidation Event), or a Mandatory Dividend under Section 1.3, and the Corporation shall not otherwise pay such Accruing Dividends and (ii) in the event a Mandatory Dividend is paid under Section 1.3, Accruing Dividends shall thereafter accrue only on the unreturned amount of the Original Issue Price after taking into account the payment of each Mandatory Dividend. As used herein, **"Original Issue Price"** means $0.69 per share with respect to the Series A Preferred Stock and Series A-1 Preferred Stock, $0.8415 per share with respect to the Series A-2 Preferred Stock, and $0.923 per share with respect to the Series B Preferred Stock (in each case, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization affecting such shares). After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount (as defined below), less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Accruing Dividends; provided that the holders of the Preferred Stock will share in all dividends and distributions

declared by the Board of Directors of the Corporation and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.2. Common Stock Dividends. The holders of the Preferred Stock shall be entitled to share in dividends payable with respect to the Common Stock as if converted and the Corporation shall not declare, pay or set aside any dividends on shares of Common Stock unless (in addition to obtaining any consents required elsewhere in this Second Amended and Restated Certificate of Incorporation, as amended) each holder of the Preferred Stock then outstanding shall first receive, or simultaneously receive, in each such instance, a dividend on each outstanding share of the Preferred Stock held by such holder as if such share of Preferred Stock had been converted into Common Stock, in an amount at least equal to the product of (a) the dividend payable on a share of Common Stock and (b) the number of shares of Common Stock issuable upon conversion of a share of the Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend.

1.3. Mandatory Dividend(s).

(a) If, prior to such time as the holders of shares of the Preferred Stock receive their full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the Corporation or any subsidiary of the Corporation shall consummate a sale, license or other disposition for value of any or all of the Corporation's intellectual property, in a single transaction or series of related transactions unrelated to the performance by the Corporation of research and development or other services (as determined in good faith by the Board of Directors of the Corporation, including each of the Preferred Directors) (a **"Strategic Event"),** at the written election of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, sent to the Corporation at least 15 days prior to the effective date of a Strategic Event, the Corporation shall distribute to the holders of shares of the Preferred Stock up to 35% of the aggregate payments (including, without limitation, all option and/or milestone payments and/or all success fees) received by the Corporation as consideration in such Strategic Event as soon as reasonably practicable following receipt by the Corporation of such payments **("Mandatory Dividend").** Such Mandatory Dividend shall be distributed to the holders of the Preferred Stock on a *pari passu* and an as-converted to Common Stock basis until the aggregate amount of all Mandatory Dividends paid to the holders of the Preferred Stock equals the full Preferred Liquidation Amount payable on the Preferred Stock held by such holders.

(b) The Corporation shall give each holder of record of the Preferred Stock written notice of an impending Strategic Event within ten days after the Board of Directors of the Corporation approves such Strategic Event. Such written notice shall describe the material terms and conditions of the impending Strategic Event and the provisions of this Section 1.3. and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

(c) After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount for their respective shares of the Preferred Stock, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Mandatory Dividends; provided that the holders of the Preferred Stock will share in all dividends and distributions declared by the Board of Directors of the

Corporation and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.4. Order of Dividend Payment. No dividends or other distributions shall be declared and/or paid on any class or series of capital stock, other than the Preferred Stock if any Mandatory Dividends have accrued and are unpaid or if any other dividends are declared and unpaid on the Preferred Stock.

2. Liquidation Preference.

2.1. Preferred Liquidation Amount. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, including, without limitation, any Deemed Liquidation Event (as defined below), each holder of shares of the Preferred Stock then outstanding shall be entitled to receive out of the assets legally available for distribution to its stockholders, whether from capital surplus, earnings or otherwise, on a *pari passu* and an as converted to Common Stock basis and prior and in preference to any distribution to the holders of any other series or class of the capital stock of the Corporation that is junior to the Preferred Stock, including, without limitation, the Common Stock, by reason of their ownership thereof, an amount per share of Preferred Stock then held by such holder equal to the Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock. If upon the occurrence of such event, the assets and funds of the Corporation shall be insufficient to permit the payment to such holders of Preferred Stock of the full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock, required by the preceding sentence, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Preferred Stock in proportion to the Preferred Liquidation Amount each such holder is otherwise entitled to receive on each such share, less any and all Mandatory Dividend(s) previously distributed with respect to each such share. **"Preferred Liquidation Amount"** means, with respect to a share of Preferred Stock, the applicable Original Issue Price for such share of Preferred Stock plus all Accruing Dividends on such share of Preferred Stock (plus any other dividends or distributions declared but not paid on such share of Preferred Stock).

2.2. Distribution of Remaining Assets. After payment has been made to the holders of the Preferred Stock of their full Preferred Liquidation Amount required by Section 2.1 less any and all Mandatory Dividend(s) previously distributed with respect to each such share, the remaining assets or surplus funds of the Corporation available for distribution to stockholders shall be distributed among the holders of the Common Stock and the holders of the Preferred Stock pro rata based on the number of shares of Common Stock held by each (assuming conversion of all shares of the Preferred Stock into Common Stock).

2.3. Deemed Liquidation Events. At the option of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, the occurrence of each of the following events shall be deemed to be a liquidation, dissolution or winding up within the meaning of this Section 2 (each, a **"Deemed Liquidation Event"):**

(a) either a transaction or series of related transactions in which any individual, corporation, partnership, trust, limited liability company, association or other entity (each, a **"Person"),** or group of related Persons, acquires from the stockholders of the Corporation, shares representing at least a majority of the outstanding voting power of the Corporation;

(b) a sale and/or issuance (or series of sales and/or issuances) by the Corporation of securities of the Corporation representing, after the issuance of such securities, more than

fifty percent (50%) of all voting securities of the Corporation to persons other than stockholders of the Corporation as of immediately prior to such sale(s) and/or issuance(s);

(c) a sale, conveyance or disposition (in one or a series of related transactions) by the Corporation or any subsidiary of the Corporation of all or substantially all of the assets of the Corporation and its subsidiaries taken as a whole;

(d) a grant of an exclusive license or other transfer (in one or a series of related transactions) by the Corporation and/or any subsidiary of the Corporation of a material amount of the technology or intellectual property of the Corporation and its subsidiaries taken as a whole; or

(e) a consolidation or merger of the Corporation with or into any other entity or entities or a reorganization of the Corporation or similar transactions, provided, however, that a consolidation, merger, reorganization or similar transaction involving the Corporation shall not constitute a Deemed Liquidation Event if following completion of the transaction, the holders of shares of the Corporation immediately prior to the transaction own shares that represent a majority of the voting power of the surviving corporation.

2.4. Amount Paid Deemed Paid or Distributed. Whenever the distribution provided for in Subsection 1.3 or in this Section 2 shall be payable in any assets other than cash, the value of the assets to be distributed shall be the fair market value thereof, determined as follows:

(a) Freely traded securities:

(i) If traded on a securities exchange, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing prices of the securities on such exchange or system over the 30-day period ending three days prior to the closing;

(ii) If actively traded over-the-counter, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the 30-day period ending three days prior to the closing; and

(iii) If there is no active public market, the value shall be the fair market value thereof, as so determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors).

(b) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as above in Subsection 2.4(a) to reflect the approximate fair market value thereof.

(c) In the event the requirements of this Section 2 are not complied with, the Corporation shall forthwith either:

(i) cause such closing to be postponed until such time as the requirements of this Section 2 have been complied with; or

(ii) cancel such transaction, in which event the rights, preferences and privileges of the holders of the Preferred Stock shall revert to and be the same as such rights, preferences and privileges existing immediately prior to the date of the first notice referred to in Subsection 2.4(d).

(d) The Corporation shall give each holder of record of the Preferred Stock written notice of such impending transaction within ten days after the Board of Directors of the Corporation approves such transaction or within ten days after the commencement of any involuntary proceeding, whichever is earlier. Such written notice shall describe the material terms and conditions of the impending transaction and the provisions of this Section 2, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

3. Voting.

3.1. General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of the Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of the Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Second Amended and Restated Certificate of Incorporation, as amended, the holders of the Preferred Stock shall vote together with the holders of Common Stock as a single class on an as-converted to Common Stock basis.

3.2. Election of Directors. For as long as there are any shares of the Preferred Stock outstanding, the holders of record of a majority of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect three directors of the Corporation (the **"Preferred Directors").** The holders of record of a majority of the then outstanding shares of Common Stock, voting together as a single class, shall be entitled to elect one director of the Corporation. If the holders of shares of the Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors pursuant to the first two sentences of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Preferred Stock or Common Stock, as the case may be, elect an individual to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect an individual to fill such directorship. The holders of a majority of the then outstanding shares of Common Stock and/or the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect all remaining members of the Board of Directors of the Corporation. Any director elected as provided in this Subsection 3.2 may be removed without cause, and any vacancy caused by the resignation, death or removal of such director may be filled, by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the then outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director.

3.3. Preferred Stock Protective Provisions. At any time when shares of the Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Second Amended and Restated Certificate of Incorporation, as amended) the written consent or affirmative vote of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, pursuant to consent given in writing or by vote at a meeting:

(a) liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event or any recapitalization or reorganization of the Corporation or other transaction in which control of the Corporation is transferred, or sell, transfer, license or encumber the Corporation's technology or intellectual property, or consent to any of the foregoing, other than licenses of the Corporation's technology or intellectual property in the ordinary course of business;

(b) amend, alter or repeal any provision of this Second Amended and Restated Certificate of Incorporation of the Corporation, as amended, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(c) amend, alter or repeal any provision of the By-Laws of the Corporation, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(d) increase or decrease the authorized number of shares of the Preferred Stock or Common Stock;

(e) reclassify, alter or amend any existing security of the Corporation in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation or the payment of dividends, if such reclassification, alteration or amendment would render such other security senior to or *pari passu* with the Preferred Stock in respect of any such right, preference or privilege (to the extent such rights preferences or privileges are not then currently in effect);

(f) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than repurchases of stock pursuant to stock restriction agreements or vesting agreements approved by the Board of Directors of the Corporation (including each of the Preferred Directors) that grant to the Corporation a right of repurchase upon termination of the service or employment of a consultant, director or employee;

(g) borrow or guaranty or otherwise authorize any amount of indebtedness, other than (i) inventory financing in the ordinary course of business; and (ii) any indebtedness in an amount of up to $250,000 in the aggregate that is approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(h) increase or decrease the authorized number of directors of the Board of Directors of the Corporation from nine members;

(i) effect a change in the nature of the Corporation's business from the discovery and development of small molecule therapeutics targeting the toxic proteins that cause the cognitive decline associated with Alzheimer's disease and other neurodegenerative diseases;

(j) enter into any transaction with any person or entity, including, without limitation, any of its founders, officers, directors or employees other than in the ordinary course of business on an arm's length basis (as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors));

(k) increase the number of shares of Common Stock reserved for issuance under the Corporation's Amended and Restated 2017 Equity Incentive Plan, as amended from time to time, or any other equity-based incentive or compensation plan;

(l) make, or permit any subsidiary to make, any loan or advance to any person or entity, including, without limitation, any founder, officer, employee or director of the Corporation or any subsidiary, except (i) advances in the ordinary course of business or (ii) advances up to $50,000 in the aggregate under the terms of an employment or service arrangement approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(m) hire, terminate, or change the compensation in excess of $100,000 of any of its officers, directors or employees, unless such hiring, termination or compensation is approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(n) own any stock or other securities of any other corporation, partnership, or other entity, unless approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(o) guarantee, or permit any subsidiary to guarantee, any indebtedness except for (i) trade accounts of the Corporation or any subsidiary arising in the ordinary course of business, or (ii) any guarantee approved by the Board of Directors of the Corporation, including each of the Preferred Directors; or

(p) make any investment other than investments in prime commercial paper, money market funds, certificates of deposit in any United States bank having a net worth in excess of $100,000,000 or obligations issued or guaranteed by the United States of America, in each case having a maturity not in excess of one year, unless approved by the Board of Directors of the Corporation, including each of the Preferred Directors.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the **"Conversion Rights"):**

4.1. Right to Convert.

4.1.1. Conversion Ratio. Each share of the Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price applicable to such share of Preferred Stock by the Conversion Price (as defined below) applicable to such share of Preferred Stock in effect at the time of conversion. The **"Conversion Price"** shall initially be equal to $0.69 for the Series A Preferred Stock and Series A-1 Preferred Stock, $0.8415 for the Series A-2 Preferred Stock, and $0.923 for the Series B Preferred Stock. Such initial Conversion Price, and the rate at which shares of the Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2. Termination of Conversion Rights. The Conversion Rights shall not terminate in connection with a Deemed Liquidation Event.

4.2. Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors). Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of the Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3. Mechanics of Conversion.

4.3.1. Notice of Conversion. In order for a holder of the Preferred Stock to voluntarily convert shares of the Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of the Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the **"Conversion Time"),** and the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (a) issue and deliver to such holder of the Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of the Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, and (b) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion.

4.3.2. Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all the Preferred Stock then outstanding; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all of the then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Second Amended and Restated Certificate of Incorporation, as amended. Before taking any action that would cause an adjustment reducing the Conversion Price of any series of Preferred Stock below the then par value of the shares of Common Stock issuable upon conversion of the Preferred Stock,

the Corporation will take any corporate action that may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Conversion Price.

4.3.3. Effect of Conversion. All shares of the Preferred Stock that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except with respect to the right of the holders thereof to receive shares of Common Stock in exchange therefor and to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2. Any shares of the Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

4.3.4. No Further Adjustment. Upon any such conversion, no adjustment to the Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5. Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of the Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of the Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4. Adjustments to Conversion Price for Diluting Issues.

4.4.1. Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) **"Option"** shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) **"Original Issue Date"** shall mean, with respect to the Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock, and the Series B Preferred Stock, the date on which the first share of such series of Preferred Stock, respectively, was issued.

(c) **"Convertible Securities"** shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) **"Additional Shares of Common Stock"** shall mean, with respect to the determination of adjustments to the Conversion Price for each series of Preferred Stock, all shares of Common Stock issued (or, pursuant to Subsection 4.4.3, deemed to be issued) by the Corporation on or after the Original Issue Date of such Series of Preferred Stock, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, **"Exempted Securities"):**

(i) shares of Common Stock, Options or Convertible Securities

issued upon the conversion of the Preferred Stock or by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsections 4.5, 4.6 or 4.7;

(ii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or an arrangement approved by the Board of Directors of the Corporation, including each of the Preferred Directors:

(iii) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options, or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided that such issuance is pursuant to the terms of such Option or Convertible Security;

(iv) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, including each of the Preferred Directors, that do not exceed an aggregate of 1,000,000 shares of Common Stock;

(v) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation, including each of the Preferred Directors:

(vi) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation (or the assets of another corporation) by the Corporation whether by merger, reorganization or otherwise, provided, that such issuances are approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(viii) shares of Common Stock issued or issuable pursuant to currently outstanding Options granted under the Corporation's Amended and Restated 2017 Equity Incentive Plan, as amended from time to time, with such amendment as approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(ix) shares of Common Stock issued or issuable upon the closing of a public offering of the Corporation's securities pursuant to the Securities Act of 1933, as amended (the **"Securities Act"),** in which all shares of the Preferred Stock are automatically converted to Common Stock pursuant to Subsection 5.1(a);

(x) shares of Common Stock issued or issuable upon conversion of any shares of the Series B Preferred Stock issued under that certain Series B Stock Purchase Agreement dated as of March 20, 2014, as amended, and under that certain Series B Preferred Stock Purchase Agreement dated as of November 16, 2016, as it may be amended, among the Corporation and the other parties listed therein;

(xi) shares of Common Stock issued or issuable upon exercise of one

or more Warrant(s) issued by the Corporation to the Alzheimer Drug Development Foundation, Inc. under that certain Agreement to Accept Conditions for Biotechnology Grant Funding dated as of July 6, 2010;

(xii) shares of Common Stock issued upon exercise of Common Stock Purchase Warrants issued by the Corporation under that certain Note and Warrant Purchase Agreement, among the Corporation and the purchasers named therein, dated as of March 11, 2016, as amended;

(xiii) shares of Common Stock issued or issuable upon the conversion, exercise or exchange of all other Options and Convertible Securities outstanding as of November 16, 2016; and

(xiv) shares of Series B-1 Convertible Preferred Stock issued or issuable upon conversion of one or more Convertible Promissory Notes (and shares of Common Stock issued upon conversion of such shares of Series B-1 Convertible Preferred Stock) issued by the Corporation under (a) that certain Note Purchase Agreement, among the Corporation and the purchasers named therein, dated as of March 8, 2018, as amended, and (b) that certain Note Purchase Agreement, among the Corporation and the purchasers named therein, dated as of November 15, 2018, as amended.

4.4.2. No Adjustment of Conversion Price. No adjustment in the Conversion Price applicable to a share of Preferred Stock shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock unless the consideration per share (determined pursuant to Subsection 4.4.5 for an Additional Share of Common Stock issued or deemed to be issued by the Corporation) is less than the Conversion Price for such share of Preferred Stock in effect on the date of, and immediately prior to, the issue of such Additional Shares of Common Stock.

4.4.3. Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Original Issue Date applicable to a series of Preferred Stock shall issue any Options or Convertible Securities (excluding Options or Convertible Securities that are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of the issuance of such Convertible Security or Option or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (ii) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Conversion Price of such series of Preferred Stock computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have been obtained had such revised terms been in effect upon the original date of issuance of such Option

or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this Subsection 4.4.3(b) shall have the effect of increasing the Conversion Price of any series of Preferred Stock to an amount that exceeds the lower of (A) such Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (B) such Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities that are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Conversion Price of a series of Preferred Stock pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than such Conversion Price then in effect with respect to such series of Preferred Stock, or because such Option or Convertible Security was issued before the Original Issue Date of such series of Preferred Stock), are revised after Original Issue Date of such series of Preferred Stock as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (ii) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) that resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, such Conversion Price shall be readjusted to the Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Conversion Price of a series of Preferred Stock provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Conversion Price of a series of Preferred Stock that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to such Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4. Adjustment of Conversion Price upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Original Issue Date applicable

to a series of Preferred Stock issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than Conversion Price of such series of Preferred Stock in effect immediately prior to such issue, then the Conversion Price applicable to each share of such series of Preferred Stock shall be reduced, concurrently with such issue, to a price per share (calculated to the nearest one-hundredth of a cent) in accordance with the following formula:

$$CP_2 = CP_1*(A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(i) **"CP_2"** shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately after such issue of Additional Shares of Common Stock;

(ii) **"CP_1"** shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately prior to such issue of Additional Shares of Common Stock;

(iii) **"A"** shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock, treating for this purpose as outstanding shares of Common Stock underlying only those Options or Convertible Securities that (x) are outstanding immediately prior to such issue and (y) are vested or otherwise exercisable;

(iv) **"B"** shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(v) **"C"** shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5. Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) For cash and property, such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors); and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration that covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors).

(b) For Options and Convertible Securities, the consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration.) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6. Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than 90 days from the first such issuance to the final such issuance, then, upon the final such issuance, the Conversion Price of such series of Preferred Stock shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5. Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time on or after the Original Issue Date of any series of Preferred Stock effect a subdivision of the outstanding Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Original Issue Date of any series of Preferred Stock combine the outstanding shares of Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this Subsection 4.5 shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6. Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time on or after the Original Issue Date of any series of Preferred Stock shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation or in cash or other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of such series of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities, cash or other property in an amount equal to the amount of such securities, cash or other property as they would have received if all outstanding shares of such series of Preferred Stock had been converted into Common Stock on the date of such event.

4.7. Adjustment for Merger or Reorganization, etc. If there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.5 or 4.6), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of the Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property that a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of the Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors)) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price of each series of Preferred Stock) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.8. Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 30 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of the Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of the Preferred Stock (but in any event not later than 15 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (a) the Conversion Price of such series of Preferred Stock then in effect, and (b) the number of shares of Common Stock and the amount, if any, of other securities, cash or property that then would be received upon the conversion of the Preferred Stock.

4.9. Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on. which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities)

for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1. Trigger Events. Upon the initial closing of the Corporation's first firmly underwritten public offering of its Common Stock pursuant to a registration statement filed with the Securities and Exchange Commission **("SEC"),** and declared effective under the Securities Act, in which the Corporation's Common Stock is listed on a national securities exchange (other than a registration statement relating either to the sale of securities to employees of the Corporation pursuant to its stock option, stock purchase or similar plan or an SEC Rule 145 transaction) covering the offer and sale of Common Stock for the account of the Corporation to the public at a price per share of not less than three times the highest then applicable Conversion Price resulting in offering proceeds to the Corporation of a least $30,000,000 net of underwriting discounts and commissions (the time of such closing is referred to herein as the **"Mandatory Conversion Time"),** (i) all outstanding shares of the Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective Conversion Price and (ii) such shares may not be reissued by the Corporation.

5.2. Procedural Requirements. All holders of record of shares of the Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of the Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of the Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for the Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of the Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

6. Waiver . Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of the Preferred Stock, the Series B Preferred Stock, the Series A-2 Preferred Stock, the Series A-1 Preferred Stock or the Series A Preferred Stock, as the case may be, by the requisite percentage (as set forth in the applicable provision(s) of this Second Amended and

Restated Certificate of Incorporation, as amended) of such stockholders of the Corporation that are entitled to a vote upon or consent with respect to any such right, power, preference or other term.

7. **Notices**. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of the Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

8. **No Reissuance of Preferred Stock**. No share or shares of any series of the Preferred Stock acquired by the Corporation by reason of purchase, conversion or otherwise shall be reissued, and all such shares shall be canceled, retired and eliminated from the shares which the Corporation shall be authorized to issue. This Second Amended and Restated Certificate of Incorporation, as amended, shall be appropriately amended to effect the corresponding reduction in the Corporation's capital stock.

B. COMMON STOCK

1. **General**. The voting, dividend and liquidation rights of the holders of Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. **Voting**. The holders of Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of the Preferred Stock that may be required by the terms of this Second Amended and Restated Certificate of Incorporation, as amended) the affirmative vote of the holders of shares of capital stock of the Corporation (voting as a single class) representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote (the Preferred Stock voting on an as if converted to Common Stock basis) and without a separate class vote by the holders of the Common Stock, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

Exhibit 3.5

FOURTH CERTIFICATE OF AMENDMENT

OF

SECOND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

COGNITION THERAPEUTICS, INC.

Cognition Therapeutics, Inc. (the **"Corporation"),** a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, as the same may be amended from time to time **("DGCL"),**

DOES HEREBY CERTIFY THAT:

FIRST: That the Board of Directors (the **"Board")** of the Corporation duly adopted resolutions declaring advisable the following amendment to the Second Amended and Restated Certificate of Incorporation of the Corporation, as amended, that was originally filed with the Secretary of State of the State of Delaware on November 14, 2016, and that this amendment was submitted to the stockholders of the Corporation for approval. The resolution setting forth the proposed amendment is as follows:

RESOLVED, that the Second Amended and Restated Certificate of Incorporation of the Corporation, as amended (the **"Certificate of Incorporation"),** shall be further amended pursuant to the Fourth Certificate of Amendment to the Certificate of Incorporation in the form attached as Exhibit A hereto.

SECOND: Thereafter, pursuant to a resolution of the Board, the holders of a majority of the outstanding shares of all classes of capital stock of the Corporation, voting together as a single class, and the holders of at least 60% of the outstanding shares of the Corporation's Series A Convertible Preferred Stock, Series A-1 Convertible Preferred Stock, Series A-2 Convertible Preferred Stock and Series B Convertible Preferred Stock, voting together as a separate class, voted in favor of the amendment.

THIRD: That the foregoing amendment was duly adopted in accordance with the provisions of § 228 and § 242 of the DGCL.

[Signature follows on next page]

IN WITNESS WHEREOF, the undersigned has caused this Fourth Certificate of Amendment of the Second Amended and Restated Certificate of Incorporation, as amended, to be signed this 27 day of **April**, 2021.

COGNITION THERAPEUTICS, INC.

By: /s/ Lisa Ricciardi
Name: Lisa Ricciardi
Title: President and Chief Executive Officer

Exhibit A

FOURTH: The total number of shares of all classes of stock that the Corporation shall have authority to issue is (i) Seventy Million (70,000,000) shares of common stock, par value $0,001 par value per share **("Common Stock"),** and (ii) Fifty-One Million Nine-Hundred Eighty-One Thousand Five Hundred Thirteen (51,981,513) shares of preferred stock, $0,001 par value per share.

The following is a statement of the designations and the powers, privileges, and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. PREFERRED STOCK

Three Million Sixty-Seven Thousand Five Hundred Nineteen (3,067,519) shares of the authorized preferred stock of the Corporation are hereby designated as **"Series A Convertible Preferred Stock"** (the **"Series A Preferred Stock");** Three Million Nine Hundred Seventy Thousand Seven Hundred Seventy- Six (3,970,776) shares of the authorized preferred stock of the Corporation are hereby designated as **"Series A-1 Convertible Preferred Stock"** (the **"Series A-1 Preferred Stock");** Three Million Five Hundred Sixty-Five Thousand Sixty-Three (3,565,063) shares of the authorized preferred stock of the Corporation are hereby designated as **"Series A-2 Convertible Preferred Stock"** (the **"Series A-2 Preferred Stock");** Thirty Million Four Hundred Fifty Thousand (30,450,000) shares of the authorized Preferred Stock of the Corporation are hereby designated as **"Series B Convertible Preferred Stock"** (the **"Series B Preferred Stock");** and Ten Million Nine Hundred Twenty-Eight Thousand One Hundred Fifty-Five (10,928,155) shares of the authorized Preferred Stock of the Corporation are hereby designated as **"Series B-1 Convertible Preferred Stock"** (the **"Series B-1 Preferred Stock").** The Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock, the Series B Preferred Stock, and the Series B- 1 Preferred Stock are sometimes referred to herein collectively as the **"Preferred Stock."** Unless otherwise indicated, references to "Sections" or "Subsections" in this Part A of this Article Fourth refer to sections and subsections of Part A of this Article Fourth.

The Preferred Stock shall have the following rights, preferences, powers, privileges, restrictions, qualifications and limitations.

1. Dividends.

1.1. Accruing Dividends. From and after the date of the issuance of each respective share of the Preferred Stock, dividends at the rate of 8% per annum of the applicable Original Issue Price (as defined herein) compounded annually shall accrue on such share of the Preferred Stock **("Accruing Dividends").** Accruing Dividends shall accrue from day to day, whether or not declared, and shall be cumulative; provided however, (i) that such Accruing Dividends shall be payable only in connection with a liquidation, dissolution or winding up of the Corporation under Section 2 (including, without limitation, in connection with a Deemed Liquidation Event), or a Mandatory Dividend under Section 1.3, and the Corporation shall not otherwise pay such Accruing Dividends and (ii) in the event a Mandatory Dividend is paid under Section 1.3, Accruing Dividends shall thereafter accrue only on the unreturned amount of the Original Issue Price after taking into account the payment of each Mandatory Dividend. As used herein, **"Original Issue Price"** means $0.69 per share with respect to the Series A Preferred Stock and Series A-1 Preferred Stock, $0.8415 per share with respect to the Series A-2 Preferred Stock, $0,923 per share with respect to the Series B Preferred Stock, and $1,385 per share with respect to the Series B-1 Preferred Stock (in each case, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization affecting such shares). After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount (as defined below), less any and all Mandatory Dividend(s)

previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Accruing Dividends; provided that the holders of the Preferred Stock will share in all dividends and distributions declared by the Board of Directors of the Corporation and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.2. Common Stock Dividends. The holders of the Preferred Stock shall be entitled to share in dividends payable with respect to the Common Stock as if converted and the Corporation shall not declare, pay or set aside any dividends on shares of Common Stock unless (in addition to obtaining any consents required elsewhere in this Second Amended and Restated Certificate of Incorporation, as amended) each holder of the Preferred Stock then outstanding shall first receive, or simultaneously receive, in each such instance, a dividend on each outstanding share of the Preferred Stock held by such holder as if such share of Preferred Stock had been converted into Common Stock, in an amount at least equal to the product of (a) the dividend payable on a share of Common Stock and (b) the number of shares of Common Stock issuable upon conversion of a share of the Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend.

1.3. Mandatory Dividend(s).

(a) If, prior to such time as the holders of shares of the Preferred Stock receive their full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to shares of the Preferred Stock, the Corporation or any subsidiary of the Corporation shall consummate a sale, license or other disposition for value of any or all of the Corporation's intellectual property, in a single transaction or series of related transactions unrelated to the performance by the Corporation of research and development or other services (as determined in good faith by the Board of Directors of the Corporation, including each of the Preferred Directors) (a **"Strategic Event"),** at the written election of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, sent to the Corporation at least 15 days prior to the effective date of a Strategic Event, the Corporation shall distribute to the holders of shares of the Preferred Stock up to 35% of the aggregate payments (including, without limitation, all option and/or milestone payments and/or all success fees) received by the Corporation as consideration in such Strategic Event as soon as reasonably practicable following receipt by the Corporation of such payments **("Mandatory Dividend").** Such Mandatory Dividend shall be distributed to the holders of the Preferred Stock on a *pari passu* and an as-converted to Common Stock basis until the aggregate amount of all Mandatory Dividends paid to the holders of the Preferred Stock equals the full Preferred Liquidation Amount payable on the Preferred Stock held by such holders.

(b) The Corporation shall give each holder of record of the Preferred Stock written notice of an impending Strategic Event within ten days after the Board of Directors of the Corporation approves such Strategic Event. Such written notice shall describe the material terms and conditions of the impending Strategic Event and the provisions of this Section 1.3, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

(c) After such time as the holders of the Preferred Stock receive their full Preferred Liquidation Amount for their respective shares of the Preferred Stock, less any and all Mandatory

Dividend(s) previously distributed with respect to shares of the Preferred Stock, the holders of the Preferred Stock will not thereafter be entitled to any additional Mandatory Dividends; provided that the holders of the Preferred Stock will share in all dividends and distributions declared by the Board of Directors of the Corporation and paid by the Corporation with the holders of the Common Stock on an as if converted to Common Stock basis.

1.4. Order of Dividend Payment. No dividends or other distributions shall be declared and/or paid on any class or series of capital stock, other than the Preferred Stock if any Mandatory Dividends have accrued and are unpaid or if any other dividends are declared and unpaid on the Preferred Stock.

2. Liquidation Preference.

2.1. Preferred Liquidation Amount. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, including, without limitation, any Deemed Liquidation Event (as defined below), each holder of shares of the Preferred Stock then outstanding shall be entitled to receive out of the assets legally available for distribution to its stockholders, whether from capital surplus, earnings or otherwise, on a *pari passu* and an as converted to Common Stock basis and prior and in preference to any distribution to the holders of any other series or class of the capital stock of the Corporation that is junior to the Preferred Stock, including, without limitation, the Common Stock, by reason of their ownership thereof, an amount per share of Preferred Stock then held by such holder equal to the Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock. If upon the occurrence of such event, the assets and funds of the Corporation shall be insufficient to permit the payment to such holders of Preferred Stock of the full Preferred Liquidation Amount, less any and all Mandatory Dividend(s) previously distributed with respect to such share of Preferred Stock, required by the preceding sentence, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Preferred Stock in proportion to the Preferred Liquidation Amount each such holder is otherwise entitled to receive on each such share, less any and all Mandatory Dividend(s) previously distributed with respect to each such share. **"Preferred Liquidation Amount"** means, with respect to a share of Preferred Stock, the applicable Original Issue Price for such share of Preferred Stock plus all Accruing Dividends on such share of Preferred Stock (plus any other dividends or distributions declared but not paid on such share of Preferred Stock).

2.2. Distribution of Remaining Assets. After payment has been made to the holders of the Preferred Stock of their full Preferred Liquidation Amount required by Section 2.1, less any and all Mandatory Dividend(s) previously distributed with respect to each such share, the remaining assets or surplus funds of the Corporation available for distribution to stockholders shall be distributed among the holders of the Common Stock and the holders of the Preferred Stock pro rata based on the number of shares of Common Stock held by each (assuming conversion of all shares of the Preferred Stock into Common Stock).

2.3. Deemed Liquidation Events. At the option of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, the occurrence of each of the following events shall be deemed to be a liquidation, dissolution or winding up within the meaning of this Section 2 (each, a **"Deemed Liquidation Event"):**

(a) either a transaction or series of related transactions in which any individual, corporation, partnership, trust, limited liability company, association or other entity (each, a **"Person"),** or group of related Persons, acquires from the stockholders of the Corporation, shares representing at least a majority of the outstanding voting power of the Corporation;

(b) a sale and/or issuance (or series of sales and/or issuances) by the Corporation of securities of the Corporation representing, after the issuance of such securities, more than fifty percent (50%) of all voting securities of the Corporation to persons other than stockholders of the Corporation as of immediately prior to such sale(s) and/or issuance(s);

(c) a sale, conveyance or disposition (in one or a series of related transactions) by the Corporation or any subsidiary of the Corporation of all or substantially all of the assets of the Corporation and its subsidiaries taken as a whole;

(d) a grant of an exclusive license or other transfer (in one or a series of related transactions) by the Corporation and/or any subsidiary of the Corporation of a material amount of the technology or intellectual property of the Corporation and its subsidiaries taken as a whole; or

(e) a consolidation or merger of the Corporation with or into any other entity or entities or a reorganization of the Corporation or similar transactions, provided, however, that a consolidation, merger, reorganization or similar transaction involving the Corporation shall not constitute a Deemed Liquidation Event if following completion of the transaction, the holders of shares of the Corporation immediately prior to the transaction own shares that represent a majority of the voting power of the surviving corporation.

2.4. Amount Paid Deemed Paid or Distributed. Whenever the distribution provided for in Subsection 1.3 or in this Section 2 shall be payable in any assets other than cash, the value of the assets to be distributed shall be the fair market value thereof, determined as follows:

(a) Freely traded securities:

(i) If traded on a securities exchange, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing prices of the securities on such exchange or system over the 30-day period ending three days prior to the closing;

(ii) If actively traded over-the-counter, the value shall be based on the formula specified in the definitive agreements for the Deemed Liquidation Event(s) or if no such formula exists, then the value of such securities shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the 30-day period ending three days prior to the closing; and

(iii) If there is no active public market, the value shall be the fair market value thereof, as so determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors).

(b) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as above in Subsection 2.4(a) to reflect the approximate fair market value thereof.

(c) In the event the requirements of this Section 2 are not complied with, the Corporation shall forthwith either:

(i) cause such closing to be postponed until such time as the requirements of this Section 2 have been complied with; or

(ii) cancel such transaction, in which event the rights, preferences and privileges of the holders of the Preferred Stock shall revert to and be the same as such rights, preferences and privileges existing immediately prior to the date of the first notice referred to in Subsection 2.4(d).

(d) The Corporation shall give each holder of record of the Preferred Stock written notice of such impending transaction within ten days after the Board of Directors of the Corporation approves such transaction or within ten days after the commencement of any involuntary proceeding, whichever is earlier. Such written notice shall describe the material terms and conditions of the impending transaction and the provisions of this Section 2, and the Corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than 20 days after the Corporation has given the first notice provided for herein or sooner than ten days after the Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of the Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis.

3. Voting.

3.1. General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of the Preferred Stock shall be entitled
to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of the Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Second Amended and Restated Certificate of Incorporation, as amended, the holders of the Preferred Stock shall vote together with the holders of Common Stock as a single class on an as-converted to Common Stock basis.

3.2. Election of Directors. For as long as there are any shares of the Preferred Stock outstanding, the holders of record of a majority of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect three directors of the Corporation (the **"Preferred Directors").** The holders of record of a majority of the then outstanding shares of Common Stock, voting together as a single class, shall be entitled to elect one director of the Corporation. If the holders of shares of the Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors pursuant to the first two sentences of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Preferred Stock or Common Stock, as the case may be, elect an individual to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect an individual to fill such directorship. The holders of a majority of the then outstanding shares of Common Stock and/or the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect all remaining members of the Board of Directors of the Corporation. Any director elected as provided in this Subsection 3.2 may be removed without cause, and any vacancy caused by the resignation, death or removal of such director may be filled, by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. At any meeting held for the purpose of electing a director,

the presence in person or by proxy of the holders of a majority of the then outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director.

3.3. Preferred Stock Protective Provisions. At any time when shares of the Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Second Amended and Restated Certificate of Incorporation, as amended) the written consent or affirmative vote of the holders of at least 60% of the then outstanding shares of the Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, pursuant to consent given in writing or by vote at a meeting:

(a) liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event or any recapitalization or reorganization of the Corporation or other transaction in which control of the Corporation is transferred, or sell, transfer, license or encumber the Corporation's technology or intellectual property, or consent to any of the foregoing, other than licenses of the Corporation's technology or intellectual property in the ordinary course of business;

(b) amend, alter or repeal any provision of this Second Amended and Restated Certificate of Incorporation of the Corporation, as amended, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(c) amend, alter or repeal any provision of the By-Laws of the Corporation, including, without limitation, in a manner that affects the powers, preferences or rights of the Preferred Stock;

(d) increase or decrease the authorized number of shares of the Preferred Stock or Common Stock;

(e) reclassify, alter or amend any existing security of the Corporation in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation or the payment of dividends, if such reclassification, alteration or amendment would render such other security senior to or *pari passu* with the Preferred Stock in respect of any such right, preference or privilege (to the extent such rights preferences or privileges are not then currently in effect);

(f) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than repurchases of stock pursuant to stock restriction agreements or vesting agreements approved by the Board of Directors of the Corporation (including each of the Preferred Directors) that grant to the Corporation a right of repurchase upon termination of the service or employment of a consultant, director or employee;

(g) borrow or guaranty or otherwise authorize any amount of indebtedness, other than (i) inventory financing in the ordinary course of business; and (ii) any indebtedness in an amount of up to $250,000 in the aggregate that is approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(h) increase or decrease the authorized number of directors of the Board of Directors of the Corporation from nine members;

(i) effect a change in the nature of the Corporation's business from the discovery and development of small molecule therapeutics targeting the toxic proteins that cause the cognitive decline associated with Alzheimer's disease and other neurodegenerative diseases;

(j) enter into any transaction with any person or entity, including, without limitation, any of its founders, officers, directors or employees other than in the ordinary course of business on an arm's length basis (as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors));

(k) increase the number of shares of Common Stock reserved for issuance under the Corporation's Amended and Restated 2017 Equity Incentive Plan, as amended from time to time, or any other equity-based incentive or compensation plan;

(l) make, or permit any subsidiary to make, any loan or advance to any person or entity, including, without limitation, any founder, officer, employee or director of the Corporation or any subsidiary, except (i) advances in the ordinary course of business or (ii) advances up to $50,000 in the aggregate under the terms of an employment or service arrangement approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(m) hire, terminate, or change the compensation in excess of $175,000 of any of its officers, directors or employees, unless such hiring, termination or compensation is approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(n) own any stock or other securities of any other corporation, partnership, or other entity, unless approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(o) guarantee, or permit any subsidiary to guarantee, any indebtedness except for (i) trade accounts of the Corporation or any subsidiary arising in the ordinary course of business, or (ii) any guarantee approved by the Board of Directors of the Corporation, including each of the Preferred Directors; or

(p) make any investment other than investments in prime commercial paper, money market funds, certificates of deposit in any United States bank having a net worth in excess of $100,000,000 or obligations issued or guaranteed by the United States of America, in each case having a maturity not in excess of one year, unless approved by the Board of Directors of the Corporation, including each of the Preferred Directors.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the **"Conversion Rights"):**

4.1. Right to Convert.

4.1.1. Conversion Ratio. Each share of the Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price applicable to such share of Preferred Stock by the Conversion Price (as defined below) applicable to such share of Preferred Stock in effect at the time of conversion. The **"Conversion Price"** shall initially be equal to $0.69 for the Series A Preferred Stock and

Series A-1 Preferred Stock, $0.8415 for the Series A-2 Preferred Stock, $0.923 for the Series B Preferred Stock, and $1.385 for the Series B-1 Preferred Stock. Such initial Conversion Price, and the rate at which shares of the Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2. Termination of Conversion Rights. The Conversion Rights shall not terminate in connection with a Deemed Liquidation Event.

4.2. Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors). Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of the Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3. Mechanics of Conversion.

4.3.1. Notice of Conversion. In order for a holder of the Preferred Stock to voluntarily convert shares of the Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of the Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the **"Conversion Time"),** and the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (a) issue and deliver to such holder of the Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of the Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, and (b) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion.

4.3.2. Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all the Preferred Stock then outstanding; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all of the then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued

shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Second Amended and Restated Certificate of Incorporation, as amended. Before taking any action that would cause an adjustment reducing the Conversion Price of any series of Preferred Stock below the then par value of the shares of Common Stock issuable upon conversion of the Preferred Stock, the Corporation will take any corporate action that may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Conversion Price.

4.3.3. Effect of Conversion. All shares of the Preferred Stock that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except with respect to the right of the holders thereof to receive shares of Common Stock in exchange therefor and to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2. Any shares of the Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

4.3.4. No Further Adjustment. Upon any such conversion, no adjustment to the Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5. Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of the Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of the Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4. Adjustments to Conversion Price for Diluting Issues.

4.4.1. Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) **"Option"** shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) **"Original Issue Date"** shall mean, with respect to the Series A Preferred Stock, the Series A-1 Preferred Stock, the Series A-2 Preferred Stock, the Series B Preferred Stock, and the Series B-1 Preferred Stock, the date on which the first share of such series of Preferred Stock, respectively, was issued.

(c) **"Convertible Securities"** shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) **"Additional Shares of Common Stock"** shall mean, with respect to the determination of adjustments to the Conversion Price for each series of Preferred Stock, all shares of

Common Stock issued (or, pursuant to Subsection 4.4.3, deemed to be issued) by the Corporation on or after the Original Issue Date of such Series of Preferred Stock, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, **"Exempted Securities"):**

(i) shares of Common Stock, Options or Convertible Securities issued upon the conversion of the Preferred Stock or by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsections 4.5, 4.6 or 4.7;

(ii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or an arrangement approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(iii) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options, or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided that such issuance is pursuant to the terms of such Option or Convertible Security;

(iv) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, including each of the Preferred Directors, that do not exceed an aggregate of 1,000,000 shares of Common Stock;

(v) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(vi) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation (or the assets of another corporation) by the Corporation whether by merger, reorganization or otherwise, provided, that such issuances are approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(viii) shares of Common Stock issued or issuable pursuant to currently outstanding Options granted under the Corporation's Amended and Restated 2017 Equity Incentive Plan, as amended from time to time, with such amendment as approved by the Board of Directors of the Corporation, including each of the Preferred Directors;

(ix) shares of Common Stock issued or issuable upon the closing of a public offering of the Corporation's securities pursuant to the Securities Act of 1933, as amended (the **"Securities Act"),** in which all shares of the Preferred Stock are automatically converted to Common Stock pursuant to Subsection 5.1(a);

(x) shares of Common Stock issued or issuable upon conversion of

any shares of the Series B Preferred Stock issued under that certain Series B Stock Purchase Agreement dated as of March 20, 2014, as amended, and under that certain Series B Preferred Stock Purchase Agreement dated as of November 16, 2016, as it may be amended, among the Corporation and the other parties listed therein;

(xi) shares of Common Stock issued or issuable upon exercise of one or more Warrant(s) issued by the Corporation to the Alzheimer Drug Development Foundation, Inc. under that certain Agreement to Accept Conditions for Biotechnology Grant Funding dated as of July 6, 2010;

(xii) shares of Common Stock issued upon exercise of Common Stock Purchase Warrants issued by the Corporation under that certain Note and Warrant Purchase Agreement, among the Corporation and the purchasers named therein, dated as of March 11, 2016, as amended;

(xiii) shares of Common Stock issued or issuable upon the conversion, exercise or exchange of all other Options and Convertible Securities outstanding as of November 16, 2016; and

(xiv) shares of Series B-1 Preferred Stock issued or issuable upon conversion of one or more Convertible Promissory Notes (and shares of Common Stock issued upon conversion of such shares of Series B-1 Preferred Stock) issued by the Corporation under (a) that certain Note Purchase Agreement, among the Corporation and the purchasers named therein, dated as of March 8, 2018, as amended, and (b) that certain Note Purchase Agreement, among the Corporation and the purchasers named therein, dated as of November 15, 2018, as amended.

4.4.2. No Adjustment of Conversion Price. No adjustment in the Conversion Price applicable to a share of Preferred Stock shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock unless the consideration per share (determined pursuant to Subsection 4.4.5 for an Additional Share of Common Stock issued or deemed to be issued by the Corporation) is less than the Conversion Price for such share of Preferred Stock in effect on the date of, and immediately prior to, the issue of such Additional Shares of Common Stock.

4.4.3. Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Original Issue Date applicable to a series of Preferred Stock shall issue any Options or Convertible Securities (excluding Options or Convertible Securities that are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of the issuance of such Convertible Security or Option or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4. are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase or decrease in the number of shares of Common Stock issuable upon the exercise,

conversion and/or exchange of any such Option or Convertible Security or (ii) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Conversion Price of such series of Preferred Stock computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have been obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this Subsection 4.4.3(b) shall have the effect of increasing the Conversion Price of any series of Preferred Stock to an amount that exceeds the lower of (A) such Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (B) such Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities that are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Conversion Price of a series of Preferred Stock pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than such Conversion Price then in effect with respect to such series of Preferred Stock, or because such Option or Convertible Security was issued before the Original Issue Date of such series of Preferred Stock), are revised after Original Issue Date of such series of Preferred Stock as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (i) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (ii) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) that resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, such Conversion Price shall be readjusted to the Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Conversion Price of a series of Preferred Stock provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Conversion Price of a series of Preferred Stock that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number

of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to such Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4. Adjustment of Conversion Price upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Original Issue Date applicable to a series of Preferred Stock issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4,3), without consideration or for a consideration per share less than Conversion Price of such series of Preferred Stock in effect immediately prior to such issue, then the Conversion Price applicable to each share of such series of Preferred Stock shall be reduced, concurrently with such issue, to a price per share (calculated to the nearest one-hundredth of a cent) in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(i) **"CP_2"** shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately after such issue of Additional Shares of Common Stock;

(ii) **"CP_1"** shall mean, with respect to the determination of adjustments to the Conversion Price of any series of Preferred Stock, the Conversion Price of such series of Preferred Stock in effect immediately prior to such issue of Additional Shares of Common Stock;

(iii) **"A"** shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock, treating for this purpose as outstanding shares of Common Stock underlying only those Options or Convertible Securities that (x) are outstanding immediately prior to such issue and (y) are vested or otherwise exercisable;

(iv) **"B"** shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(v) **"C"** shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5. Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) For cash and property, such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors); and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration that covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors).

(b) For Options and Convertible Securities, the consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration.) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6. Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than 90 days from the first such issuance to the final such issuance, then, upon the final such issuance, the Conversion Price of such series of Preferred Stock shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5. Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time on or after the Original Issue Date of any series of Preferred Stock effect a subdivision of the outstanding Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Original Issue Date of any series of Preferred Stock combine the outstanding shares of Common Stock, the Conversion Price of such series of Preferred Stock in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this Subsection 4.5 shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6. Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time on or after the Original Issue Date of any series of Preferred Stock shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation or in cash or other

property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of such series of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities, cash or other property in an amount equal to the amount of such securities, cash or other property as they would have received if all outstanding shares of such series of Preferred Stock had been converted into Common Stock on the date of such event.

4.7. Adjustment for Merger or Reorganization, etc. If there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.5 or 4.6), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of the Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property that a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of the Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation (including each of the Preferred Directors)) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price of each series of Preferred Stock) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.8. Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 30 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of the Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of the Preferred Stock (but in any event not later than 15 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (a) the Conversion Price of such series of Preferred Stock then in effect, and (b) the number of shares of Common Stock and the amount, if any, of other securities, cash or property that then would be received upon the conversion of the Preferred Stock.

4.9. Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on. which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1. Trigger Events. Upon the initial closing of the Corporation's first firmly underwritten public offering of its Common Stock pursuant to a registration statement filed with the Securities and Exchange Commission **("SEC"),** and declared effective under the Securities Act, in which the Corporation's Common Stock is listed on a national securities exchange (other than a registration statement relating either to the sale of securities to employees of the Corporation pursuant to its stock option, stock purchase or similar plan or an SEC Rule 145 transaction) covering the offer and sale of Common Stock for the account of the Corporation to the public at a price per share of not less than three times the highest then applicable Conversion Price resulting in offering proceeds to the Corporation of a least $30,000,000 net of underwriting discounts and commissions (the time of such closing is referred to herein as the **"Mandatory Conversion Time"),** (i) all outstanding shares of the Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective Conversion Price and (ii) such shares may not be reissued by the Corporation.

5.2. Procedural Requirements. All holders of record of shares of the Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of the Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of the Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for the Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of the Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series,

and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of the Preferred Stock accordingly.

6. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of the Preferred Stock, the Series B-1 Preferred Stock, the Series B Preferred Stock, the Series A-2 Preferred Stock, the Series A-1 Preferred Stock or the Series A Preferred Stock, as the case may be, by the requisite percentage (as set forth in the applicable provision(s) of this Second Amended and Restated Certificate of Incorporation, as amended) of such stockholders of the Corporation that are entitled to a vote upon or consent with respect to any such right, power, preference or other term.

7. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of the Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

8. No Reissuance of Preferred Stock. No share or shares of any series of the Preferred Stock acquired by the Corporation by reason of purchase, conversion or otherwise shall be reissued, and all such shares shall be canceled, retired and eliminated from the shares which the Corporation shall be authorized to issue. This Second Amended and Restated Certificate of Incorporation, as amended, shall be appropriately amended to effect the corresponding reduction in the Corporation's capital stock.

B. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of the Preferred Stock that may be required by the terms of this Second Amended and Restated Certificate of Incorporation, as amended) the affirmative vote of the holders of shares of capital stock of the Corporation (voting as a single class) representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote (the Preferred Stock voting on an as if converted to Common Stock basis) and without a separate class vote by the holders of the Common Stock, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

BY-LAWS
OF
COGNITION THERAPEUTICS, INC.

ARTICLE 1 OFFICES

Section 1.1. The Corporation shall have and maintain in the State of Delaware a registered office which may, but need not be, the same as its place of business.

Section 1.2. The Corporation may also have offices at such other places as the Board of Directors may from time to time determine or the business of the Corporation may require.

ARTICLE 2 STOCKHOLDERS

Section 2.1. All meetings of the stockholders shall be held at such place, either within or without the State of Delaware, and at such date and time as may be designated by the Board of Directors and as shall be specified in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2.2. An annual meeting of the stockholders, for the election of directors and for the transaction of such other business as may properly be brought before the meeting, shall be held at such place, date and time as the Board of Directors may designate and as shall be specified in the notice of the meeting or in a duly executed waiver of notice thereof. In the absence of such a designation by the Board of Directors, the Annual Meeting of Stockholders shall be held during the month of May each year on a date to be determined from year to year by the Board of Directors.

Section 2.3. Special meetings of the stockholders, for any purpose or purposes, may be called by the Board of Directors, the Chief Executive Officer or the President and shall be called by the President or the Secretary at the request in writing of: (i) any director of the Corporation then in office or (ii) stockholders entitled to cast at least a majority of the votes that all stockholders are entitled to cast at the particular meeting. Such request shall state the purpose or purposes of the proposed meeting. Business transacted at all special meetings shall be confined to the purposes stated in the notice thereof.

Section 2.4. Written notice of any annual or special meeting of stockholders shall be mailed to each stockholder entitled to vote thereat at such stockholder's address as it appears on the records of the Corporation, not fewer than ten nor more than sixty days before the date of such meeting. Such notice shall be deemed to be given when deposited in the United States mail, postage prepaid, directed to each stockholder at such stockholder's address as it last appears on the records of the Corporation. Such notice shall state the place, date and hour of the meeting, and, in the case of a special meeting, shall state the purpose or purposes for which the meeting is called.

Section 2.5. At any meeting of the stockholders, the holders of a majority of all of the issued and outstanding shares of stock entitled to vote at the meeting, present in person or by proxy, shall constitute a quorum for all purposes, except to the extent that the presence of a

larger number of stockholders may be required by law, by the Certificate of Incorporation of the Corporation or by these By-laws. If a quorum shall fail to be present or represented at any meeting, the chairman of the meeting or the holders of a majority of the shares of the stock entitled to vote who are present, in person or by proxy, may adjourn the meeting to another place, date or time. When a meeting is so adjourned, written notice need not be given of the adjourned meeting if the place, date and time thereof are announced at the meeting at which the adjournment is taken; provided, however, that if the date of any adjourned meeting is more than thirty days after the date for which the meeting was originally noticed, or if a new record date is fixed for the adjourned meeting, written notice of the place, date, and time of the adjourned meeting shall be given in conformity herewith. At any adjourned meeting, any business may be transacted that might have been transacted at the original meeting.

Section 2.6. At any meeting of the stockholders, every stockholder entitled to vote may vote in person or by proxy authorized by an instrument in writing or any complete and reliable copy, facsimile telecommunication or other reproduction of the writing executed by such stockholder or by an authorized officer, director, employee or agent of such stockholder, to the extent permitted by law, and submitted to the Secretary at or before such meeting, but no proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. Except as otherwise provided herein, in the Certificate of Incorporation or as required by law, each stockholder shall have one vote for each share of stock entitled to vote that is registered in his or her name on the record date for the meeting. Neither the election of directors nor any other voting need be by written ballot, except upon demand therefor by the Board of Directors or the officer of the Corporation presiding at the meeting of stockholders where the vote is to be taken. When a quorum exists at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one for which, by express provision of law or of the Certificate of Incorporation of the Corporation or of these By-laws, a different vote is required.

Section 2.7. At least ten days before every meeting of stockholders, the officer who has charge of the stock ledger of the Corporation shall prepare a complete list of the stockholders entitled to vote at such meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours for a period of at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder of the Corporation who is present. The stock ledger of the Corporation shall be the only evidence as to the identities of the stockholders entitled to examine the list of stockholders required by this Section 2.7 or to vote in person or by proxy at any meeting of stockholders.

Section 2.8. The Board of Directors shall appoint either one or three inspectors of election, in advance of any meeting of stockholders, to act at such meeting of the stockholders or any adjournment thereof. Inspectors of election need not be stockholders, and no person who is a candidate for corporate office shall act as an inspector of election. If three inspectors of

election are appointed, such inspectors of election shall act by majority vote. Each inspector of election shall sign an oath faithfully to execute the duties of inspector with strict impartiality and to the best of the inspector's ability and shall do all acts as are necessary and proper to conduct the election or vote and all such other acts as may be prescribed by law with fairness to all stockholders. Such inspectors of election shall make a written report of any matter determined by them and shall execute a certificate as to any fact found by them.

Section 2.9. The chairman of any meeting of the stockholders shall determine the order of business and the procedure to be followed at such meeting, including such regulation of the manner of voting and the conduct of discussion as the chairman shall deem to be fair and equitable.

Section 2.10. The stockholders may participate in any meeting by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear one another, and such participation shall constitute presence in person at such meeting.

Section 2.11. Unless otherwise required by the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the stockholders may be taken without a meeting, without prior notice and without a vote, if a written consent setting forth the action so taken shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of any corporate action without a meeting by less than unanimous written consent shall be given in conformity herewith to those stockholders who have not consented thereto in writing.

ARTICLE 3 BOARD OF DIRECTORS

Section 3.1. The business and affairs of the Corporation shall be managed by or under the direction of a Board of Directors. In addition to the powers expressly conferred upon the Board of Directors by these By-laws, the Board of Directors may exercise all powers of the Corporation and perform all lawful acts as are not required to be exercised or performed by the stockholders pursuant to law, the Certificate of Incorporation of the Corporation or these By- laws. The Board of Directors may designate a director to serve as Chairman of the Board, who shall preside at all meetings of the Board of Directors. The Chairman of the Board shall serve for such term and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors.

Section 3.2. Directors shall be natural persons who need not be stockholders of the Corporation. The initial number of directors shall be three. Except as may otherwise be provided in the Certificate of Incorporation, the specific number of directors shall thereafter be designated from time to time exclusively by the Board of Directors. Each director shall be elected for a term of one year and until his or her successor is duly elected and qualified, subject, however, to such director's prior death, resignation, retirement, disqualification or removal from office. Except as otherwise provided in the Certificate of Incorporation or any agreement to which the Company is subject or by which it is bound, whenever the authorized number of directors is increased between annual meetings of the stockholders, a majority of the directors

then in office shall have the power to elect such new directors, who shall serve until the next annual meeting of stockholders and until their successors are duly elected and qualified. Any decrease in the authorized number of directors shall not become effective until the expiration of the term of the directors then in office unless, at the time of such decrease, there shall be vacancies on the Board of Directors that are being eliminated by such decrease.

Section 3.3. Except as otherwise provided in the Certificate of Incorporation or any agreement to which the Company is subject or by which it is bound, any vacancy on the Board of Directors occurring by reason of death, resignation, disqualification, removal or other cause may be filled by a majority of the directors then in office, although less than a quorum, and each director elected to fill a vacancy shall serve for the unexpired term of his or her predecessor and until such director's successor is duly elected and qualified.

Section 3.4. The organizational meeting of each newly elected Board of Directors may be held immediately following the stockholders meeting at which such directors were duly elected without the necessity of notice to such directors or at such time and place as may be fixed by notice or a duly executed waiver of notice thereof.

Section 3.5. Regular meetings of the Board of Directors shall be held without call or notice at such time and place as shall from time to time be fixed by the Board of Directors.

Section 3.6. Special meetings of the Board of Directors may be called by the Chief Executive Officer, by the President or by the Secretary or upon the written request of any director of the Corporation then in office. Notice of the place, time and date of each such special meeting shall be given to each director by whom it is not waived by mailing written notice to each director not less than two days before the meeting or by giving notice in person or by telephone, telegram or facsimile transmission not less than twenty-four hours before the meeting. Notice of special meetings of the Board of Directors need not state the purpose thereof, except as otherwise expressly provided by law, by the Certificate of Incorporation or by these By-laws. Any and all business may be transacted at a special meeting, unless otherwise indicated in the notice thereof or provided by law, by the Certificate of Incorporation or by these By-laws.

Section 3.7. Members of the Board of Directors or any committee thereof may participate in any meeting of the Board of Directors or such committee, as the case may be, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear one another, and such participation shall constitute presence in person at such meeting.

Section 3.8. At any meeting of the Board of Directors, the presence of a majority of the total number of directors shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors, unless otherwise provided by law, by the Certificate of Incorporation of the Corporation or by these By-laws. If a quorum shall not be present at any meeting of the Board of Directors, a majority of the directors present may adjourn the meeting to any place, date or time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.9. Unless otherwise provided by law, by the Certificate of Incorporation or these By-laws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting if all members of the Board of Directors or such committee, as the case may be, consent thereto in writing and such consent is filed with the minutes of proceedings of the Board of Directors or committee thereof.

Section 3.10. Directors, in addition to expenses of attendance, shall be allowed such compensation for their services as directors, including, without limitation, their services as members of committees of the Board of Directors, as may be fixed from time to time by the Board of Directors; provided, that nothing contained in these By-laws shall be construed to preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

Section 3.11. A member of the Board of Directors or of any committee thereof shall, in the performance of his or her duties, be fully protected in relying in good faith upon the books of account or reports made to the Corporation by any of its officers, or by an independent certified public accountant, or by an appraiser selected with reasonable care by the Board of Directors or by any committee thereof, or in relying in good faith upon other records of the Corporation.

ARTICLE 4 COMMITTEES

Section 4.1. The Board of Directors, by a vote of a majority of the whole Board of Directors, may from time to time designate committees of the Board of Directors, with such lawfully delegable powers and duties as it thereby confers, to serve at the pleasure of the Board of Directors and shall, for those committees and any others provided for herein, appoint at least three directors to serve as members and may designate, if it desires, one or more directors as alternate members who may replace any absent or disqualified member at any meeting of the committee. Any committee so designated may exercise the power and authority of the Board of Directors to declare a dividend or to authorize the issuance of stock if the resolution that designates the committee or a supplemental resolution of the Board of Directors shall so provide. The Board of Directors may, from time to time, suspend, alter, continue or terminate any committee or the powers and functions thereof.

Section 4.2. The Board of Directors may appoint committees consisting of officers or other persons, with chairmanships, vice chairmanships and secretaryships and such duties and powers as the Board of Directors may from time to time designate and prescribe. The Board of Directors may from time to time suspend, alter, continue or terminate any of such committees or the powers and functions thereof.

Section 4.3. Any action that may be taken by a committee at a meeting may be taken without a meeting if all members thereof consent thereto in writing and such writing is filed with the minutes of the proceedings of such committee.

Section 4.4. Each committee may determine the procedural rules for meeting and conducting its business and shall act in accordance therewith, except as otherwise provided by law, by the Certificate of Incorporation or by these By-laws. Adequate provision shall be made for notice to all members of any committee of all meetings of that committee.

ARTICLE 5 OFFICERS

Section 5.1. The officers of the Corporation shall consist of a Chief Executive Officer, a President, a Secretary and a Treasurer. Officers shall be appointed from time to time by the Board of Directors. No officer except the Chief Executive Officer need be a member of the Board of Directors. Any number of offices may be held by the same person.

Section 5.2. The Board of Directors may appoint one or more Vice Presidents and such other officers, including assistant officers, and agents as it shall deem necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors.

Section 5.3. Each officer shall hold office until his or her successor is duly elected and qualified or until his or her earlier death, resignation, retirement or removal. Any officer appointed by the Board of Directors may be removed at any time by the Board of Directors without prejudice to his or her contract rights. If the office of any officer becomes vacant for any reason, such vacancy shall be filled by the Board of Directors. Any officer appointed to fill such a vacancy shall hold office until his or her successor is duly elected and qualified or until his or her earlier death, resignation, retirement or removal.

Section 5.4. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officers or agents, notwithstanding any provision of these By-laws.

Section 5.5. The Chief Executive Officer shall have general management, direction and control of the business and affairs of the Corporation, subject to the direction of the Board of Directors. The Chief Executive Officer shall preside at all meetings of the stockholders and, if no Chairman of the Board shall be designated, of the Board of Directors. Unless otherwise directed by the Board of Directors from time to time, the Chief Executive Officer shall have the power to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of stockholders of or with respect to any action of stockholders of any other corporation in which the Corporation may hold securities and otherwise to exercise any and all rights and powers which the Corporation may possess by reason of its ownership of securities in such other corporation.

Section 5.6. The President shall be the chief operating officer of the Corporation and shall have such powers and perform such duties as may from time to time be assigned to the President by the Chief Executive Officer or the Board of Directors. In the absence or disability of the Chief Executive Officer, the President shall be the chief executive officer of the Corporation, and, as such, shall have the functions, authority and duties provided for the Chief Executive Officer.

Section 5.7. Each Vice President shall have such powers and perform such duties as may be delegated to such Vice President by the Board of Directors or by the Chief Executive Officer.

Section 5.8. The Secretary shall attend all meetings of the Board of Directors and of the stockholders and shall record all votes and the minutes of all proceedings at such meetings in

a book to be kept for that purpose and shall perform such other duties as the Board of Directors may from time to time prescribe. The Secretary shall perform the preceding duties for any committee of the Board of Directors upon the request of the Board of Directors or such committee. The Secretary shall give or cause to be given notice of all meetings of the stockholders and the Board of Directors. The Secretary shall have charge of the seal of the Corporation, and, where required, shall have the authority to affix such seal to any instrument. In the absence or disability of the Secretary, any Assistant Secretary shall perform the duties and exercise the powers of the Secretary.

Section 5.9. The Treasurer shall have the custody of the Corporation's funds and securities and shall deposit all monies and other valuable effects in the name and to the credit of the Corporation, in such depositories as may be designated by the Board of Directors. The Treasurer shall make such disbursements of the Corporation's funds as are authorized by the Board of Directors or by the President, taking proper vouchers for such disbursements, and shall render to the Board of Directors an account of all such transactions and of the financial condition of the Corporation, at such times as the Board of Directors may require. The Treasurer shall also perform such other duties as the Board of Directors may from time to time prescribe. In the absence or disability of the Treasurer, any Assistant Treasurer shall perform the duties and exercise the powers of the Treasurer.

ARTICLE 6 INDEMNIFICATION

Section 6.1. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "Indemnitee") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that such person, or a person for whom he or she is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Indemnitee. Notwithstanding the preceding sentence, except as otherwise provided in Section 6.3, the Corporation shall be required to indemnify an Indemnitee in connection with a proceeding (or part thereof) commenced by such Indemnitee only if the commencement of such proceeding (or part thereof) by the Indemnitee was authorized by the Board of Directors.

Section 6.2. The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnitee in defending any proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the proceeding shall be made only upon receipt of an undertaking by the Indemnitee to repay all amounts advanced if it should be ultimately determined that the Indemnitee is not entitled to be indemnified under this Article 6 or otherwise.

Section 6.3. If a claim for indemnification or payment of expenses under this Article 6 is not paid in full within sixty days after a written claim therefor by the Indemnitee has been received by the Corporation, the Indemnitee may file suit to recover the unpaid amount of such

claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnitee is not entitled to the requested indemnification or payment of expenses under applicable law.

Section 6.4. The rights conferred on any Indemnitee by this Article 6 shall not be exclusive of any other rights which such Indemnitee may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, these By-laws, agreement, vote of stockholders or disinterested directors or otherwise.

Section 6.5. The Corporation's obligation, if any, to indemnify or to advance expenses to any Indemnitee who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Indemnitee may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or nonprofit entity.

Section 6.6. Any repeal or modification of the foregoing provisions of this Article 6 shall not adversely affect any right or protection hereunder of any Indemnitee in respect of any act or omission occurring prior to the time of such repeal or modification.

Section 6.7. This Article 6 shall not limit the right of the Corporation, to the extent and in the manner permitted by law, to indemnify and to advance expenses to persons other than Indemnitees when and as authorized by appropriate corporate action.

Section 6.8. Any provisions of the Certificate of Incorporation that provide more favorable indemnification rights than those set forth in this Article 6 to the Indemnitees shall take precedence over the provisions of this Article 6.

ARTICLE 7 STOCK

Section 7.1. The certificates representing shares of stock of the Corporation shall be numbered and shall be entered in the books of the Corporation as they are issued. Each stockholder shall be entitled to a certificate exhibiting such stockholder's name and the number of shares held by such stockholder, which certificate shall be signed by the Chief Executive Officer or the President or any Vice President, and by the Treasurer or the Secretary or any Assistant Secretary. Any or all of the signatures on such certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, such certificate may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

Section 7.2. Transfers of stock shall be made only upon the transfer books of the Corporation maintained in an office of the Corporation or by transfer agents designated to transfer shares of the stock of the Corporation, and only by the person named in the certificate or by such person's attorney, lawfully constituted in writing, and upon surrender of the certificate therefor.

Section 7.3. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than sixty nor less than ten days before the date of such meeting nor more than sixty days prior to any other action. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

Section 7.4. The Corporation shall be entitled to treat the holder of record of any share or shares of stock as the holder in fact thereof and accordingly shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, save as expressly provided by the laws of the State of Delaware.

Section 7.5. The Board of Directors may authorize the issuance of a new certificate representing shares of stock in place of any certificate previously issued by the Corporation and alleged to have been lost, stolen or destroyed, pursuant to such regulations as the Board of Directors may establish concerning proof or advertisement of such alleged loss, theft or destruction and concerning the giving of a satisfactory bond or bonds sufficient to indemnify the Corporation against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate.

Section 7.6. The issue, transfer, conversion and registration of certificates of stock of the Corporation shall be governed by such other regulations as the Board of Directors may from time to time establish.

ARTICLE 8 NOTICES

Section 8.1. Whenever notice is required to be given to any director, committee member, officer, stockholder, employee or agent, whether pursuant to law, the Certificate of Incorporation or these By-laws, it shall not be construed to mean personal notice, but such notice may be given, in the case of stockholders, in writing, by depositing the same in the mail, postage prepaid, or by overnight carrier addressed to such stockholder at such stockholder's last known address as the same appears on the books of the Corporation, and, in the case of directors, committee members, officers, employees and agents, by telephone, or by mail, postage prepaid, or by prepaid telegram at his or her last known address as the same appears on the books of the Corporation. All notices shall be deemed to be given when mailed, telegraphed or telephoned.

Section 8.2. Whenever notice is required to be given to any stockholder, director, committee member, officer, employee or agent, whether pursuant to law, the Certificate of orporation or these By-laws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of erson at a meeting shall constitute a waiver of notice of such meeting, except as otherwise provided by law. Neither the business to be transacted at, nor the purpose of, any regular or

special meeting of the stockholders, directors, or members of a committee of directors need be specified in any written waiver of notice unless so required by the Certificate of Incorporation of the Corporation or by these By-laws.

ARTICLE 9 MISCELLANEOUS

Section 9.1. Any officer of the Corporation shall, if required by the Board of Directors, give the Corporation a bond for the faithful performance of the duties of his or her office, and for the restoration to the Corporation of all corporate books, papers, vouchers, money and property of whatever kind in his or her possession or under his or her control. Such bond shall be for a sum and with such surety or sureties as the Board of Directors may require.

Section 9.2. The corporate seal shall be in the charge of the Secretary and shall have inscribed thereon the name of the Corporation and the words "Incorporated 2007 Delaware." If and when so directed by the Board of Directors or a committee thereof, the Secretary may have duplicates of such seal made and deposited for use with other officers of the Corporation. It shall not be necessary to the validity of any instrument executed by any authorized officer or officers of the Corporation that the execution of such instrument be evidenced by the corporate seal.

Section 9.3. The fiscal year of the Corporation shall be as determined by the Board of Directors.

Section 9.4. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers as the Board of Directors may from time to time designate.

Section 9.5. The Board of Directors shall determine from time to time whether, when and under what conditions and regulations, the books and records of the Corporation (except such as may by statute be specifically open to inspection) shall be open to the inspection of the stockholders, and the stockholders' rights in this respect are and shall be restricted and limited accordingly.

Section 9.6. Facsimile signatures of any officer of the Corporation may be used at such time and in such manner as authorized by the Board of Directors or a committee thereof.

ARTICLE 10 AMENDMENT

Section 10.1. These By-laws may be amended, suspended or repealed and new By-laws may be adopted in a manner consistent with law: (a) if authorized by the Certificate of Incorporation, by the affirmative vote of a majority of the directors then in office, at any meeting of the Board of Directors, or (b) by the affirmative vote of the stockholders at any stockholders meeting called and maintained in accordance with Article 2 of these By-laws; provided, however, that a brief description of such proposed amendment, suspension or repeal and/or adoption of new By-laws is contained in the notice of such meeting of the Board of Directors or of such annual or special meeting of the stockholders.

Adopted as of August 21, 2007

Exhibit 10.2

Execution Copy

COGNITION THERAPEUTICS, INC.

THIRD AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

March 20, 2014

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SCHEDULE

Schedule A	Schedule of Investors

COGNITION THERAPEUTICS, INC.

THIRD AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS THIRD AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT is made as of the 20th day of March, 2014, by and among Cognition Therapeutics, Inc., a Delaware corporation (the "**Company**"), and each of the investors listed on Schedule A hereto, each of whom is referred to in this Agreement as an "**Investor**" and any Additional Purchaser (as defined in the Purchase Agreement) that becomes a party to this Agreement in accordance with Section 6.9.

RECITALS

The Company and certain of the Investors are parties to a Second Amended and Restated Investors' Rights Agreement, dated as of December 5, 2011 (the "**Rights Agreement**").

The Company and certain of the Investors are purchasing shares of the Company's Series B Convertible Preferred Stock, par value $.001 per share (the "**Series B Preferred Stock**"), pursuant to the Series B Preferred Stock Purchase Agreement of even date herewith (the "**Purchase Agreement**").

In order to induce the Company to enter into the Purchase Agreement and to induce the Investors to invest funds in the Company pursuant to the Purchase Agreement, the Company and the undersigned Investors, which include the holders of at least 60% of the Registrable Securities (as set forth in the Rights Agreement), hereby agree to enter into this Agreement in order to amend and restate the Rights Agreement in accordance with Section 6.6 of the Rights Agreement and to govern the rights of the Investors to cause the Company to register shares of Common Stock issuable to the Investors upon conversion of the Company's Series A Convertible Preferred Stock, par value $.001 per share (the "**Series A Preferred Stock**"), Series A-1 Convertible Preferred Stock, par value $.001 per share (the "**Series A-1 Preferred Stock**"), Series A-2 Convertible Preferred Stock, par value $.001 per share (the "**Series A-2 Preferred Stock**"), and Series B Preferred Stock (together with the Series A Preferred Stock , Series A-1 Preferred Stock and Series A-2 Preferred Stock, the "Preferred Stock"), to receive certain information from the Company, and to participate in future equity offerings by the Company, and to govern certain other matters as set forth in this Agreement.

NOW, THEREFORE, the parties, intending to be legally bound, hereby agree as follows:

1. Definitions. For purposes of this Agreement:

"**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including, without limitation, any general partner, managing member, officer or director of such Person or any venture capital fund now or hereafter existing that is controlled by any such Person, or any partner or retired partner of any Person that is a partnership, or any member or former member of any Person that is a limited liability company, or solely in the case of Ogden CAP Associates, LLC ("Ogden"): (a) with respect to which investment discretion is exercised by one or more

general partners or managing members of, or shares the same management company with, Ogden; or (b) any employee of Ogden or Ogden's Affiliate who holds (or will by virtue of an immediately succeeding transfer will hold) at least 100,000 shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization affecting such shares).

"**Common Stock**" means shares of the Company's common stock, par value $.001 per share.

"**Damages**" means any loss, damage, or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, or liability (or any action in respect thereof) arises out of or is based upon (a) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (b) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (c) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

"**Derivative Securities**" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"**Excluded Registration**" means (a) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, or similar plan; (b) a registration relating to an SEC Rule 145 transaction; (c) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (d) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

"**Form S-1**" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

"**Form S-2**" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

"**Form S-3**" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

"**GAAP**" means generally accepted accounting principles in the United States.

"**Holder**" means any holder of Registrable Securities who is a party to this Agreement.

"**Immediate Family Member**" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother- in-law, sister-in-law, including adoptive relationships, of a natural person referred to herein.

"**Initiating Holders**" means, collectively, Holders who properly initiate a registration request under this Agreement.

"**IPO**" means the Company's first underwritten public offering of its Common Stock pursuant to a registration statement filed with the SEC under the Securities Act.

"**Key Employee**" means any executive-level employee (including division director and vice president-level positions) as well as any employee who, either alone or in concert with others, develops, invents, programs, or designs any Company Intellectual Property (as defined in the Purchase Agreement).

"**Major Investor**" means any Investor that, individually or together with such Investor's Affiliates, holds shares representing an investment of at least $100,000 in the Preferred Stock.

"**New Securities**" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

"**Person**" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

"**Preferred Director**" means any director of the Company that the holders of record of the Preferred Stock are entitled to elect pursuant to the Certificate (as defined in Section 5.4).

"**Registrable Securities**" means (a) the Common Stock issuable or issued upon conversion of the Preferred Stock; (b) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company, acquired by the Investors after the date hereof; and (c) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clause (a) or (b) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Section 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Section 2.13.

"**Registrable Securities then outstanding**" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and

the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

"**Restricted Securities**" means the securities of the Company required to bear the legend set forth in Section 2.12(a).

"**Right of First Refusal and Co-Sale Agreement**" means the Third Amended and Restated Right of First Refusal and Co-Sale Agreement among the Company, the Investors and certain other stockholders of the Company, dated as of the date of the Initial Closing (as defined in the Purchase Agreement).

"**SEC**" means the Securities and Exchange Commission.

"**SEC Rule 144**" means Rule 144 promulgated by the SEC under the Securities Act.

"**SEC Rule 144(k)**" means Rule 144(k) promulgated by the SEC under the Securities Act.

"**SEC Rule 145**" means Rule 145 promulgated by the SEC under the Securities Act.

"**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"**Selling Expenses**" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel (as defined in Section 2.6) borne and paid by the Company as provided in Section 2.6.

"**Stock Plan**" means the Company's Amended and Restated 2007 Equity Incentive Plan, as amended from time to time.

"**Voting Agreement**" means the Third Amended and Restated Voting Agreement among the Company, the Investors and certain other stockholders of the Company, dated as of the date of the Initial Closing.

2. Registration Rights. The Company covenants and agrees as follows:

2.1. **Demand Registration.**

(a) If at any time after the earlier of (i) five years after the date of this Agreement and (ii) 180 days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of at least 20% of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement covering the registration of at least 20% of the Registrable Securities then outstanding (or a proportionately lower percentage if the anticipated aggregate offering price, net of Selling Expenses, would exceed $5,000,000), then the Company shall (A) within 10 days after the date such request is given, give notice thereof (the **"Demand Notice")** to all Holders other than the Initiating Holders; and (B) as soon as practicable, and in any event within 60 days after the date such request is given by the

Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c), 2.1(d), 2.l(f) and 2.3.

(b) If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least 10% of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to the Registrable Securities then outstanding of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $1,000,000, then the Company shall (i) within 10 days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within 45 days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.l(c), 2.l(e), 2.l(f) and 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Section 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Company's Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (1) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (2) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (3) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing for a period of not more. than 180 days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any 12-month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such 180-day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(a): (i) during the period that is 60 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 180 days after the effective date of, a Company-initiated registration, provided, that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Section 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made in accordance with Section 2.l(b).

(e) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(b): (i) during the period that is 30 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 90 days after the effective date of, a Company-initiated registration, provided, that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Section 2.1 (b) within the 12-month period immediately preceding the date of such request.

(f) A registration shall not be counted as "effected" for purposes of Sections 2.l(d) and 2. l(e) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Section 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of Sections 2.1(d) and 2.1(e). Solely for purposes of Sections 2.1(d) and 2.1(e), a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Section 2.3(a), fewer than 100% of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.2. **Company Registration.** If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its Common Stock or other securities under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within 20 days after such notice is given by the Company, the Company shall, subject to the provisions of Section 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Section 2.6.

2.3. **Underwriting Requirements.**

(a) If, pursuant to Section 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Section 2.1, and the Company shall include such information in the Demand Notice. The underwriters will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders (based on the relative number of Registrable Securities owned by the Initiating Holders that are included in such registration). In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Section 2.4(e)) enter into an underwriting agreement in customary form with the underwriters

selected for such underwriting. Notwithstanding any other provision of this Section 2.3, if the underwriters advise the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Section 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares.

(c) For purposes of the provision in Section 2.3(a) or 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence. Notwithstanding the foregoing (including, without limitation, Sections 2.3(a) and (b)), the number of Registrable Securities included in such registration and underwriting shall not be reduced below 30% of the securities included in such registration unless such offering is the IPO, in which case the selling stockholders may be excluded entirely if the underwriters make the determination described above and no securities other than those of the Company are included in

such registration. No Registrable Securities or other securities excluded from the underwriting by reason of this Section 2.3 shall be included in such registration statement.

(d) Without limiting the generality of the foregoing, in the event that the underwriters in any offering under Section 2.1 or 2.2 request approval of a modification of the provisions set forth in Section 2.1, 2.2 or 2.3 from the Investors, the Investors' approval of such modification shall not be unreasonably withheld.

2.4. **Obligations of the Company.** Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of at least 60% of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to 120 days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such 120-day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such 120-day period shall be extended, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriters of such offering;

(f) use commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any underwriter participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, subject to reasonable confidentiality obligations, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable *to* verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

2.5. **Furnish Information.** It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6. **Expenses of Registration.** All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to this Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders of at least 60% of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of at least 60% of the Registrable Securities agree to forfeit their right to one registration pursuant to Section 2.l(a) or 2.l(b), as the case may be; provided further that if, at the time of such withdrawal, the Holders shall have learned of a material adverse

change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such information then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Section 2.l(a) or 2.l(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7. **Delay of Registration.** No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8. **Indemnification.** If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if

such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Sections 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case, (A) no Holder will be required to contribute any amount in excess of the public offering price of all such

Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (B) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses) paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9. **Reports Under Exchange Act.** With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after 90 days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company; and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10. **Limitations on Subsequent Registration Rights.** From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of at least 60% of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company which would give such holder or prospective holder any registration rights; provided that this limitation shall not apply to any additional Investor who becomes a party to this Agreement in accordance with Section 6.9.

2.11. **"Market Standoff" Agreement.** Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company for its own behalf of shares of its Common Stock or any other equity securities under the Securities Act on a registration statement on Form S-1, Form S-2, or Form S-3, and ending on the date specified by the Company and the managing underwriter (such period not to exceed (a) 180 days in the case of the IPO, which period may be extended upon the request of the managing underwriter, to the extent required by any NASD rules, for an additional period of up to 15 days if the Company issues or proposes to issue an earnings or other public release within 15 days of the expiration of the 180-day lockup period, or (b) 90 days in the case of any registration other than the IPO, which period may be extended upon the request of the managing underwriter, to the extent required by any NASD rules, for an additional period of up to 15 days if the Company issues or proposes to issue an earnings or other public release within 15 days of the expiration of the 90-day lockup period), (i) lend, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right, or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock, whether such shares or any such securities are then owned by the Holder or are thereafter acquired, or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section 2.11 shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, and shall be applicable to the Holders only if all officers, directors and all stockholders individually owning more than one percent of the Company's outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Preferred Stock) are subject to the same restrictions. The underwriters in connection with such registration are intended third party beneficiaries of this Section 2.11 and shall have the right, power, and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section 2.11 or that are necessary to give further effect thereto. Any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply pro rata to all Holders subject to such agreements, based on the number of shares subject to such agreements.

2.12. **Restrictions on Transfer.** The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which

conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(a) Each certificate or instrument representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Section 2.12(b)) be stamped or otherwise imprinted with a legend substantially in the following form:

> "THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.
>
> THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN INVESTORS' RIGHTS AGREEMENT BETWEEN THE COMPANYAND THE STOCKHOLDER, AS MAY BE AMENDED FROM TIME TO TIME, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY."

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Section 2.12.

(b) The holder of each certificate representing Restricted Securities, by acceptance thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (A) in any transaction in compliance with SEC Rule 144 or (B) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration;

provided that each transferee agrees in writing to be subject to the terms of this Section 2.12. Each certificate or instrument evidencing the Restricted Securities transferred as above provided shall bear, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Section 2.12(a), except that such certificate shall not bear such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13. **Termination of Registration Rights.** The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Section 2.1 or Section 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event, as such term is defined in the Certificate; and

(b) as to particular Registrable Securities owned by such Holder, when such Registrable Securities could be sold without restriction under SEC Rule 144(k); and

(c) the four-year anniversary of the IPO.

3. Information Rights.

3.1. **Delivery of Financial Statements.**

(a) The Company shall deliver to each Major Investor, in a format specified by Golden Seeds LLC, or any successor entity thereto:

(i) as soon as practicable, but in any event within 90 days after the end of each fiscal year of the Company, (A) a balance sheet as of the end of such year, (B) statements of income and of cash flows for such year, and a comparison between (1) the actual amounts as of and for such fiscal year and (2) the comparable amounts for the prior year and as included in the Budget (as defined in Section 3.1(v)) for such year, with an explanation of any material differences between such amounts and a schedule as to the sources and applications of funds for such year, and (C) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants of nationally recognized standing selected by the Company, copies of which shall also be provided to ClearMomentum, Inc. ("**ClearMomentum**") or any successor thereof, as specified by Golden Seeds LLC and subject to Section 3.4;

(ii) as soon as practicable, but in any event within 60 days after the end of each of the first three quarters of each fiscal year of the Company, (A) unaudited statements of income and of cash flows for such fiscal quarter, and a comparison between (1) the actual amounts as of and for such fiscal quarter and (2) the comparable amounts for such fiscal quarter as included in the Budget for the applicable fiscal year and (B) an unaudited balance sheet and a statement of stockholders' equity as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (A) be subject to normal year-end audit adjustments and (B) not contain all notes thereto that may be required in accordance with GAAP), copies of which shall also be provided to ClearMomentum or any

successor thereof, as specified by Golden Seeds LLC or any successor entity thereto and subject to Section 3.4;

(iii) such other information relating to the financial condition, business, prospects, or corporate affairs of the Company as determined by the Board of Directors;

(iv) as soon as practicable, but in any event within 45 days of the end of each month, (A) an unaudited income statement and statement of cash flows for such month, and a comparison between (1) the actual amounts as of and for such month and (2) the comparable amounts for such month as included in the Budget for the applicable fiscal year and (B) an unaudited balance sheet and statement of stockholders' equity as of the end of such month, all prepared in accordance with GAAP (except that such financial statements may (A) be subject to normal year-end audit adjustments and (B) not contain all notes thereto that may be required in accordance with GAAP);

(v) as soon as practicable, but in any event 30 days before the end of each fiscal year, a budget and business plan for the next fiscal year (collectively, the "**Budget**"), which shall include, without limitation, forecasts of the Company's revenues, expenses and cash position on a month-to-month basis, balance sheets, income statements, and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company; and

(vi) as soon as practicable, but in any event within 45 days of the end of each month, and upon the final closing under the Purchase Agreement and upon each closing of future financings by the Company, the Company's capitalization table in a format specified by Golden Seeds LLC or any successor entity thereto, a copy of which shall also be provided to ClearMomentum or any successor thereof, as specified by Golden Seeds LLC or any successor entity thereto and subject to Section 3.4.

(b) If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

(c) Notwithstanding anything else in this Section 3.1 to the contrary, the Company may cease providing the information set forth in this Section 3.1 during the period starting with the date 60 days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Section 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2. **Inspection.** The Company shall permit each Major Investor (provided that such Major Investor is not a competitor of the Company), at such Major Investor's expense, to visit and inspect the Company's properties; examine its books of account and records; and

discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Major Investor upon reasonable advance notice.

3.3. **Termination of Information Rights.** The covenants set forth in Sections 3.1 and 3.2 shall terminate and be of no further force or effect (a) immediately before the consummation of the IPO, (b) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (c) upon a Deemed Liquidation Event, as such term is defined in the Certificate, whichever event occurs first.

3.4. **Confidentiality.** Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.4 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company, if such professionals agree to be bound by the provisions of this Section 3.4; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Section 3.4; (iii) to any existing or prospective Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, if such prospective purchaser agrees to be bound by the provisions of this Section 3.4; or (iv) as may otherwise be required by law, provided that the Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure. For the avoidance of doubt, each Investor shall be responsible for any breach of this Section 3.4 by any other Person to which it is permitted to disclose any Confidential Information pursuant to this Section 3.4.

4. Rights to Future Stock Issuances.

4.1. **Right of First Offer.** Subject to the terms and conditions of this Section 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Investor.

(a) The Company shall give notice (the "**Offer Notice**") to each Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within 20 days after the Offer . Notice is given, each Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon

conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by such Investor bears to the total Common Stock of the Company then issued and outstanding (assuming full conversion and/or exercise, as applicable, of all the Preferred Stock and other Derivative Securities, and the full issuance of all shares reserved for issuance under the Stock Plan). At the expiration of such 20-day period, the Company shall promptly notify each Investor that elects to purchase or acquire all the shares available to it (each, a "**Fully Exercising Investor**") of any other Investor's failure to do likewise. During the 10-day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Investors were entitled to subscribe but that were not subscribed for by the Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Section 4.1(b) shall occur within the later of 90 days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Section 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Section 4.1(b), the Company may, during the 90-day period following the expiration of the periods provided in Section 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within 60 days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Investors in accordance with this Section 4.1.

(d) The right of first offer in this Section 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Certificate); (ii) shares of Common Stock issued in the IPO; and (iii) the issuance of shares of the Series B Preferred Stock to Additional Purchasers pursuant to Section 1.2 of the Purchase Agreement.

4.2. **Termination; Waiver.**

(a) The covenants set forth in Section 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Certificate, whichever event occurs first and, as to each Investor, in accordance with Section 4.1(e).

(b) Except with respect to Pittsburgh Life Sciences Greenhouse and Innovations Works, Inc., the covenants set forth in Section 4.1 shall terminate and be of no further force or effect with respect to any Investor who is not a Fully Exercising Investor and

such non-Fully Exercising Investor shall never again be afforded such pre-emptive rights with respect to any New Securities. The provisions of Section 4.1 shall not terminate with respect to Pittsburgh Life Sciences Greenhouse and Innovations Works, Inc. notwithstanding any failure of Pittsburgh Life Sciences Greenhouse or Innovations Works, Inc., as applicable, to be a Fully Exercising Investor.

(c) The right of first offer set forth in Section 4.1 may be waived as to all Investors upon the written agreement of the holders of at least 60% of the Preferred Stock held by all Investors.

5. Additional Covenants.

5.1. **Employee Stock.** Unless otherwise approved by either (x) the Board of Directors, including both Preferred Directors or (y) the Compensation Committee provided that a Preferred Director is a member thereof, stock options under the Stock Plan to purchase shares of the Company's capital stock granted to employees and consultants of the Company after the date hereof shall vest as provided in this Section 5.1. In the case of employees and consultants who join the Company after December 17, 2010, such stock options shall vest over a four-year period, with the first 12.5% of the shares underlying such stock options vesting following six months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following 42 months. In the case of employees and consultants of the Company employed or engaged by the Company as of December 17, 2010, such stock options shall vest over a four-year period, with the shares underlying such stock options vesting in equal monthly installments beginning on the first day of the month following the grant date. Upon issuance of any shares under the Stock Plan, the Company will require the holders to enter into the Voting Agreement and the Right of First Refusal and Co-Sale Agreement. In addition, unless otherwise approved by the Board of Directors, including both Preferred Directors, the Company shall have the right to repurchase vested shares at cost upon termination of employment of a holder of restricted stock. Without limiting the generality of the foregoing, upon a Deemed Liquidation Event, as such term is defined in the Certificate, all options to purchase capital stock of the Company held by employees and Key Holders (as defined in the Voting Agreement) will vest as specified by the Board of Directors of the Company (or as may be approved by the stockholders of the Company to the extent such approval is required), which may approve the acceleration of the vesting of such options under the respective option agreements between the Company and the Key Employees; provided that such accelerated vesting does not give rise to adverse tax consequences for the Company, including, without limitation, the lack of deductibility of compensation payments.

5.2. **Qualified Small Business Stock.** The Company shall use commercially reasonable efforts to cause the shares of the Preferred Stock issued pursuant to the Purchase Agreement, the Series A-1 Preferred Stock Purchase Agreement dated as of December 17, 2010 among the Company and each of the investors listed on Schedule A thereto and the Series A-2 Preferred Stock Purchase Agreement dated as of December 5, 2011 among the Company and each of the investors listed on Schedule A thereto, as well as any shares into which such shares are converted, within the meaning of Section 1202(f) of the Internal Revenue Code (the "**Code**"), to constitute "qualified small business stock" as defined in Section 1202(c) of the Code; provided, however, that such requirement shall not be applicable if the Board of Directors of the

Company determines, in its good-faith business judgment, that such qualification is inconsistent with the best interests of the Company. The Company shall submit to its stockholders (including the Investors) and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and the regulations promulgated thereunder. In addition, within twenty (20) business days after any Investor's written request therefor, the Company shall, at its option, either (a) deliver to such Investor a written statement indicating whether (and what portion of) such Investor's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code, or (b) deliver to such Investor such factual information in the Company's possession as is reasonably necessary to enable such Investor to determine whether (and what portion of) such Investor's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code.

5.3. **Board Matters; Director Compensation.** Until otherwise determined by the vote of a majority of the directors then in office, the Board of Directors shall meet at least monthly alternating between in-person meetings and conference calls. The Company shall reimburse the nonemployee directors for all reasonable out-of-pocket travel expenses incurred (consistent with the Company's travel policy) in connection with attending meetings of the Board of Directors.

5.4. **Successor Indemnification.** If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company's By-Laws, its Amended and Restated Certificate of Incorporation, as amended from time to time (the "**Certificate**"), or elsewhere, as the case may be. Additionally, the Company shall require and cause any successor (whether direct or indirect by purchase, merger, consolidation or otherwise) to all, substantially all or a substantial part, of the business and/or assets of the Company, by written agreement to expressly assume the Company's obligations with respect to indemnification of members of the Board of Directors.

5.5. **Termination of Covenants.** The covenants set forth in this Section 5, except for Section 5.4, shall terminate and be of no further force or effect (a) immediately before the consummation of the IPO, (b) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (c) upon a Deemed Liquidation Event, as such term is defined in the Certificate, whichever event occurs first.

6. Miscellaneous.

6.1. **Successors and Assigns; Assignment of Rights.** The rights under this Agreement may be assigned (but only with all related obligations) by any of the Investors to any of their respective Affiliates or any transferee who holds (or will by virtue of an immediately succeeding transfer will hold) at least 10% of any series of the then outstanding shares of the Preferred Stock; provided, however, that (a) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (b) such

transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Section 2.11. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein. Golden Seeds LLC (and any successor-in-interest thereof whether by consolidation, merger or otherwise) is an intended third party beneficiary of this Agreement and the parties acknowledge and agree that Golden Seeds LLC (and any successor-in-interest), as an intended third party beneficiary, has an independent and right to enforce the terms of this Agreement.

6.2. **Governing Law.** This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of law.

6.3. **Counterparts; Electronic Transmission.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. A facsimile or electronic transmission of a scanned copy of a signed counterpart signature page hereto shall be deemed to be an originally executed copy for purposes of this Agreement.

6.4. **Titles and Subtitles.** The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5. **Notices.** All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (a) personal delivery to the party to be notified, (b) when sent, if sent by confirmed electronic mail or facsimile transmission during normal business hours of the recipient, and if not sent during normal business hours, then on the recipient's next business day, (c) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next business day delivery, with written verification of receipt. All communications to be sent to the Investors shall be sent at their addresses as set forth on Schedule A hereto, or to such email address, facsimile number or address as subsequently modified by written notice given in accordance with this Section 6.5. All communications to be sent to the Company shall be sent to the address set forth below in this Section 6.5, or to such email address, facsimile number or address as subsequently modified by written notice given in accordance with this Section 6.5:

Cognition Therapeutics, Inc.
2403 Sidney Street, Suite 261
Pittsburgh, PA 15203
Attention: Chief Executive Officer and President
Facsimile: (412) 481-2216

With a copy to:

Duane Morris LLP
30 South 17th Street
Philadelphia, PA 19103-4196
Attention: Kathleen M. Shay
Facsimile: 215-689-4382

6.6. **Amendments and Waivers.** Except as set forth in Section 4.2(c), any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the holders of at least 60% of the Registrable Securities then outstanding; and provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, this Agreement may not be amended or terminated and the observance of any term hereof may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, termination, or waiver applies to all Investors in the same fashion (it being agreed that, subject to Section 4.2(c), a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction). The Company shall give prompt notice of any amendment or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, termination, or waiver. Any amendment, termination, or waiver effected in accordance with this Section 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision. Notwithstanding the foregoing, Schedule A hereto may be amended by the Company from time to time to add or modify information regarding Investors without the consent of the other parties hereto.

6.7. **Severability.** In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8. **Aggregation of Stock.** All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

6.9. **Additional Investors.** Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of the Series B Preferred Stock after the date hereof, any purchaser of such shares of the Series B Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

6.10. **Entire Agreement.** This Agreement amends and restates the Rights Agreement. This Agreement (including any Schedules hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled.

6.11. **Delays or Omissions.** No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

6.12. **Acknowledgment.** The Company acknowledges that the Investors are in the business of venture capital investing and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict the Investors from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company.

6.13. **Dispute Resolution.** The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of Delaware and to the jurisdiction of the United States District Court for the District of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of Delaware or the United States District Court for the District of Delaware, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

6.14. **WAIVER OF JURY TRIAL. EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR**

ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

[SIGNATURE PAGE FOLLOWS]

SCHEDULE A

INVESTORS

Name and Address

Dean K. & Margo L. Allen Family Trust
25412 Nellie Gail Road
Laguna Hills, CA 92653-6307
Attn: Dean K. Allen, Trustee

Angel Capital Entrepreneur Fund 1, LLC
1430 Glencoe Drive
Arcadia, CA 91006

Audrey's Kitchen L.P.
371 Pearce Mill Road
Wexford, PA 15090
Attn: Alicia McGinnis

Breedlove Family Limited 220 7th Avenue
Beaver Falls, PA 15010
Attn: Mark H. Breedlove

Howell A. Breedlove
2015 Blairmont Drive
Pittsburgh, PA 15241

CogRX-A, LLC
2119 S. Villa Drive
Gibsonia, PA 15044
Attn: Alan M. Breedlove

The Connors Family Trust
6085 Greenbrier Drive
Huntington Beach, CA 92648

Daniel H. Cosgriff Trust
1900 Preston Road
Box 267-304 Plano, TX 75093

Downing Family Trust
Dated October 27, 1993
4899 County Road 222
Durango, CO 81303
Attn: Michael R. Downing, Ph.D.

Name and Address

Golden Seeds Advisors Fund LP
750 Lexington Avenue, 6th Floor
New York, NY 10022
Attn: Lauren Kane

Golden Seeds Cognition Therapeutics LLC
750 Lexington Avenue, 6th Floor
New York, NY 10022
Attn: Lauren Kane

Golden Seeds Advisors Fund 2 LP
750 Lexington Avenue, 6th Floor
New York, NY 10022
Attn: Lauren Kane

Golden Seeds Fund LP
750 Lexington Avenue, 6th Floor
New York, NY 10022
Attn: Lauren Kane

Golden Seeds Fund 2 LP
750 Lexington Avenue, 6th Floor
New York, NY 10022
Attn: Lauren Kane

Franz F. Hefti, Ph.D.
121 Boulderwood Drive
Bernardsville, NJ 07924

Innovation Works, Inc.
Suite 250
2000 Technology Drive
Pittsburgh, PA 15219
Attn: Deborah Walker

Johnson Family Trust
646 Vista Lane
Laguna Beach, CA 92651
Attn: Seth R. Johnson, Trustee

Name and Address

R & B Kleiest Living Trust
Robert A. Kleist, Trustee
7 Cherbourg
Newport Beach, CA 92660

M5Invest Partners
764 Mt. Moro Road
Villanova, PA 19085
Attn: Howard Morgan

John M. Murphy
34022 Capistrano By The Sea
Dana Point, CA 92629-2937

Michael J. Napoli, Jr.
928 N. Croft Avenue #102
Los Angeles, CA 90069

Ogden CAP Associates, LLC
390 Park Avenue
New York, NY 10022
Attn: Robert Gailus

Pittsburgh Life Sciences Greenhouse
2425 Sidney Street
Pittsburgh, PA 15203

Molly B. Schmid
650 W. 9th Street
Claremont, CA 91711

Setzer Family Trust U/D/T 02-02-98
1483 Northridge Drive
Prescott, AZ 86301
Attn: Edwin P. Setzer, Trustee

Sudek Family Trust
25 Coronado Pointe
Laguna Niguel, CA 92677
Attn: Richard Sudek, Trustee

Name and Address

TMC Investment Company, Inc.
TMC Investment Company, Inc.
c/o Stonewood Capital Management, Inc.
Three Gateway Center, 13 East
Pittsburgh, PA 15222
Attn: John H. Tippins

Eli Glezer
13 746 Durango Drive
Del Mar, CA 92014

PLSG Accelerator Fund, LLC
2425 Sidney Street
Pittsburgh, PA 15203

Paul M. Work
501 Marigold Ave.
Corona Del Mar, CA 92625-2408

David Schick
4126 Parva Ave.
Los Angeles, CA 90027

The Eastlack Family Living Trust
$^{c}/_{o}$ Robert Eastlack, Trustee
5265 Amber View Pt.
San Diego, CA 92130

Richard and Anne Hallock Family Trust Dated
June 19, 1995
11500 San Vicente Blvd, #406
Los Angeles, CA 90049

Michael and Ella Doka Family Trust Dated
July 2nd, 1997
7 Endicott
Coto De Caza, CA 92679

Richard S. Falk, Jr.
6921 Neptune Place
La Jolla, CA 92037

Name and Address

Gary Kostow
14820 Caminito Lorren
Del Mar, CA 92014

Frank and Rona Singer Family Trust
3552 Venture Drive
Huntington Beach, CA 92649

John Previs
2570 Windgate Road
Bethel Park, Pa 15102-2731

Susan Uchitelle And Benjamin Uchitelle, As
Joint Tenants With Right Of Survivorship
41 Crestwood Dr.
Clayton, MO 63105

Scott And Christina Worley, JTE
171 El Pueblo Way
Palm Beach, FL 33480

Donald R. Rady Trust dated November 26,
1992, Donald R. Rady, Trustor and Trustee
1919 Grand Ave., Suite 2f
San Diego CA 92109

Francis L. Sterling Trust dated 9/11/1997 as
Amended
65 Easton Lane
Moreland Hills, OH 44022

Deutsch Family Investment Partnership
2 Bridle Court
Oyster Bay Cove, New York 11771

Delta G. Corporation
22 Wedgewood Lane
Pittsburgh PA 15215

Kramer-Fabre Living Trust
2880 Torito Rd.
Santa Barbara, CA 93108

IN WITNESS WHEREOF, the parties have executed this Third Amended and Restated Investors' Rights Agreement as of the date first written above.

COMPANY:

By: _____
Name: _____
Title: _____

INVESTOR:

By: _____
Name: _____
Title: _____

[SIGNATURE PAGE TO THIRD AMENDED AND RESTATED
INVESTORS' RIGHTS AGREEMENT]

Exhibit 10.3

FIRST AMENDMENT TO
THIRD AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS FIRST AMENDMENT (the "First Amendment") to that certain Third Amended and Restated Investors' Rights Agreement dated as of March 20, 2014, among Cognition Therapeutics, Inc., a Delaware corporation (the "Company") and its stockholders party thereto (the "Investors' Rights Agreement"), is entered into as of March 23, 2020, by and among the Company and the undersigned stockholders of the Company constituting the holders of at least 60% of the Registrable Securities (as defined in the Investors' Rights Agreement) then outstanding (the "Required Investors"). All capitalized terms used but not defined in this First Amendment shall have the meanings assigned to them in the Investors' Rights Agreement.

Recitals

WHEREAS, the Company and the Required Investors desire to amend the Investors' Rights Agreement to remove the ability of the holders of at least 20% of the Registrable Securities then outstanding to demand registration of the Company's securities on a Form S-1 prior to 180 days after the effective date of an IPO;

WHEREAS, pursuant to Section 6.6 of the Investors' Rights Agreement, with certain exceptions not relevant to this First Amendment, any term of the Investors' Rights Agreement may be amended with the written consent of the Company and the Required Investors; and

WHEREAS, accordingly, the Company and the Required Investors are entering into this First Amendment to make such amendments to the Investors' Rights Agreement.

Agreement

NOW, THEREFORE, in consideration of the promises and covenants set forth herein, and intending to be legally bound hereby, the parties hereto agree as follows:

1. **Amendment to Section 2.1(a) of the Investors' Rights Agreement**. Section 2.1(a) of the Investors' Rights Agreement is hereby amended and restated in its entirety to provide as follows:

Section 2.1 Demand Registration.

(a) If at any time after 180 days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of at least 20% of the Registrable Securities then outstanding (or a proportionately lower percentage if the anticipated aggregate offering price, net of Selling Expenses, would exceed $5,000,000), then the Company shall (A) within 10 days after the date such request is given, give notice thereof (the "**Demand Notice**") to all Holders other than the Initiating Holders; and (B) as soon as practicable and in any event within 60 days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered

and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c), 2.1(d), 2.1(f) and 2.3.

2. **Effect of First Amendment**. The parties acknowledge and agree that all of the terms, provisions, covenants and conditions of the Investors' Rights Agreement shall hereafter continue in full force and effect in accordance with the terms thereof, except to the extent expressly modified, amended or revised herein; provided, however, that if any term or provision of this First Amendment shall conflict with or otherwise be inconsistent with any term or provision of the Investors' Rights Agreement, the terms and provisions of this First Amendment shall prevail.

3. **Governing Law**. This First Amendment shall be governed by and construed under the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of law.

4. **Effectiveness; Counterparts; Electronic Transmission**. In accordance with Section 6.6 of the Investors' Rights Agreement, this First Amendment shall become effective upon the execution of this First Amendment by the Company and the Required Investors. This First Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This First Amendment may, upon execution by a party, be transmitted by electronic or facsimile transmission with the same effect as if such party had delivered an executed original counterpart of this First Amendment.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the undersigned have executed this First Amendment to the Third Amended and Restated Investors' Rights Agreement as of the date set forth above.

REQUIRED INVESTORS:

Individuals Sign Below

Date: _____, 2020

_____
Signature

_____
Name:

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Date: _____, 2020

_____
Name of Stockholder (please print)

By: _____
Name: _____
Title: _____

[Signature Page to the First Amendment o the Third Amended and Restated Investors' Rights Agreement]

Exhibit 10.4

OFFICE LEASE AGREEMENT

between

RJ EQUITIES LP
(Landlord)

and

COGNITITION THERAPEUTICS, INC.
(Tenant)

Dated: July 1, 2017

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OFFICE LEASE AGREEMENT

This Office Lease Agreement (the "Lease") is made this day of July, 2017, by and between **RJ EQUITIES LP,** a Pennsylvania limited partnership ("Landlord") and **COGNITION THERAPEUTICS, INC.,** a Delaware corporation ("Tenant").

ARTICLE 1. BASIC TERMS

For the purposes of this Lease, the following terms shall have the meanings set forth below:

(a)	Landlord:	RJ EQUITIES LP, a Pennsylvania limited partnership
(b)	Tenant:	COGNITION THERAPEUTICS, INC., a Delaware corporation
(c)	Premises:	Suite 242 located on the second floor of the commercial building (the "Building") situated at 2403 Sidney Street, Pittsburgh, PA 15203 (the "Development") and as outlined on the Diagram of Development attached hereto as Exhibit "A". The Premises contains approximately 1,754 rentable square feet as depicted on the floor plan attached hereto as Exhibit "B".
(d)	Commencement Date:	July 1, 2017
(e)	Lease Term:	Three (3) years
(f)	Termination Date:	June 30, 2020
(g)	Extension Term:	Intentionally omitted.
(h)	Base Rent:	$29,818.00 per year / $2,484.83 per month
(i)	Base Year for Real Estate Taxes:	2017.
(j)	Base Year for Operating Costs:	2017.
(k)	Approximate rentable area of the Premises:	1,754.
(1)	Approximate rentable area of the Building:	221,000.
(m)	Tenant's Proportionate Share:	0.79%.

(n) Security Deposit: N/A.

(o) Permitted Uses: Office use

(p) Notification Addresses:

Landlord: RJ Equities LP
2403 Sidney Street, Suite 200
Pittsburgh, PA 15203
Attn: Ronald J. Tarquinio

Tenant: Cognition Therapeutics, Inc.
2403 Sidney Street, Suite 261
Pittsburgh, PA 15203
Attn: President

ARTICLE 2. PREMISES

(a) Office Space. Landlord, for and in consideration of the Rent (as defined below) to be paid and the covenants and agreements to be performed by Tenant, as hereinafter set forth, does hereby lease, demise and let unto Tenant the Premises, together with a non-exclusive license (in common with others), to use the common areas of the Building and the Development. Landlord reserves unto itself, however, the use of the roof, exterior walls and the area above and beneath the Premises, together with the right to install, maintain, use, repair and replace exterior windows and doors, pipes, ducts, conduits, wires and structural elements leading through the Premises in locations and in such a manner which shall not materially or adversely interfere with Tenant's use or occupancy thereof.

(b) Office Furniture. Landlord herby grants a license to Tenant to use those certain existing cubicles, desks, filing cabinets, chairs and other furniture and equipment which are currently in the Premises as of the date hereof (collectively, the "Office Furniture"). Tenant hereby acknowledges and agrees that: (i) title and ownership of the Office Furniture shall at all times remain with Landlord, and (ii) Tenant shall maintain and repair (and replace, if necessary) the Office Furniture during the Lease Term. Upon the expiration or earlier termination of the Lease Term, Tenant shall return all Office Furniture in substantially the same condition as delivered to Tenant as of the Commencement Date, normal wear and tear and damage from casualty excepted. TENANT HEREBY TAKES THE OFFICE FURNITURE IN ITS "AS-IS, WHERE IS" CONDITION "WITH ALL FAULTS" AND SPECIFICALLY AND EXPRESSLY WITHOUT ANY WARRANTIES, REPRESENTATIONS OR GUARANTEES, EITHER EXPRESS OR IMPLIED, AS TO ITS CONDITION, FITNESS FOR ANY PARTICULAR PURPOSE, MERCHANTABILITY, OR ANY OTHER WARRANTY OF ANY KIND, NATURE, OR TYPE WHATSOEVER FROM OR ON BEHALF OF LANDLORD.

ARTICLE 3. TERM AND COMMENCEMENT

(a) Term and Confirmation. The term of this Lease shall commence on the Commencement Date set forth in Article 1(d) and end on the Termination Date set forth in Article 1(f), unless extended or sooner terminated as provided herein, subject to adjustment as provided below and the other provisions hereof. If the Commencement Date is postponed as provided below, the Termination Date set forth in Article 1 shall be adjusted accordingly. Tenant shall execute a confirmation of the Commencement Date and other factual matters in such form as Landlord may reasonably request within ten (10) days after requested by Landlord following the Commencement Date; any failure to respond within such time shall be deemed an acceptance of the matters as set forth in Landlord's confirmation. If Tenant disagrees with Landlord's adjustment of the Commencement Date, Tenant shall pay Rent and perform all other obligations commencing on the date as determined by Landlord, subject to refund or credit when the matter is resolved.

(b) Commencement Delays. The Commencement Date, Rent and Tenant's other obligations shall be postponed to the extent Tenant is unable to occupy the Premises because Landlord fails to deliver possession of the Premises for any other reason, including holding over by prior occupants. If Landlord so fails for a ninety (90) day initial grace period, Tenant shall have the right to terminate this Lease by notice within ten (10) days. Any such delay in the Commencement Date shall not subject Landlord to liability for loss or damage resulting therefrom, and Tenant's sole recourse with respect thereto shall be the postponement of Rent or termination of this Lease in accordance with the preceding sentence.

ARTICLE 4. CONSTRUCTION OF PREMISES

Tenant confirms that (1) it has inspected the Premises and accepts the same in its existing "AS IS" condition, and (2) no repair, work, alterations or remodeling of the Premises is required to be done by Landlord as a condition of this Lease.

ARTICLE 5. BASE RENT

(a) Base Rent. Tenant shall pay to Landlord Base Rent, payable in advance without demand on the first day of each calendar month throughout the Term; provided, that Tenant shall pay Base Rent for the first full calendar month for which Base Rent shall be due (and any initial partial month) when Tenant executes and delivers this Lease.

(b) Additional Rent. Whenever under the terms of this Lease any sum of money is required to be paid by Tenant to Landlord in addition to the Base Rent herein reserved, and said additional amount so to be paid is not designated as "additional rent", then said amount shall nevertheless, at the option of Landlord, be deemed "additional rent" and collectible as such, but nothing herein contained shall be deemed to suspend or delay the payment of any sum at the time the same becomes due and payable hereunder, or limit any other remedy of Landlord. Nonpayment of additional rent beyond the expiration of applicable notice and/or cure periods shall constitute a default under this Lease to the same extent, and shall entitle the Landlord to the same remedies, as nonpayment of Base Rent. Where no time limit for payment is otherwise stated in the specific Lease provision applicable thereto, any such obligation shall be due and payable within fifteen (15) days following Tenant's receipt of a written statement showing in reasonable detail the basis for the amount claimed. Base Rent and additional rent are sometimes hereinafter referred to as "Rent".

(c) Payments. All payments of Rent shall be paid when due without any deduction, recoupment, set-off or counterclaim (except as otherwise set forth in this Lease) at the principal office of

the Landlord or at such other place as Landlord may from time to time direct. No delay by Landlord in providing a statement for Rent shall be deemed a default by Landlord or a waiver of Landlord's right to require payment of Tenant's obligations for any Rent due under the terms of this Lease.

ARTICLE 6. RENT ESCALATION

(a) Real Estate Tax Increases. Commencing on January 1, 2018, and thereafter through the term of this Lease, Tenant shall pay to Landlord, as additional rent, Tenant's Proportionate Share of the amount by which Real Estate Taxes incurred by Landlord during any calendar year following the Base Year for Real Estate Taxes shall exceed the Real Estate Taxes incurred by Landlord during such Base Year.

"Real Estate Taxes" shall be deemed to mean the aggregate amount of taxes and assessments levied, assessed or imposed upon the Development in which the Premises are located. For purposes hereof, Real Estate Taxes shall include, without limitation, real estate taxes, sewer rents, water rents, assessments (special or otherwise), transit taxes, any tax or excise on rentals or any other tax (however described) on account of rental received for use and occupancy of all or any part of the Premises, whether such taxes are imposed by the United States of America, the Commonwealth of Pennsylvania, the county in which the Premises is located or any local governmental municipality, authority or agency, or any other political subdivision of any of the foregoing. Real Estate Taxes shall also include all reasonable costs and expenses (including, without limitation, legal fees and court costs) incurred in connection with the protest or the reduction of any of the aforesaid taxes and or assessments, up to an amount equal to the reduction of any of the aforesaid taxes resulting from such protest. If at any time during the term hereof, a tax or excise on rents or any other tax, however described, is levied or assessed by any governmental authority on account of the rents hereunder or the interest of Landlord or Landlord's beneficiaries under this Lease, then such additional tax shall be included in Real Estate Taxes. Further, any tax assessed or levied by any governmental authority in lieu of the foregoing Real Estate Taxes shall also be included. For the purpose of determining Real Estate Taxes for any given calendar year, the amount to be paid for such calendar year shall be (a) with respect to assessments, the amount of the installments (and any interest) due and payable during such calendar year and (b) with respect to all other Real Estate Taxes, the amount due and payable during such calendar year, but only to the extent properly allocable to such calendar year. Notwithstanding anything in this Lease to the contrary, "Real Estate Taxes" shall not include (i) any capital stock, net income, profit tax, succession, transfer, franchise, gift, estate or inheritance tax, (ii) any transfer tax or recording charge resulting from a transfer of the Development or the Building or any interest in the Development or the Building or (iii) any penalties, interest or fines incurred by Landlord due to nonpayment or late payment of taxes.

(b) Operating Cost Increases. Commencing on January 1, 2018, and thereafter through the term of this Lease, Tenant shall pay to Landlord, as additional rent, Tenant's Proportionate Share of the amount by which Operating Costs incurred by Landlord during any calendar year following the Base Year for Operating Costs shall exceed the Operating Costs incurred by Landlord during such Base Year.

"Operating Costs" shall be deemed to mean all costs and expenses of any kind or nature incurred by Landlord in any calendar year in operating, policing, protecting, lighting, heating, air conditioning, insuring, repairing and maintaining the Building, other structures and improvements and the land constituting or supporting the Development, all in accordance with accepted principles of sound management of similar properties, and shall include (without limitation) all costs and expenses of operation, replacement, replacement and maintenance, including by way of illustration and not limitation: personal property taxes and any tax in addition to or in lieu thereof, assessed against Landlord or to be collected by

Landlord; utilities; supplies; materials; tools; insurance (including, but not limited to, commercial general liability, casualty, business interruption, rent loss insurance and flood and earthquake insurance); licenses, permits and inspection fees; cost of services of independent contractors (including property management fees); any tax, assessment, cost or fee incurred by Landlord in connection with the Development from any neighborhood improvement district or similar program or initiative; cost of compensation (including employment taxes and fringe benefits) of all persons who perform regular and recurring duties connected with day-to-day operation, maintenance and repair of the Development, its equipment and the component interior and exterior common areas, ceilings, floors, walks, stairs, stairwells, elevators, loading docks, trash compactor, malls and landscaped areas including janitorial, gardening, security, parking, operating engineer, painting, plumbing, electrical, carpentry, heating, ventilation, air conditioning, window washing, signage and advertising; rental expense or a reasonable allowance for depreciation of personal property used in such maintenance, operation and repair of the Development; those variable costs, expenses and disbursements which Landlord reasonably determines Landlord would have incurred had the Development been 100% occupied at all times during such calendar year; and amortization of Permitted Capital Expenditures (as hereinafter defined).

Notwithstanding anything in this Lease to the contrary, "Operating Costs" shall not include the following: costs to benefit, or relating to, a specific tenant, such as legal and other related expenses associated with the negotiation or enforcement of leases, and any penalties or damages from such lawsuits; costs associated with the financing or refinancing of debt or selling of the Building, the Development or any interest therein, such as points, broker's fees and attorney's fees; executive salaries and compensation of employees of Landlord above the grade of regional property manager; repairs and/or replacements which are covered by insurance claim or condemnation proceeds; leasing commissions, legal fees, tenant allowances or fit outs (including permit, license and inspection fees), advertising costs, space planning costs and promotional material; costs incurred by Landlord in connection with the original construction of the Building or the correction of latent defects in construction of the Building; depreciation and amortization (except for amortization of Permitted Capital Expenditures); costs paid to subsidiaries or affiliates of Landlord, to the extent that the costs exceed the reasonable costs that would have been paid had the services, supplies or materials been provided by unaffiliated parties on a reasonable basis; interest on debt or amortization payments on any mortgage or deeds of trust or any other borrowings and any ground rent; ground rents or rentals payable by Landlord pursuant to any over-lease or any compensation paid to clerks, attendants or other persons in commercial concessions operated by Landlord; costs incurred in managing or operating any "pay for" parking facilities within the Development; expenses resulting from the gross negligence or willful misconduct of Landlord or its agents, employees or contractors; any fines or fees for Landlord's failure to comply with governmental, quasi-governmental, or regulatory agencies' rules and regulations, or any costs or expenses incurred by Landlord due to violation by Landlord, or Landlord's agents, contractors or employees, of either the payment terms and conditions of any lease or, service contract or other agreement covering the Development or Landlord's obligations as owner of the Development; costs for sculpture, decorations, painting or other objects of art in excess of amounts typically spent for such items in office buildings of comparable quality in the competitive area of the Building; costs of any political, charitable or civic contribution or donations; Capital Items, except for Permitted Capital Expenditures; costs that are properly chargeable to particular tenants in the Development, including, without limitation, costs and expenses for providing heating and air conditioning service outside of normal business hours and damages to the Development or any part thereof caused by the act or neglect of another tenant; costs relating to utilities or other services to tenant spaces for which Tenant pays for such utilities or other services directly; costs properly attributable (applying generally accepted accounting principles) to other calendar years; costs paid by Landlord if and to the extent such costs are incurred by Landlord for any work or service furnished to any other tenant in the Development (other than Tenant) to a materially greater extent and in a materially more favorable manner than furnished generally to the remaining tenants in the Project (including Tenant); costs incurred with respect to preparation of income tax returns; and costs incurred in

cleaning up any environment hazard or condition in violation of any environmental law. “Permitted Capital Expenditures” means capital expenditures and capital repairs and replacements (“Capital Items”), provided such Capital Items (x) are necessitated by a change in law or regulation occurring after the Commencement Date; or (y) are reasonably intended to have cost-saving benefits over the Term of the Lease. The foregoing provision is for definitional purposes only and shall not be construed to impose any obligation upon Landlord to incur such expenses. No item of Operating Cost shall be included more than once in any given time period and no item of expense charged to Tenant as an Operating Cost shall be charged to Tenant as Real Estate Taxes or any other type of chargeable expense or cost. The property management fees incurred by Landlord shall only be chargeable to Tenant to the extent such property management fees do not exceed the property management fees incurred by other buildings of similar size and quality and located within the geographic area in which the Development is located.

(c) Method of Payment. Within sixty (60) days after the end of each calendar year (including the last calendar year of the term of this Lease), Landlord shall furnish Tenant a written statement showing in reasonable detail Landlord’s Real Estate Taxes and Operating Costs for the Base Year and the preceding calendar year and showing Tenant’s Proportionate Share of the amount of any increase in such Real Estate Taxes and/or Operating Costs over the amount thereof for the respective Base Year. Coincidentally with the monthly rent payment due following Tenant’s receipt of such statement, Tenant shall pay to Landlord an amount equal to the sum of (1) Tenant’s Proportionate Share of the increase in Real Estate Taxes and Operating Costs for the preceding calendar year over the amount thereof for the applicable Base Year; and (2) one-twelfth (1/12th) of such increases for the current calendar year multiplied by the number of rent payments (including the current one) then elapsed in such calendar year. Thereafter such one-twelfth (l/12th) amount shall be paid monthly with the Base Rent until subsequently adjusted in accordance with the terms of this Article.

(d) Tenant’s Proportionate Share. “Tenant’s Proportionate Share” of Taxes and Operating Costs shall be the percentages set forth in Article 1, but if the rentable area of the Premises or Building shall change, Tenant’s Proportionate Share shall thereupon become the rentable area of the Premises divided by the rentable area of the Building, subject at all times to adjustment as provided in this Article. Tenant acknowledges that the “rentable area of the Premises” under this Lease includes the usable area, without deduction for columns or projections, multiplied by a load or conversion factor, to reflect a share of certain areas, which may include lobbies, corridors, mechanical, utility, janitorial, boiler and service rooms and closets, restrooms, and other public, common and service areas. Except as provided expressly to the contrary herein, the “rentable area of the Building” shall include all rentable area of all space leased or available for lease at the Building, which Landlord may reasonably re-determine from time to time, to reflect re-configurations, additions or modifications to the Building.

(e) Tax Refunds, Protest Costs, and Expense Adjustments For Prior Years. Landlord shall each year: (i) credit against Real Estate Taxes any refunds received during such year, (ii) include in Real Estate Taxes any additional amount paid during such year, involving an adjustment to Real Estate Taxes for a prior year, due to error by the taxing authority, supplemental assessment, or other reason, (iii) include, in either Real Estate Taxes or Operating Costs, any fees for attorneys, consultants and experts, and other costs paid during such year in attempting to protest, appeal or otherwise seek to reduce or minimize Real Estate Taxes, by the terms of this Article, (iv) credit against Operating Costs the cost of any item previously included in Operating Costs, to the extent that Landlord receives reimbursement from insurance proceeds or a third party during such year (excluding tenant payments for Real Estate Taxes and Operating Expenses), and (v) make any other appropriate changes to reflect adjustments to Real Estate Taxes or Operating Expenses for prior years.

(f) Payments After Lease Term Ends. Tenant’s obligations to pay Tenant’s Proportionate Share of Real Estate Taxes and Operating Costs (or any other amounts) accruing during, or relating to, the

period prior to expiration or earlier termination of this Lease shall survive the expiration or termination of this Lease for a period of two (2) years. Tenant shall pay the full amount of such estimate and any additional amount due after the actual amounts are determined, in each case within thirty (30) days after Landlord sends a statement therefore. If the actual amount is less than the amount Tenant pays as an estimate, Landlord shall refund the difference within thirty (30) days after such determination is made.

(g) Audit Rights. In the event of any dispute as to the amount of Tenant's Proportionate Share of Operating Costs and Real Property Taxes, Tenant may, by prior written notice ("Audit Notice") given ninety (90) days following receipt of a Landlord's reconciliation statement ("Audit Period"), audit Landlord's accounting records with respect to Operating Expenses and Real Property Taxes relative to the year to which such statement relates. The audit shall be conducted by Tenant, or an accounting firm engaged by Tenant and reasonably satisfactory to Landlord (billing hourly and not on a contingency fee basis) ("Third Party Auditor"), and shall be conducted at the office of Landlord at which its records are kept or, at Landlord's election, the office of Landlord's property manager (if any). The audit shall be conducted at reasonable times during normal business hours. In no event will Landlord or its property manager be required to (i) photocopy any accounting records or other items or contracts, (ii) create any ledgers or schedules not already in existence, (iii) incur any costs or expenses relative to such inspection, or (iv) perform any other tasks other than making available such accounting records as aforesaid. Neither Tenant nor its auditor may leave the office of Landlord with originals of any materials supplied by Landlord. Tenant must pay Tenant's Proportionate Share of Operating Costs and Real Property Taxes when due pursuant to the terms of this Lease and may not withhold payment of Operating Costs, Real Property Taxes or any other Rent pending results of the audit or during a dispute regarding Operating Costs and Real Property Taxes. The audit must be completed within ninety (90) days of the date of Tenant's Audit Notice and the results of such audit shall be delivered to Landlord within forty-five (45) days of the date of Tenant's Audit Notice. If Tenant does not substantially comply with any of the aforementioned time frames, then the Landlord's statement will be conclusively binding on Tenant. If such audit or review correctly reveals that Landlord has overcharged Tenant, then within thirty (30) days after the results of such audit are made available to Landlord, the amount of such overcharge shall be deducted from the installments of Tenant's Share of Operating Costs and Real Property Taxes next becoming due. If the audit reveals that Tenant was undercharged, then within thirty (30) days after the results of the audit are made available to Tenant, Tenant agrees to reimburse Landlord the amount of such undercharge. Tenant agrees to keep the results of the audit confidential and will cause its agents, employees and contractors to keep such results confidential. To that end, Landlord may require Tenant and its auditor to execute a commercially reasonable confidentiality agreement provided by Landlord.

ARTICLE 7. LATE PAYMENT

A late charge of five (5%) percent shall be due and payable forthwith on the amount of Base Rent and additional rent not received by Landlord from Tenant on or before the tenth (10^{th}) day after such payment was due. In addition, Tenant shall pay interest at the Lease Interest Rate (as defined below) on any sum which is not paid when due, interest to run from the due date until such sum is paid. The "Lease Interest Rate" means four (4) percentage points per annum above the prime rate per annum announced from time to time by PNC Bank, N.A, or its successors.

ARTICLE 8. USE OF PREMISES

Tenant shall occupy and use the Premises only for the Permitted Uses set forth in Article 1. Tenant shall not occupy or use the Premises for any other purpose or business without the prior written consent of Landlord. Landlord has promulgated reasonable Rules and Regulations ("Rules and

Regulations"), which are attached hereto, made part hereof and marked as Exhibit "C". Tenant acknowledges receipt of and shall observe and comply with such Rules and Regulations. Tenant further acknowledges that Landlord, in Landlord's reasonable discretion, may from time to time adopt, amend, establish, modify, proscribe or restate such rules and regulations with regard to the operation of the Premises, the Building, and common areas of the Development; provided that such rules and regulations are generally applicable to all tenants, do not materially increase the financial burdens of Tenant and do not materially adversely affect Tenant's rights under this Lease. In the event of any conflict between the provisions of such rules and regulations and this Lease, the provisions of this Lease shall control.

ARTICLE 9. COMMON AREAS/PARKING

All parking areas, driveways, alleys, public corridors and fire escapes, and other areas, facilities and improvements as may be approved by Landlord from time to time for the general use, in common, of Tenant and other tenants, their employees, agents, invitees and licensees, shall at all times be subject to the exclusive control and management of Landlord, and Landlord shall have the right from time to time to establish, modify and enforce reasonable rules and regulations with respect to all such areas, facilities and improvements.

Landlord reserves the right to designate certain parking areas for non-exclusive permitted parking for tenant's employees, for general visitor parking, and for other designated uses. Landlord agrees to enforce its parking regulations for the mutual benefit of Landlord and tenants of the Development. Except for claims resulting from Landlord's intentional or grossly negligent acts, Landlord shall not be responsible or liable for damage or loss sustained to motor vehicles (including any contents) parked in the Development.

ARTICLE 10. ALTERATIONS

(a) Tenant shall not make any alterations, improvements or additions to the Premises or attach any fixtures or equipment thereto, without the Landlord's prior written approval, not to be unreasonably withheld. All alterations, improvements or additions made to the Premises or the attachment of any fixtures or equipment thereto shall be performed at Tenant's sole cost and expense. Tenant may affix pictures and shelving to the walls without Landlord's consent.

(b) All alterations, improvements or additions to the Premises made by Tenant shall be deemed to have been attached to the Premises and to have become the property of Landlord upon such attachment, and upon expiration of this Lease or renewal term thereof, Tenant shall not remove any of such alterations, improvements or additions; provided, however, that Landlord may designate by written notice to Tenant at the time Tenant requests consent those alterations and additions which shall be removed by Tenant at the expiration or termination of this Lease, and Tenant shall properly remove the same and repair any damage to the Premises caused by such removal. Notwithstanding anything in this Lease to the contrary, all furniture, trade fixtures and equipment installed by or for Tenant may be removed by Tenant at any time.

(c) In performing such alterations, improvements or additions, or in the removal thereof, Tenant shall use due care to cause as little damage or injury as possible to the Premises and the Building and shall repair all damage or injury that may occur to the Premises or the Building as a result thereof.

(d) Tenant agrees in doing any such work in or about the Premises to engage only such labor as will not conflict with or cause strikes or other labor disturbances among the Development service employees of Landlord. Any contractors employed by Tenant shall be subject to Landlord's prior written

approval, not to be unreasonably withheld. All such contractors shall be required to carry worker's compensation insurance, commercial general liability insurance and property damage insurance in amounts, form and content, and with companies reasonably satisfactory to Landlord.

(e) Prior to the commencement by Tenant of any work as set forth in this Article, Tenant shall obtain, at Tenant's sole cost and expense, all necessary permits, authorizations and licenses required by the various governmental authorities having jurisdiction over the Premises.

ARTICLE 11. MECHANIC'S LIENS

If any mechanics' or other lien shall be filed against the Premises or the Development purporting to be for labor or material furnished or to be furnished at the request of Tenant, then Tenant shall at its expense cause such lien to be discharged by payment, bond or otherwise within thirty (30) days after notice of filing thereof. As an alternative to causing the lien to be discharged of record, Tenant shall have the right to contest the validity of any lien or claim if Tenant shall first have posted a bond or other security reasonably satisfactory to Landlord (such as an undertaking with Landlord's title company to insure that, upon final determination of the validity of such lien or claim, Tenant shall immediately pay any judgment rendered against Tenant). If Tenant shall fail to take such action within such thirty (30) day period, Landlord may cause such lien to be discharged by payment, bond or otherwise, without investigation as to the validity thereof or as to any offsets or defenses thereto and Tenant shall, upon demand, reimburse Landlord for all amounts paid and costs incurred including reasonable attorney's fees, in having such lien discharged of record. Tenant shall indemnify and hold Landlord harmless from and against any and all claims, costs, damages, liabilities and expenses (including reasonable attorney's fees) which may be brought or imposed against or incurred by Landlord by reason of any such lien or its discharge.

ARTICLE 12. CONDITION OF PREMISES

Tenant acknowledges and agrees that, except as expressly set forth in this Lease, there have been no representations or warranties made by or on behalf of Landlord with respect to the Building, the Office Furniture, Premises or the Development or with respect to the suitability of any of them for the conduct of Tenant's business. The taking of possession of the Premises by Tenant shall conclusively establish that the Premises were at such time in satisfactory condition, order and repair, subject to latent defects which a reasonable inspection of the Premises would not disclose.

ARTICLE 13. UTILITIES AND SERVICES

(a) Utilities: Separately metered electric and gas service shall be made available to the Premises. Tenant shall pay for the cost of such utility services directly to the utility provider or to the Landlord, as the case may be.

(b) Building Services: Landlord shall provide the following to the Premises, the Building or the Development, as applicable:

1) Water and sewage for the Permitted Use;

2) Replacement standard light globes and/or standard fluorescent tubes and ballasts in the standard ceiling lighting fixtures;

3) HVAC, including maintenance of HVAC equipment and systems;

4) Passenger and freight elevator service and maintenance and repair;

5) Hot and cold water for drinking, lavatory and toilet purposes at those points of supply provided for nonexclusive general use of tenants of the Building, and points of supply in the Premises installed by or with Landlord's consent for the exclusive use of Tenant;

6) Maintenance and repair of interior common areas of the Building, including the public restrooms in the Building; and

7) Maintenance and repair of exterior common areas of the Development, including but not limited to cleaning of outside exterior windows and doors, snow removal and landscaping.

(c) Landlord does not warrant that the utilities or services provided for in this Article shall be free from slow-down, interruption or stoppage pursuant to voluntary agreement by and between Landlord and governmental bodies and regulatory agencies, or caused by the maintenance, repair, substitution, renewal, replacement or improvements of any of the equipment involved in the furnishing of any such utilities or services or caused by strikes, lockouts, labor controversies, fuel shortages, accidents, acts of God or the elements or any other cause beyond the reasonable control of Landlord; and specifically, no such slow-down, interruption or stoppage of any of such services shall be construed as an eviction, actual or constructive, of Tenant, nor shall same cause any abatement of Base Rent or additional rent payable hereunder or in any manner or for any purpose relieve Tenant from any of Tenant's obligations hereunder, unless same shall make a material portion of the Premises untenantable for a period of three (3) consecutive business days at which point Base Rent shall be abated until such time as the Premises are no longer untenantable, and in no event shall Landlord be liable for damages to persons or property or be in default hereunder as a result of such interruption or stoppage of service. Should said disruption of service or utilities cause significant interference with Tenant's business for a period of sixty (60) days, Tenant shall have the right to terminate this Lease by written notice to Landlord. Landlord shall provide Tenant with reasonable advance notice of any anticipated interruptions in utility or Building services, and Landlord shall use reasonable efforts to minimize disruption of Tenant's use and occupancy in connection therewith.

ARTICLE 14. ASSIGNMENT AND SUBLETTING

Tenant shall not assign this Lease or sublet the Premises, (whether by operation of law or voluntary agreement) in whole or in part, without the Landlord's prior written consent, not to be unreasonably withheld. In case of any assignment or subletting, Tenant shall remain primarily liable on this Lease and shall not be released from the performance of any of the terms, covenants and conditions hereof.

Notwithstanding the foregoing, Tenant may assign this Lease, or sublet the Premises or any portion thereof to an affiliate controlling, controlled by or under common control with Tenant, without Landlord consent, but with notice thereof to Landlord. Tenant may sublet all or a portion of the Premises without prior consent to third parties and entities related to Tenant either through affiliated or commercial relationships for office use. Any license, assignment, subleasing or other occupancy agreement shall be subject to all terms, covenants and conditions of this Lease and no license, assignment, subleasing or other occupancy agreement shall relieve Tenant of any liability hereunder. Upon Landlord's request, Tenant shall provide Landlord with copies of all reasonable documentation related to any license, assignment, sublease, or other occupancy agreement and Tenant shall require any permitted licensee, assignee, sublicensee, or other

occupant to obtain and maintain commercially reasonable insurance naming Landlord as additional insured. Tenant shall provide copies evidencing such insurance to Landlord upon Landlord's request.

ARTICLE 15. RIGHTS RESERVED BY LANDLORD

Except to the extent expressly limited herein, Landlord reserves full rights to control the Development, the Building and the Premises (which rights may be exercised without subjecting Landlord to claims for constructive eviction, abatement of Rent, damages or other claims of any kind), including more particularly, but without limitation, the following rights for Landlord, its employees or agents; provided however, Landlord shall use commercially reasonable efforts to exercise such rights in a manner that will first attempt to minimize interference with Tenant's use and occupancy of the Premises:

(a) Access to Premises. To enter the Premises in order to inspect, supply cleaning service or other services to be provided Tenant hereunder, show the Premises to current and prospective lenders, insurers, purchasers, tenants, brokers and governmental authorities, and perform any work or take any other actions reserved to Landlord under this Lease or applicable laws. However, Landlord shall: (i) provide reasonable advance written or oral notice to Tenant's on-site manager or other appropriate person (except in emergencies), (ii) take reasonable steps to minimize any significant disruption to Tenant's business, and following completion of any work, return Tenant's leasehold improvements, fixtures, property and equipment to the original locations and condition to the fullest extent reasonably possible, and (iii) take reasonable steps to avoid materially changing the configuration or reducing the square footage of the Premises, unless required by laws or other causes beyond Landlord's reasonable control (and in the event of any permanent reduction, the Rent and other rights and obligations of the parties based on the square footage of the Premises shall be proportionately reduced). Tenant shall not place partitions, furniture or other obstructions in the Premises which may prevent or impair Landlord's access to the systems and equipment for the Building or the systems and equipment for the Premises. If Tenant requests that any such access occur before or after Landlord's regular business hours and Landlord approves, Tenant shall pay all overtime and other additional costs in connection therewith.

(b) Changes to the Development. To: (i) paint and decorate, (ii) perform repairs or maintenance, and (iii) make replacements, restorations, renovations, alterations, additions and improvements, structural or otherwise in and to the Development or any part thereof, including any adjacent building, structure, facility, land, street or alley, or change the uses thereof (including changes, reductions or additions of corridors, entrances, doors, lobbies, parking facilities and other areas, structural support columns and shear walls, utility lines, pipes, duct work, cables, installations, docks, walks, elevators, stairs, solar tint windows or film, planters, sculptures, displays, and other amenities and features therein, and changes relating to the connection with or entrance into or use of the Building or any other adjoining or adjacent building or buildings, now existing or hereafter constructed). In connection with such matters, Landlord may among other things erect scaffolding, barricades and other structures, open ceilings, close entry ways, restrooms, elevators, stairways, corridors, parking and other areas and facilities, and take such other actions as Landlord deems appropriate.

ARTICLE 16. REPAIRS

(a) Subject to the provisions of Article 6 hereof, Landlord shall perform all maintenance and make all repairs or replacement necessary to maintain the structural, plumbing, HVAC and electrical systems (including replacement of light bulbs, ballasts and fixtures), exterior doors and windows, roof, exterior walls, demising walls and floor (but excluding interior ceiling, wall and floor finishes), common areas and utility lines and connections servicing the Premises, the Building or the Development in good

order and condition. Landlord shall commence such repairs as promptly as the circumstances reasonably permit and thereafter shall diligently pursue the same to completion with reasonable promptness. Notwithstanding anything contained in this Lease to the contrary, Tenant shall be responsible, at its sole cost and expense, for any maintenance, repairs and replacements made by the Landlord which are necessitated by the negligent acts, misuse or willful misconduct of Tenant, its agents, contractors, employees or invitees.

(b) Except as the Landlord is obligated for repairs as provided hereinabove, Tenant shall make at Tenant's sole cost and expense, all repairs necessary to maintain the Premises and shall keep the Premises and the fixtures therein in neat, clean, safe and orderly condition. In addition, and notwithstanding anything contained in this Lease to the contrary, the Tenant shall, at its sole cost and expense, maintain, repair and replace all lab equipment contained in the lab space portion of the Premises, including without limitation all water treatment systems and vacuum equipment. If the Tenant refuses or neglects to make such repairs, or fails to diligently prosecute the same to completion, after written notice from Landlord of the need therefore, Landlord may make such repairs at the expense of Tenant and such expense, along with a fifteen (15%) percent service charge, shall be collectible as additional rent.

(c) Landlord shall not be liable by reason of any injury to or interference with Tenant's business arising from the making of any repairs in accordance with this Article 16 in or to the Premises or the Building and Development or to any appurtenances or equipment therein; provided that Landlord shall interfere as little as reasonably practicable with the conduct of Tenant's business in the performance of the foregoing. There shall be no abatement of Rent because of such repairs, except as provided in Article 20 hereof.

ARTICLE 17. INDEMNIFICATION AND INSURANCE

(a) Indemnification.

(i) Tenant shall indemnify, hold harmless and defend Landlord from and against any and all costs, expenses (including reasonable counsel fees), liabilities, losses, damages, suits, actions, fines, penalties, claims or demands of any kind and asserted by or on behalf of any person or governmental authority, arising out of or in any way connected with, and Landlord shall not be liable to Tenant on account of, (i) any failure by Tenant to perform any of the agreements, terms, covenants or conditions of this Lease required to be performed by Tenant, (ii) any failure by Tenant to comply with any statutes, ordinances, regulations or orders of any governmental authority applicable to Tenant's occupancy and use of the Premises, or (iii) any accident, death or personal injury, or damage to or loss or theft of property, which shall occur in or about the Premises, except to the extent caused by the negligence or willful misconduct of Landlord, its agents, employees or contractors.

(ii) Landlord shall indemnify, hold harmless and defend Tenant from and against any and all costs, expenses (including reasonable counsel fees), liabilities, losses, damages, suits, actions, fines, penalties, claims or demands of any kind and asserted by or on behalf of any person or governmental authority, arising out of or in any way connected with, (i) any failure by Landlord to perform any of the agreements, terms, covenants or conditions of this Lease required to be performed by Landlord, or (ii) the negligence or willful misconduct of Landlord or its agents, employees or contractors.

(b) Required Insurance. Tenant shall maintain at its expense during the term with respect to the Premises and Tenant's use thereof and of the Building:

(i) Worker's compensation insurance in the amounts required by statute, and Employer Liability Insurance in at least the following amounts: (a) Bodily Injury by Accident - $500,000 per accident, (b) Bodily Injury by Disease - $500,000 per employee and (c) Aggregate Limit - $1,000,000 per policy year.

(ii) Property Damage Insurance for the protection of Tenant and Landlord, as their interest may appear, covering all risks of physical loss to Tenant's alterations or improvements, personal property, business records, fixtures and equipment in amounts not less than the full insurable replacement cost of such property and full insurable value of such other interests of Tenant, such policies to be in form reasonably satisfactory to Landlord.

(iii) Commercial general liability insurance in form reasonably satisfactory to Landlord with limits of at least the following amounts: (a) death or bodily injury - $2,000,000, (b) property damage or destruction (including loss of use thereof) - $2,000,000 per policy year. Such policy shall include endorsements: (1) for contractual liability covering Tenant's indemnity obligations under this Lease, and (2) for adding Landlord, Landlord's mortgagee, the management company for the Development, and other parties designated by Landlord, as additional insureds.

(c) Certificates, Subrogation and Other Matters. Tenant shall provide Landlord with certificates evidencing the coverage required hereunder prior to the Commencement Date, or Tenant's entry to the Premises for construction of improvements or any other purpose (whichever first occurs). Such certificates shall state that such insurance coverage may not be changed, canceled or non-renewed without at least thirty (30) days' prior written notice to Landlord. Tenant shall provide renewal certificates to Landlord at least ten (10) days prior to expiration of such policies. Tenant's insurance policies shall be primary to all policies of Landlord and any other additional insureds (whose policies shall be deemed excess and noncontributory). All insurance required hereunder shall be provided by responsible insurers licensed in the Commonwealth of Pennsylvania, and shall have a general policy holder's rating of at least A and a financial rating of at least X in the then current edition of Best's Insurance Reports. The parties mutually hereby waive all rights and claims against each other for all losses covered by their respective insurance policies, and waive all rights of subrogation for their respective insurers. The parties agree that their respective insurance policies are now, or shall be, endorsed such that said waiver of subrogation shall not affect the right of the insured to recover thereunder. Landlord disclaims any representations as to whether the foregoing coverages will be adequate to protect Tenant.

(d) Landlord Insurance. At all times during the Lease Term, Landlord agrees to maintain in force and effect (i) all-risk fire and extended coverage insurance on the Building, and (ii) commercial general liability insurance with limits and deductibles consistent with those maintained by owners of similarly situated buildings in the vicinity of the Building.

ARTICLE 18. LANDLORD'S LIABILITY

Except for claims arising from the negligent acts or willful misconduct of Landlord or its agents, employees or contractors, Tenant waives all claims against Landlord and Landlord's partners, members, agents and employees for injury or death to persons, damage to property or any other interest of Tenant sustained by Tenant or a party claiming by or through Tenant resulting from: (a) any defect in or failure of structural, plumbing, sprinkling, electrical, heating or air conditioning systems or equipment, or any other systems and equipment of the Premises or the Building or from the drains, pipes, plumbing or sewer; (b) broken glass; (c) any acts or omissions of the other tenants or occupants of the Building or of nearby buildings; (d) any acts or omissions of other persons; (e) damage or loss sustained to motor vehicles (including any contents) parked at or operating within the Development, from any cause; and (f) theft, Act of God, public enemy,

injunction, riot, strike, insurrection, war, court order, or any order of any governmental authorities having jurisdiction over the Premises.

ARTICLE 19. COMPLIANCE WITH INSURANCE REQUIREMENTS

Tenant agrees that Tenant will not do or suffer to be done, any act, matter or thing, objectionable to the fire insurance companies whereby the fire insurance or any other insurance now in force or hereafter to be placed on the Premises or any part thereof, or on the Building of which the Premises may be a part, shall become void or suspended, or whereby the same shall be rated as a more hazardous risk than at the date when Tenant receives possession hereunder. In case of a breach of this covenant, in addition to all other remedies of Landlord hereunder, Tenant agrees to pay to Landlord as additional rent, any and all increases in premiums on insurance carried by Landlord on the Premises or any part thereof, or on the Building of which the Premises may be a part, caused in any way by the occupancy of Tenant. Notwithstanding the foregoing, Landlord acknowledges that the Permitted Use shall not constitute a breach of this Article 19.

ARTICLE 20. FIRE OR OTHER CASUALTY

(a) If the Building and/or Premises are damaged by fire or any other cause to such extent that the same cannot be restored, as reasonably estimated by Landlord, within one hundred twenty (120) days after the date of such damage or destruction, then Landlord shall, no later than the sixtieth (60th) day following the damage, give Tenant notice of Landlord's election either to (a) restore the Building and Premises or (b) terminate this Lease. In the event Landlord elects to terminate this Lease, the Lease shall terminate on the earlier of the date of such notice or the date upon which Tenant surrenders possession of the Premises. In such event, the Rent and other charges due hereunder shall be apportioned as of the date of such casualty, and any Rent paid for any period beyond said date shall be repaid to Tenant. If the time of restoration as estimated by Landlord shall be less than one hundred twenty (120) days, or if Landlord does not elect to terminate this Lease, as hereinabove provided, Landlord shall restore the Building and the Premises, and Tenant shall have not right to terminate this Lease except as herein provided. Tenant shall, in such event, restore fixtures and improvements owned by Tenant to the original condition. Notwithstanding the foregoing, however, if the time of restoration as reasonably estimated by Landlord exceeds one hundred twenty (120) days, Tenant shall have the right to terminate this Lease upon written notice given to Landlord within thirty (30) days after the date of Landlord's notice of the estimated restoration period. Landlord shall deliver notice of the estimated restoration period within sixty (60) days after the date of the casualty.

(b) In any such case in which use of the Premises is affected by any damage thereto, there shall be an abatement or an equitable reduction in Rent, depending on the period for which, and the extent to which, the Premises is not reasonably usable for the purposes for which it is leased hereunder. If the damage results from the fault of Tenant, or Tenant's agents, servants, visitors or licensees, Tenant shall not be entitled to any abatement or reduction of Rent up to the amount of the deductible paid by Landlord.

ARTICLE 21. SUBORDINATION

This Lease shall be subject and subordinate to the lien of any mortgage, or renewals, modifications, consolidations, replacements or extensions thereof, which now or hereafter may affect the Premises. Tenant shall, at Landlord's request, execute such agreements and other instruments as Landlord or any mortgagee of the Premises reasonably shall deem necessary or desirable to subordinate this Lease to the lien of any

present or future mortgage, mortgages or construction loans against the Premises. The subordination of this Lease shall be subject to any current or future mortgage holder(s) agreement not to disturb Tenant's occupancy so long as Tenant is not then in default of this Lease. Tenant specifically approves and, upon Landlord's request, agrees to execute an Estoppel Certificate and a Subordination, Nondisturbance and Attornment Agreement substantially in the forms attached hereto as Exhibits "E" and "F", respectively.

ARTICLE 22. CONDEMNATION

(a) In the event the Premises, or any part thereof, shall be taken or condemned permanently or temporarily for any public or quasi-public use or purpose by any competent authority in appropriation proceedings or by any right of eminent domain, the entire compensation award therefore, including leasehold, reversion and fee, shall belong to the Landlord without any deduction therefrom for any present or future estate of Tenant. Tenant shall, however, be entitled to claim, prove and receive in such condemnation proceedings such award as may be allowed for fixtures and other equipment installed by it, and for moving expenses, but only if such award shall be in addition to the award to Landlord.

(b) If the entire Building shall be so taken by virtue of eminent domain, this Lease shall terminate on the date when title vests pursuant to such taking, and the Rent and other charges hereunder shall be apportioned as of said date, and any Rent paid for any period beyond said date shall be repaid to Tenant.

(c) If more than twenty percent (20%) of the floor area comprising the Premises shall be so taken, or if a portion of the Building or Development is taken which materially interferes with Tenant's use of the Premises, either party shall have the right to cancel and terminate this Lease as of the date of such taking, upon giving notice to the other party within thirty (30) days after notice to Tenant from Landlord or the condemning authority that such Premises are to be appropriated or taken. In the event that this Lease is not terminated as herein provided, this Lease shall continue, with an equitable and proportionate adjustment, effective on the date of taking, in Rent and other charges due hereunder based upon the reduction in floor area.

ARTICLE 23. ESTOPPEL CERTIFICATES

Tenant shall, at any time and from time to time, upon thirty (30) days written request by Landlord, execute, acknowledge and deliver to Landlord a statement in writing duly executed by Tenant (i) certifying that this Lease is in full force and effect without modification or amendment (or, if there have been any modifications or amendments, that this Lease is in full force and effect as modified and amended and setting forth in full all modifications and amendments), (ii) certifying the dates to which Base Rent and additional rent have been paid, and (iii) either certifying that to the knowledge of Tenant no default exists under this Lease or specifying each such default, and (iv) certifying such other matters as Landlord and/or any lender may reasonably request; it being the intention and agreement of Landlord and Tenant that any such statement by Tenant may.be relied upon by a prospective purchaser or a prospective mortgagee of the Building, or current mortgagee of the Building, or by others, in any matter affecting the Premises.

ARTICLE 24. DEFAULT

The occurrence of any of the following events shall constitute a default by Tenant under this Lease:

(a) Failure of Tenant to take possession of the Premises within thirty (30) days following the Commencement Date;

(b) A failure by Tenant to pay any installment of Base Rent hereunder within seven (7) days after the due date or a failure to pay any such other sum herein required to be paid by Tenant within thirty (30) days after written notice thereof;

(c) An abandonment of the Premises by Tenant;

(d) An assignment of this Lease or subletting of the Premises in violation of this Lease;

(e) A failure by Tenant to pay, when due, any installment of Rent hereunder on two (2) or more occasions within any period of twelve (12) consecutive months;

(f) The failure by Tenant to maintain insurance as required by the provisions of Article 17 hereof;

(g) A failure by Tenant to observe and perform any other material provision or covenant of this Lease to be observed or performed by Tenant, where such failure continues for thirty (30) days after written notice thereof from Landlord to Tenant;

(h) The filing of a petition by or against Tenant for adjudication as a bankrupt or insolvent or for reorganization or for the appointment pursuant to any local, state or federal bankruptcy or insolvency law of a receiver or trustee of Tenant's property; or an assignment by Tenant for the benefit of creditors; or the taking possession of the property of Tenant by any local, state or federal governmental officer or agency or court-appointed official for the dissolution or liquidation of Tenant or for the operating, either temporary or permanently, of Tenant's business, provided, however, that if any such action is commenced against Tenant the same shall not constitute a default if Tenant causes the same to be dismissed within sixty (60) days after the filing of same; or

(i) A default or breach by Tenant beyond the expiration of applicable notice and/or cure periods under any other lease with Landlord in connection with the Building.

ARTICLE 25. PROVISIONS RELATED TO LANDLORD'S REMEDIES

(a) Remedies. Upon the occurrence of any event of default set forth above and the expiration of any applicable notice and grace period, Landlord shall have the rights and remedies hereinafter set forth to the extent permitted by law, which shall be distinct, separate and cumulative with and in addition to any other right or remedy allowed under law or any other provision of this Lease:

(1) Landlord may terminate this Lease and Tenant's right of possession, reenter and repossess the Premises by detainer suit, summary proceedings or other lawful means, and recover from Tenant: (i) any unpaid Rent as of the termination date; (ii) the amount by which: (a) any unpaid Rent which would have accrued after the termination date during the balance of the term exceeds (b) the reasonable rental value of the Premises under a lease substantially similar to this Lease, taking into account among other things the condition of the Premises, market conditions and the period of time the Premises may reasonably remain vacant before Landlord is able to re-lease the same to a suitable replacement tenant, and Costs of Reletting (as defined in Paragraph (g) below) that Landlord may incur in order to enter such replacement lease, (iii) any other amounts necessary to compensate Landlord for all damages proximately caused by Tenant's failure to perform its obligations under this Lease, but excluding consequential, indirect

or special damages. For purposes of computing the amount of rent herein that would have accrued after the termination date, Tenant's obligations for Real Estate Taxes and Operating Costs shall be projected based upon the average rate of increase in such items from the Commencement Date through the termination date (or if such period shall be less than three years, then based on Landlord's reasonable estimates). The amounts computed in accordance with the foregoing subclauses (a) and (b) shall both be discounted in accordance with accepted financial practice at the rate of four (4%) percent per annum to the then present value.

(2) Landlord may terminate Tenant's right of possession, reenter and repossess the Premises by detainer suit, summary proceedings or other lawful means, without terminating this Lease, and recover from Tenant: (i) any unpaid Rent as of the date possession is terminated, (ii) any unpaid rent which thereafter accrues during the term from the date possession is terminated through the time of judgment (or which may have accrued from the time of any earlier judgment obtained by Landlord), less any consideration received from replacement tenants as further described and applied pursuant to Paragraph (g) below, and (iii) any other amounts necessary to compensate Landlord for all damages proximately caused by Tenant's failure to perform its obligations under this Lease, including all Costs of Reletting, but excluding consequential, indirect or special damages. Tenant shall pay any such amounts to Landlord as the same accrue or after the same have accrued from time to time upon demand. At any time after terminating Tenant's right to possession as provided herein, Landlord may terminate this Lease as provided in clause (1) above by notice to Tenant, and Landlord may pursue such other remedies as may be available to Landlord under this Lease or applicable law.

(b) Reletting. If this Lease or Tenant's right to possession is terminated or Tenant abandons the Premises, Landlord may: (i) enter and secure the Premises, change the locks, install barricades, remove any improvements, fixtures or other property of Tenant therein, perform any decorating, remodeling, repairs, alterations, improvements or additions and take such other actions as Landlord shall determine in Landlord's sole discretion to prevent damage or deterioration to the Premises or prepare the same for reletting, and (ii) relet all or any portion of the Premises (separately or as part of a larger space), for any rent, use or period of time (which may extend beyond the term hereof), and upon any other terms as Landlord shall determine in Landlord's sole discretion, directly or as Tenant's agent. The consideration received from such reletting shall be applied pursuant to the terms of Paragraph (g) hereof, and if such consideration, as so applied, is not sufficient to cover all Rent and damages to which Landlord may be entitled hereunder, Tenant shall pay any deficiency to Landlord as the same accrues or after the same has accrued from time to time upon demand, subject to the other provisions hereof.

(c) Specific Performance. Landlord shall at all times have the right without prior demand or notice except as required by applicable law to: (i) seek any declaratory, injunctive or other equitable relief, and specifically enforce this Lease or restrain or enjoin a violation of any provision hereof, and Tenant hereby waives any right to require that Landlord post a bond or other security in connection therewith, and (ii) sue for and collect any unpaid Rent which has accrued.

(d) Returned Checks. If Landlord receives two (2) or more checks from Tenant which are returned by Tenant's bank for insufficient funds, Landlord may require that all checks thereafter be bank certified or cashier's checks (without limiting Landlord's other remedies). All bank service charges resulting from any returned checks shall be borne by Tenant.

(e) Landlord's Cure of Tenant Defaults. If Tenant fails to perform any obligation under this Lease for five (5) days after notice thereof by Landlord (except that no notice shall be required in emergencies), Landlord shall have the right (but not the duty), to perform such obligation on behalf and for the account of Tenant. In such event, Tenant shall reimburse Landlord upon demand, as additional rent, for all expenses reasonably incurred by Landlord in performing such obligation together with an amount equal

to fifteen (15%) percent thereof for Landlord's overhead, and interest thereon at the Lease Interest Rate from the date of demand. Landlord's performance of Tenant's obligations hereunder shall not be deemed a waiver or release of Tenant therefrom.

(f) Intentionally Omitted.

(g) Other Matters. No re-entry or repossession, repairs, changes, alterations and additions, reletting, or any other action or omission by Landlord shall be construed as an election by Landlord to terminate this Lease or Tenant's right to possession, nor shall the same operate to release Tenant in whole or in part from any of Tenant's obligations hereunder, unless express notice of such intention is sent by Landlord to Tenant. Landlord may bring suits for amounts owed by Tenant hereunder or any portions thereof, as the same accrue or after the same have accrued, and no suit or recovery of any portion due hereunder shall be deemed a waiver of Landlord's right to collect all amounts to which Landlord is entitled hereunder, nor shall the same serve as any defense to any subsequent suit brought for any amount not therefor reduced to judgment. Landlord may pursue one or more remedies against Tenant and need not make an election of remedies except as required by applicable law. All rent and other consideration paid by any replacement tenants shall be applied at Landlord's option: (i) first, to the Costs of Reletting, (ii) second, to the payment of all costs of enforcing this Lease against Tenant or any guarantor, (iii) third, to the payment of all interest and service charges accruing hereunder, (iv) fourth, to the payment of Rent theretofore accrued, and (v) with the residue, if any, to be held by Landlord and applied to the payment of Rent and other obligations of Tenant as the same become due (and with any remaining residue to be retained by Landlord). "Costs of Reletting" shall include without limitation, all costs and expenses incurred by Landlord for any repairs or other matters described in Paragraph (b) above, brokerage commissions, advertising costs, attorneys' fees, any economic incentives given to enter leases with replacement tenants, and costs of collecting rent from replacement tenants. Landlord shall be under no obligation to observe or perform any provision of this Lease on its part to be observed or performed which accrues while Tenant is in default hereunder. The times set forth herein for the curing of defaults by Tenant are of the essence of this Lease.

ARTICLE 26. LANDLORD'S DEFAULT; RIGHT TO CURE

(a) If Landlord shall fail to perform any obligation under this Lease required to be performed by Landlord, Landlord shall not be deemed to be in default hereunder nor subject to any claims for damages of any kind, unless such failure shall have continued for a period of thirty (30) days after written notice thereof by Tenant (provided, if the nature of Landlord's failure is such that more time is reasonably required in order to cure, Landlord shall not be in default if Landlord commences to cure within such thirty (30) day period and thereafter diligently seeks to cure such failure to completion).

(b) Upon the occurrence of any event of default by Landlord after the expiration of any applicable cure and grace period, Tenant shall have all rights and remedies to the extent permitted by law or in equity, which be distinct, separate and cumulative to the extent permitted by law.

ARTICLE 27. WAIVER

The failure or delay on the part of Landlord or Tenant to enforce or exercise at any time any of the provisions, rights or remedies in the Lease shall in no way be construed to be a waiver thereof, nor in any way to affect the validity of this Lease or any part hereof, or the right of the Landlord or Tenant to thereafter enforce each and every such provision, right or remedy. No waiver of any breach of this Lease shall be held to be a waiver of any other or subsequent breach. The receipt by Landlord of lesser amount than the Rent

due at a time when the rent is in default under this Lease shall not be construed as a waiver of such default. The receipt by Landlord of a lesser amount than the Rent due shall not be construed to be other than a payment on account of the Rent then due, nor shall any statement on Tenant's check or any letter accompanying Tenant's check be deemed an accord and satisfaction and Landlord may accept such payment without prejudice to Landlord's right to recover the balance of the rent due or to pursue any other remedies provided in this Lease. No act or thing done by Landlord or Landlord's agents or employees during the term of this Lease shall be deemed an acceptance of a surrender of the Premises, and no agreement to accept such a surrender shall be valid unless in writing and signed by Landlord.

ARTICLE 28. UTILITY DEREGULATION

Landlord has advised Tenant that various utility companies (each to be referred to herein as a "Current Service Provider") are the utility companies selected by Landlord to provide service for the Development. Notwithstanding the foregoing, if permitted by law, Landlord shall have the right at any time and from time to time during the term of this Lease to either contract for service from a different company or companies providing service (each such company shall hereinafter be referred to as an "Alternate Service Provider") or continue to contract for service from the Current Service Provider.

Tenant shall cooperate with Landlord, the Current Service Providers, and any Alternate Service Provider as reasonably necessary, and shall allow Landlord, the Current Service Providers, and any Alternate Service Provider reasonable access to the Building's lines, feeders, risers, wiring, and other machinery within the Premises.

Unless caused by the willful misconduct or negligence of Landlord, its agents or employees, Landlord shall in no way be liable or responsible for any loss, damage, or expense that Tenant may sustain or incur by reason of any failure, interference, disruption, or defect in the supply of utility services furnished to the Premises, or of any change in the quality or character of the utility services supplied by the Current Service Providers or any Alternate Service Provider, and no such change, failure, defect, unavailability, or unsuitability shall constitute an actual or constructive eviction, in whole or in part, or entitle Tenant to any abatement or diminution of rent, or relieve Tenant from any of its obligations under this Lease.

ARTICLE 29. TELECOMMUNICATIONS

(a) Telephone Lines. Subject to Landlord's continuing right of supervision and approval (not to be unreasonably withheld), and the other provisions hereof, Landlord shall: (i) install telephone lines ("Lines") connecting the Premises to Landlord's terminal block on the floor or floors on which the Premises are located, or (ii) use such Lines as may currently exist and already connect the Premises to such terminal block. Landlord's predecessor or independent contractor has heretofore connected such terminal block through riser system Lines to Landlord's main distribution frame ("MDF") for the Property. Landlord disclaims any representations, warranties or understandings concerning the capacity, design or suitability of Landlord's riser Lines, MDF or related equipment. If there is, or will be, more than one tenant on any floor, at any time, Landlord may allocate, and periodically reallocate, connections to the terminal block based on the proportion of square feet each tenant occupies on such floor, or the type of business operations or requirements of such tenants, in Landlord's reasonable discretion. Landlord may arrange for an independent contractor to review Tenant's request for approval hereunder, monitor or supervise Tenant's installation, connection and disconnection of Lines, and provide other such services, or Landlord may provide the same.

(b) Installation. Landlord shall install Tenant's Lines and make connections and disconnection at the terminal blocks as described above, and Landlord shall use an experienced and qualified contractor.

(c) Limitation of Liability. Unless due solely to Landlord's intentional misconduct or negligent acts, Landlord shall have no liability for damages arising, and Landlord does not warrant that the Tenant's use of the Lines will be free, from the following (collectively called "Line Problems"): (i) any eavesdropping, wire-tapping or theft of long distance access codes by unauthorized parties, (ii) any failure of the Lines to satisfy Tenant's requirements, or (iii) any capacitance, attenuation, cross-talk or other problems with the Lines, any misdesignation of the Lines in the MDF room or wire closets, or any shortages, failures, variations, interruptions, disconnections, loss or damage caused by or in connection with the installation, maintenance, replacement, use or removal of any other Lines or equipment at the Development by or for other tenants at the Development, by any failure of the environmental conditions at or the power supply for the Development to conform to any requirements of the Lines or any other problems associated with any Lines or by any other cause. Unless due solely to Landlord's willful misconduct or negligent acts, under no circumstances shall any Line Problems be deemed an actual or constructive eviction of Tenant, render Landlord liable to Tenant for abatement of any rent or other charges under the Lease, or relieve Tenant from performance of Tenant's obligations under the Lease. Landlord in no event shall be liable for damages by reason of loss of profits, business interruption or other consequential damage arising from any Line Problems.

ARTICLE 30. SURRENDER

The Lease shall terminate and Tenant shall deliver up and surrender possession of the Premises on the last day of the term hereof, and Tenant waives the right to any notice of termination or notice to quit and Tenant hereby waives all right to any such notice as may be provided under any laws now or hereafter in effect in Pennsylvania, including but not limited to the Landlord and Tenant Act of 1951, as amended. Tenant covenants that upon the expiration or sooner termination of this Lease Tenant shall deliver up and surrender possession of the Premises in the same condition in which Tenant has agreed to keep the same during the continuance of this Lease and in accordance with the terms hereof, ordinary wear and tear and damage from casualty or condemnation excepted.

ARTICLE 31. QUIET ENJOYMENT

Landlord covenants and agrees that Tenant, upon paying the Rent herein provided for and observing and keeping the covenants, agreements and conditions on its part to be kept, shall lawfully and quietly hold, occupy and enjoy the Premises during the Lease without hindrance or interruption by Landlord or anyone claiming by, through or under Landlord.

ARTICLE 32. HOLDING OVER

Unless Landlord expressly agrees otherwise in writing, Tenant shall pay Landlord 150% of the amount of Rent then applicable prorated on a per diem basis for each day Tenant shall fail to vacate or surrender possession of the Premises or any part thereof after expiration or earlier termination of this Lease as required under Article 30, together with all damages sustained by Landlord on account thereof. Tenant shall pay such amounts on demand, and, in the absence of demand, monthly in advance. The foregoing provisions, and Landlord's acceptance of any such amounts, shall not serve as permission for Tenant to hold-over, nor serve to extend the term (although Tenant shall remain a tenant at sufferance bound to comply with all provisions of this Lease until Tenant properly vacates the Premises.

ARTICLE 33. ENVIRONMENTAL COVENANTS, REPRESENTATIONS AND WARRANTIES

(a) Tenant shall comply with all laws, regulations, ordinances and other governmental standards applicable to Tenant's use of the Premises with respect to hazardous waste, hazardous substances and any and all other environmental matters. Furthermore, Tenant shall procure and maintain all licenses and permits required by such applicable laws, ordinances or regulations. Tenant covenants and agrees that it shall not release, emit, or discharge at or from the Premises any hazardous or toxic substances consisting of any hazardous or toxic chemical, waste, byproduct, pollutants, contamination, compound, product or substance, including, without limitation, asbestos, polychlorinated byphenyls, petroleum (including crude oil or any fraction thereof), and any material the exposure to, or manufacture, possession, presence, use, generation, storage, transportation, treatment, release, disposal, abatement, cleanup, removal, remediation or handling of which, is prohibited, controlled or regulated by federal, state, regional, county, local, governmental, public or private statute, law, regulation, ordinance, order, consent decree, judgment, permit, license, code, covenant, deed restrictions, common law, treaty, convention or other requirement, pertaining to protection of the environmental, health or safety of persons, natural resources, conservation, wildlife, waste management, any hazardous material activity, and pollution (including, without limitation, regulation of releases and disposals to air, land, water and ground water). These requirements include, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. 9601 et seq., Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 and Solid and Hazardous Waste Amendments of 1984, 42 U.S.C. 6901 et seq., Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, 33 U.S.C. 1251, et seq., Clean Air Act of 1966, as amended, 42 U.S.C. 7401 et seq., Toxic Substances Control Act of 1976, 15 U.S.C. 2601 et seq., Occupational Safety and Health Act of 1970, as amended, 29 U.S.C. 651 et seq., Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. 11001 et seq., National Environmental Policy Act of 1975, 42 U.S.C. 300(f) et seq., and any similar or implementing Pennsylvania laws, and all amendments, rules, regulations, guidance documents and publications promulgated thereunder.

(b) In the event Tenant receives any notice of the happening of: (1) any event arising from Tenant's use or occupancy of the Premises involving an emission, spill, release or discharge at or from the Premises into or upon (i) the air; (ii) soils (whether on the Premises or neighboring property) or any improvements located thereon; (iii) surface water or ground water; (iv) the sewer system servicing the Premises, except as allowed under current law, regulation or permit, of any regulated quantities of toxic or hazardous substances or wastes (intended hereby and hereafter to include any and all such materials listed in any federal, state or local law, code and ordinances and all rules and regulations promulgated thereunder, as hazardous) (any of which is hereinafter referred to as "Hazardous Discharge"); or (2) any complaint, order, directive, claim, citation or notice by any governmental authority or any other person or entity arising from Tenant's use or occupancy of the Premises with respect to (i) air emissions; (ii) spills, releases or discharges to soils or any improvements located thereon, surface water, ground water or the sewer, septic system or waste treatment, storage or disposal system servicing the Premises; (iii) solid or liquid waste disposal; (iv) the use, generation, storage, transportation or disposal of toxic or hazardous substances or wastes; or (v) any other environmental, health or safety matter relating to any of Tenant's activity upon the Premises, including any improvements located thereon or neighboring property (any of which is hereinafter referred to as an "Environmental Complaint"), then Tenant shall give immediate notice of same to Landlord, detailing all relevant facts and circumstances. Tenant shall, upon receipt of notice of a Hazardous Discharge or Environmental Complaint, and at its sole cost and expense, promptly and completely take all actions necessary to remove, resolve or minimize the impact of such Hazardous Discharge or Environmental Complaint on or from the Premises, and restore the affected property to its prior condition.

Without limitation on the foregoing, and in the event Tenant fails to take the actions set forth herein, Landlord shall have the right, but not the obligation, to enter onto the Premises and take any actions as it

deems necessary or advisable to clean up, remove, resolve or minimize the impact or otherwise deal with any Hazardous Discharge or Environmental Complaint upon Landlord's receipt of any notice from any person or entity asserting the happening of a Hazardous Discharge or Environmental Complaint on or from or pertaining to the Premises and arising from Tenant's use or occupancy of the Premises. All reasonable costs and expenses incurred by Landlord in the exercise of any such rights shall be deemed to be additional rent hereunder and shall be immediately payable by Tenant to Landlord upon demand.

(c) Tenant, its successors and assigns, shall forever indemnify, defend and hold harmless Landlord, its partners, members, directors, officers, employees and agents, and successors and assigns from and against all damages, punitive damages, liabilities, losses, demands, claims, cost recovery actions, lawsuit, administrative proceedings, orders, response costs, compliance costs, investigation expenses, consultant fees, attorneys' fees and litigation expenses, arising from Tenant's use of the Premises, including (1) possession, use and storage of any hazardous material at the Premises; (2) the operation of any applicable environmental law against the Tenant, Landlord or the Premises, based on Tenant's activities during the term of this Lease; or (3) the violation at the Premises or by the Tenant of any applicable environmental law. Tenant and its successors or assigns shall pay all costs and expenses incurred by Landlord, its successors and assigns, to enforce the provisions of this indemnification, including, without limitation, reasonable attorneys' fees and litigation expenses. This indemnification shall survive the termination of this Lease.

(d) As between Landlord and Tenant, Landlord shall be responsible for (i) the remediation of any hazardous materials or substances located on the Development, the Building, or any part thereof (including the Premises), existing as of the Commencement Date (except to the extent caused by Tenant or its agents, employees or contractors), (ii) any violations of environmental laws existing as of the Commencement Date (except to the extent caused by Tenant or its agents, employees or contractors), (iii) the remediation of any hazardous materials or substances located on the Development, the Building, or any part thereof (including the Premises), existing as of the Commencement Date after the Commencement Date to the extent caused by Landlord or its agents, employees or contractors, or (iv) any violations of environmental laws arising on or after the Commencement Date to the extent caused by Landlord or its agents, employees or contractors.

(e) Landlord represents and warrants to Tenant, to the best of its knowledge, as of the Commencement Date, it has received no written notice from any applicable governmental authority regarding the existence of hazardous materials on or about the Premises or the Development.

ARTICLE 34. TENANT'S COMPLIANCE WITH LAWS

Tenant shall comply with all governmental laws, ordinances and regulations applicable to Tenant's occupancy and use of the Premises.

ARTICLE 35. DISABILITIES ACT

Tenant shall comply, at Tenant's sole cost and expense, with the Americans with Disabilities Act of 1990 and similar state and local laws and ordinances, as well as all regulations issued thereunder, but only if the need for compliance is caused in whole or material part by reason of the specific nature of Tenant's business operations in the Premises or specific accommodation to Tenant's employees. Except as set forth in the preceding sentence, Landlord shall cause the common areas of the Development to comply, at Landlord's sole cost, or at another tenant's sole cost, or as an Operating Cost subject to pass-through hereunder, with the Americans with Disabilities Act of 1990 and similar state

and local laws and ordinances, as well as all regulations issued thereunder. Tenant shall promptly advise Landlord in writing, and provide Landlord with copies of any notice received by Tenant alleging violation of any such law, regulation or ordinance relating to the Premises or the Building or any use thereof or activity therein, or any governmental or regulatory action or investigation instituted or threatened regarding noncompliance with any such law, regulation or ordinance.

ARTICLE 36. NOTICE

Wherever in this Lease it shall be required or permitted that notice or demand be given or served by either party to this Lease to or on the other party, such notice or demand shall be deemed to have been duly given or served if in writing and either personally served or forwarded by Federal Express or comparable delivery service or by registered or certified mail, charges prepaid, and addressed as set forth in Article 1 to the applicable Notification Addresses.

Each such mailed notice shall be deemed to have been given to or served upon the party to which addressed (i) on the date of delivery if personally served, (ii) one business day after the date the same is deposited with the express service, or (iii) three business days after the date the same is deposited with the postal service, properly addressed in the manner above provided. Either party hereto may change the address to which such notices shall be delivered or mailed by giving written notice of such change to the other party hereto, as herein provided.

ARTICLE 37. BROKERS

Each party represents and warrants to the other that TARQUINCoRE, LLC has acted as the only broker or agent in connection with the finding and negotiation of this Lease. Landlord shall be responsible for payment of commissions or fees due such brokers in accordance with the terms of Landlord's written listing agreement with such agent. Each party agrees to indemnify and hold harmless the other from and against any claims, suits, liabilities and expenses incurred by or assessed by reason of any undisclosed brokerage or agency arrangement.

ARTICLE 38. FORCE MAJEURE

Neither party shall be required to perform any term, condition or covenant of this Lease as long as such performance is delayed or prevented by force majeure, which shall mean Acts of God, strikes, lockouts, material or labor restrictions imposed by governmental authority, civil riot, floods and other causes not reasonably within the control of such party and which, by the exercise of due diligence, such party is unable, wholly or in part, to prevent or overcome; provided, however, that such party shall be required to commence and thereafter diligently prosecute performance of completion to the extent reasonably permitted under the circumstances. Notwithstanding anything herein to the contrary, the foregoing shall not excuse either party from the payment of any monies due pursuant to the terms of this Lease.

ARTICLE 39. TRANSFER OF LANDLORD'S INTEREST

Landlord's obligations hereunder shall be binding upon Landlord only for the period of time that Landlord is in ownership of the Building; and, upon termination of that ownership, Tenant, except as to any obligations which have then matured or relate to an event occurring prior to the transfer, any breach

occurring prior to the transfer, or any tort or fraud committed prior to the transfer, shall look solely to Landlord's successor in interest in the Building for the satisfaction of each and every obligation of Landlord hereunder. Tenant agrees to attorn to any transferee of Landlord.

ARTICLE 40. SUCCESSORS

The respective rights and obligations provided in this Lease shall bind and shall inure to the benefit of the parties hereto and their respective successors and assigns, provided, however, that no rights shall inure to the benefit of any successors of Tenant whenever, by the express terms of this Lease, Landlord's written consent for the transfer to such successor is required under Article 14 hereof, unless Landlord shall have granted such consent.

ARTICLE 41. GOVERNING LAW

This Lease shall be construed, governed and enforced in accordance with the laws of the Commonwealth of Pennsylvania and the exclusive venue for any action shall be in the Court of Common Pleas of Allegheny County, Pennsylvania.

ARTICLE 42. SEPARABILITY

If any provisions of this Lease shall be held to be invalid, void or unenforceable, the remaining provisions hereof shall in no way be affected or impaired and such remaining provisions shall remain in full force and effect.

ARTICLE 43. CAPTIONS

Any headings preceding the text of the several paragraphs and subparagraphs hereof are inserted solely for convenience of reference and shall not constitute a part of this Lease, nor shall they affect its meaning, construction or effect.

ARTICLE 44. GENDER

As used in this Lease, the word "person" shall mean and include, where appropriate, any individual, corporation, partnership or other entity; the plural shall be substituted for the singular, and the singular for the plural, where appropriate; and words of any gender shall mean to include any other gender.

ARTICLE 45. EXECUTION; COUNTERPARTS

This Lease shall become effective when it has been signed by a duly authorized officer or representative of each of the parties and delivered to the other party. This Lease may be executed in any number of counterparts, each of which when taken together shall be deemed to be one and the same instrument. The parties acknowledge and agree that notwithstanding any law or presumption to the contrary, the exchange of copies of this Lease and signature pages by electronic transmission shall constitute effective execution and delivery of this Lease for all purposes, and signatures of the parties hereto transmitted electronically shall be deemed to be their original signature for all purposes.

ARTICLE 46. ENTIRE AGREEMENT

This Lease, including the Exhibits hereto, contains all the agreements, conditions, understandings, representations and warranties made between the parties hereto with respect to the subject matter hereof, and may not be modified orally or in any manner other than by an agreement in writing signed by both parties hereto or their respective successors in interest.

ARTICLE 47. AUTHORITY

If Tenant is a corporation, association, partnership or similar legal entity, the Tenant represents and warrants that the individual signing this Lease is duly authorized to execute and deliver this Lease on behalf of such entity in accordance with the duly adopted authorizing instruments of such entity which have been adopted or approved in accordance with all legal requirements and the internal bylaws, agreements, or other organizing documents of the entity, and that this Lease is binding upon such entity in accordance with its terms.

If Landlord is a corporation, association, partnership or similar legal entity, The Landlord represents and warrants that the individual signing this Lease is duly authorized to execute and deliver this Lease on behalf of such entity in accordance with the duly adopted authorizing instruments of such entity which have been adopted or approved in accordance with all legal requirements and the internal bylaws, agreements, or other organizing documents of the entity, and that this Lease is binding upon such entity in accordance with its terms.

ARTICLE 48. SECURITY DEPOSIT

Upon execution of this Lease, Tenant shall deposit with Landlord the Security Deposit in the amount set forth in Article 1. The Security Deposit shall be held by Landlord as security for the full and faithful performance by Tenant of all of the terms, covenants and provisions of this Lease during the term hereof. In no event shall Landlord be obligated to pay, or Tenant is entitled to receive, any interest or other earnings on the security deposit. Landlord shall not be obligated to hold the Security Deposit in trust or in a separate account but may freely commingle the security deposit with Landlord's other funds.

In the event Tenant fails to keep and perform any of the terms, covenants or provisions of this Lease, then Landlord, at Landlord's option, may appropriate and apply the Security Deposit, or so much thereof as may be necessary to pay any Rent or other sums due hereunder for which Tenant shall be in default of payment. Tenant, upon notice from Landlord, immediately shall remit to Landlord an amount sufficient to restore this Security Deposit to the amount required to be maintained in accordance with this Article. Upon Tenant's full and complete performance and compliance with all of the terms, covenants and provisions of this Lease during the lease term, upon the expiration of the term and Tenant's proper surrender of the Premises, the Security Deposit shall be returned to Tenant.

In the event of a sale of the Building, Landlord may deliver the Security Deposit to the purchaser, and upon such delivery, Landlord shall be discharged from any further liability with respect to the Security Deposit.

ARTICLE 49. OFAC CERTIFICATION

Tenant certifies that: (i) it is not acting, directly or indirectly, for or on behalf of any person, group, entity, or nation named by any Executive Order or the United States Treasury Department as a terrorist, "Specially

Designated National and Blocked Person," or other banned or blocked person, entity, nation, or transaction pursuant to any law, order, rule, or regulation that is enforced or administered by the Office of Foreign Assets Control; and (ii) it is not engaged in this transaction, directly or indirectly on behalf of, or instigating or facilitating this transaction, directly or indirectly on behalf of, any such person, group, entity, or nation.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties, intending to be legally bound, have executed this Lease as of the day and year first written above.

ATTEST:

/s/ Anita Marocci

COGNITION THERAPEUTICS, INC.

By: /s/ Harold Safferstein
Name: Harold Safferstein
Title: SVP

ATTEST:

/s/ Anita Marocci

RJ EQUITIES LP

By: RD Equities, LLC, its General Partner

By: /s/ Ronald J. Tarquinio
Name: Ronald J. Tarquinio
Title: Member

Exhibit "A"

Diagram of Development

Exhibit “B”

Outline of Premises

RPC Executive Office Suites Floor Plan

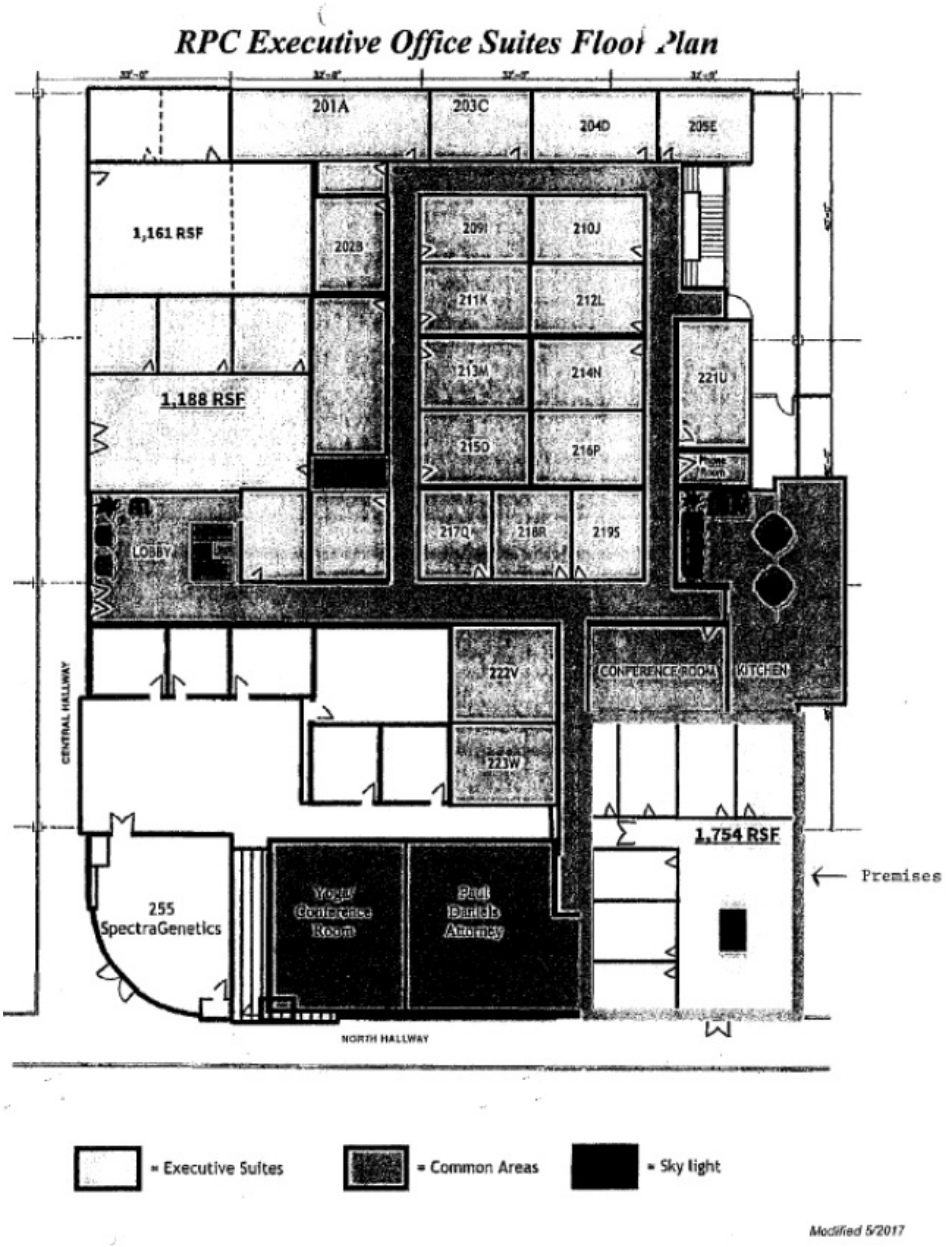

Exhibit "C"

Rules and Regulations

GENERAL:

1. **OBSTRUCTIONS:**
   The streets, driveways, parking lots, sidewalks, entrances, passages and other common areas provided by Landlord shall not be obstructed by Tenant, its employees, agents, representatives, vendors and guests or used for any other purpose than ingress and egress.
2. **BATHROOMS:**
   The bathrooms, toilet rooms and other plumbing apparatus shall not be used for any other purposes other than those for which they are constructed.
3. **GENERAL PROHIBITIONS:**
   - No cooking, grilling, smoking, gas or other type of flame in the common areas;
   - No animals or birds are permitted anywhere on the premises;
   - No use of the premises as sleeping rooms;
   - No loitering or congregating in the entrances or hallways;
   - No making improper loud noises or disturbances of any kind;
   - Doing anything to unreasonably disturb or disrupt other tenants in the complex;
   - Doing anything to change, damage or destroy the landscaping around the premises;
4. **SMOKING:**
   The complex's buildings are maintained as **smoke free** environments. This means **no smoking** in the building. Smoking is permitted outside of the buildings where several smoking boxes are provided in four designated areas for cigarette butts. Please use the smoking boxes for your butts, not the grounds or parking areas.
5. **DOORS:**
   Exterior doors are not to be held open. Holding or propping these doors open for 30 seconds or more will sound off an alarm and automatically notify police.

PARKING:

To insure that adequate parking spaces are available for our tenants, a specific number of parking passes are provided to each tenant for a specific parking zone. The passes are to be placed on the rear view mirror of each vehicle and can be transferred from one vehicle to another. The parking lots are patrolled daily. Vehicles that lack a parking pass or are parked in the wrong zone will be considered in violation of the parking regulations. Violations are handled as follows:

First Violation: A yellow sticker will be placed under the windshield wiper;
Second Violation: An adhesive yellow sticker will be placed on the windshield;
Third Violation: The police will be called and the car will be towed, at the owner's expense.

These rules and regulations are subject to change from time to time at the discretion of the Landlord.

Exhibit "D"

Intentionally Omitted

Exhibit “E”

ESTOPPEL CERTIFICATE

{See Attached Form of Estoppel}

TENANT ESTOPPEL

Ladies and Gentlemen:

The undersigned certifies to _____ (together with its successors and assigns, the "Bank") and the Landlord (as defined below) as of the date hereof as follows:

1. It is the tenant under a certain Office Lease Agreement dated July , 2017 (the "Lease") with RJ Equities, LP, a Pennsylvania limited partnership,as landlord (together with its successors and assigns, "Landlord"), and the undersigned, as tenant ("Tenant"), for premises located at and known as Suite 242 located on the second floor of the commercial building situated at 2403 Sidney Street, Pittsburgh, PA 15203 (the "Leased Premises").

2. The Lease is in full force and effect. There are no amendments, modifications or supplements to the Lease except the following (if none, indicate "None"):

_____

_____

_____ .

3. The Lease does not contain any provisions regarding options to purchase and/or lease additional space, rights of first refusal to purchase and/or lease additional space or any similar provisions regarding acquisition of ownership interests or additional leases space in the building. If such provisions are contained in the Lease please specify: _____

_____

_____

4. The term of the Lease commenced on July I, 2017 and terminates on June 30, 2020. Tenant has taken possession of the Leased Premises.

5. The monthly base rent payments currently payable pursuant to the Lease are in the amount of $2,484.83. Rent has been paid through_____. In addition to the monthly base rent payments, the following amounts are also payable on a monthly basis for the following purposes, all of which have been paid through _____ (if none, indicate "None"):

_____

_____.

6. All improvements, if any, required to be made by Landlord under the Lease have been completed and accepted by Tenant. Landlord has not agreed to grant Tenant any free rent or rent rebate or to make any contribution to tenant improvements.

7. Tenant will deliver to the Bank a copy of all notices Tenant serves on or receive from Landlord.

8. No advance rent has been paid, and to Tenant's knowledge, Tenant has no unsatisfied claims against Landlord, no uncured default exists under the Lease, and no event has occurred that but for the giving of notice would constitute a default.

9. No cancellation, modification, assignment, renewal, extension, or amendment of the Lease or prepayment of more than one month's rent shall be made without the Bank's written consent and approval.

10. Tenant has all licenses and permits which Tenant must have to operate its business from the Leased Premises, and all are current and have not been revoked. Since taking possession of the Leased Premises, Tenant has not received any notice that the Leased Premises or Tenant's use of the Leased Premises violates any applicable law, regulation, ordinance or directive of any governmental authority or agency or insurance company.

11. The amount of the security deposit is $0.00.

The undersigned individual hereby certifies that he or she is duly authorized to sign, acknowledge and deliver this letter on behalf of Tenant. The statements herein contained may be relied upon by the Bank and the Landlord and their respective successors and assigns.

Very truly yours,

Cognition Therapeutics, Inc.

By: _____

Title: _____

EXHIBIT "F"

SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT

{See Attached Form of SNDA}

SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT

This Subordination, Non-Disturbance and Attornment Agreement (this "Agreement") is made as of the _____ day of _____, 20____, among (the "Lender"), having a place of business at _____, RJ Equities LP (the "Landlord" or "Borrower"), a Pennsylvania limited partnership having a place of business at 2403 Sidney Street, Suite 200, Pittsburgh, PA 15203, and Cognition Therapeutics, Inc. (the "Tenant"), having a place of business at 2403 Sidney Street, Suite 261, Pittsburgh, PA 15203.

Introductory Provisions

A. Lender is relying on this Agreement as an inducement to Lender in making and maintaining a loan (the "Loan") secured by, among other things, a Mortgage and Security Agreement dated as of (the "Mortgage") given by Borrower covering property commonly known as and numbered 2403 Sidney Street, Pittsburgh, PA 15203 (the "Property"). Lender is also the "Assignee" under an Assignment of Leases, Rents and Profits (the "Assignment") dated as of from Borrower with respect to the Property.

B. Tenant is the tenant under that certain lease (the "Lease") dated July __, 2017, made with Landlord covering certain premises (the "Premises") at the Property as more particularly described in the Lease.

C. Lender requires, as a condition to the making and maintaining of the Loan, that the Mortgage be and remain superior to the Lease and that its rights under the Assignment be recognized.

D. Tenant requires as a condition to the Lease being subordinate to the Mortgage that its rights under the Lease be recognized.

E. Lender, Landlord, and Tenant desire to confirm their understanding with respect to the Mortgage and the Lease.

NOW, THEREFORE, in consideration of the foregoing, the mutual covenants and agreements contained in this Agreement, and other valuable consideration, the receipt and adequacy of which are hereby acknowledged, and with the understanding by Tenant that Lender shall rely hereon in making and maintaining the Loan, Lender, Landlord, and Tenant agree as follows:

1. Subordination. The Lease and the rights of Tenant thereunder is subordinate and inferior to the Mortgage and any amendment, renewal, substitution, extension or replacement thereof and each advance made thereunder as though the Mortgage, and each such amendment, renewal, substitution, extension or replacement were executed and recorded, and the advance made, before the execution of the Lease.

2. Non-Disturbance. So long as Tenant is not in default (beyond any notice and/or cure period expressed in the Lease within which Tenant may cure such default) in the payment of rent or in the performance or observance of any of the terms, covenants or conditions of the Lease on Tenant's part to be performed or observed: (a) Tenant's occupancy of the Premises shall not be disturbed by Lender in the exercise of any of its rights under the Mortgage during the term of the Lease, or any extensions or renewals thereof made in accordance with the terms of the Lease, and (b) Lender will not join Tenant as a party defendant in any action or proceeding for the purpose of terminating Tenant's interest and estate under the Lease because of any default under the Mortgage.

3. Attornment and Certificates. In the event Lender succeeds to the interest of Borrower as Landlord under the Lease, or if the Property or the Premises are sold pursuant to the power of sale under the Mortgage, Tenant shall attorn to Lender, or a purchaser upon any such foreclosure sale, and shall recognize Lender, or such purchaser, thereafter as the Landlord under the Lease. Such attornment shall be effective and self-operative without the execution of any further instrument. Tenant agrees, however, to execute and deliver at any time and from time to time, upon the request of any holder(s) of any of the indebtedness or other obligations secured by the Mortgage, or upon request of any such purchaser, (a) any instrument or certificate which, in the reasonable judgment of such holder(s), or such purchaser, may be necessary or appropriate in any such foreclosure proceeding or otherwise to evidence such attornment and (b) an instrument or certificate regarding the status of the Lease, consisting of statements, if true (and if not true, specifying in what respect): (i) that the Lease is in full force and effect, (ii) the date through which rentals have been paid, (iii) the duration and date of the commencement of the term of the Lease, (iv) the nature of any amendments or modifications to the Lease, (v) that to Tenant's knowledge no default, or state of facts, which with the passage of time or notice, or both, would constitute a default, exists on the part of either party to the Lease, and (vi) the dates on which payments of additional rent, if any, are due under the Lease.

4. Limitations. If Lender exercises any of its rights under the Assignment or the Mortgage, or if Lender shall succeed to the interest of Landlord under the Lease in any manner, or if any purchaser acquires the Property, or the Premises, upon or after any foreclosure of the Mortgage, or any deed in lieu thereof, Lender or such purchaser, as the case may be, shall have the same remedies by entry, action or otherwise in the event of any default by Tenant (beyond any notice and/or cure period expressed in the Lease within which Tenant may cure such default) in the payment of rent or in the performance or observance of any of the terms, covenants and conditions of the Lease on Tenant's part to be paid, performed or observed that Landlord had or would have had if Lender or such purchaser had not succeeded to the interest of the present Landlord. From and after any such attornment, Lender or such purchaser shall be bound to Tenant under all the terms, covenants and conditions of the Lease, and Tenant shall, from and after such attornment to Lender, or to such purchaser, have the same remedies against Lender, or such purchaser, for the breach of an agreement contained in the Lease that Tenant might have had under the Lease against Landlord, if Lender or such purchaser had not succeeded to the interest of Landlord; provided, however, that Lender or such purchaser shall only be bound during the period of its ownership, and that in the case of the exercise by Lender of its rights under the Mortgage, or the Assignment, or any combination thereof, or a foreclosure, or deed in lieu of foreclosure, all Tenant claims shall be satisfied only out of the interest, if any, of Lender, or such purchaser, in the Property, and Lender and such purchaser shall not be: (a) liable for any act or omission of any prior landlord (including Landlord); or (b) liable for or incur any obligation with respect to the construction of the Property or any improvements of the Premises or the Property; or (c) subject to any offsets or defenses which Tenant might have against any prior landlord (including Landlord), or (d) bound by any rent or additional rent which Tenant might have paid for more than the then current rental period to any prior landlord (including Landlord); or (e) bound by any amendment or modification of the Lease, or any consent to any assignment or sublease, made without Lender's prior written consent; or (f) bound by or responsible for any security deposit not actually received by Lender; or (g) liable for any obligation with respect to any breach of warranties or representations of any nature under the Lease or otherwise, including without limitation, any warranties or representations respecting use, compliance with zoning, Landlord's title, Landlord's authority, habitability and/or fitness for any purpose, or possession; or (h) liable for consequential damages.

5. Rights Reserved. Nothing herein contained is intended, nor shall it be construed, to abridge or adversely affect any right or remedy of: (a) Landlord under the Lease, or any subsequent Landlord,

against Tenant in the event of any default by Tenant (beyond any notice and/or cure period expressed in the Lease within which Tenant may cure such default) in the payment of rent or in the performance of observance of any of the terms, covenants or conditions of the Lease on Tenant's part to be performed or observed; or (b) Tenant to pursue claims under the Lease against any prior landlord (including Landlord) in the event of any default by prior landlord whether or not such claim is barred against Lender or a subsequent purchaser.

6. Notice and Right to Cure. Tenant agrees to provide Lender with a copy of each notice of default given to Landlord under the Lease at the same time such notice of default is given to Landlord. In the event of any default by Landlord under the Lease, Tenant will take no action to terminate the Lease unless the default remains uncured for a period of sixty (60) days after written notice thereof shall have been given, postage prepaid, to Landlord at Landlord's address, and to Lender at the address provided in Section 7 below; provided, however, that if any such default is such that it reasonably cannot be cured within such sixty (60) day period, such period shall be extended for such additional period of time as shall be reasonably necessary (including, without limitation, a reasonable period of time to obtain possession of the Property and to foreclose the Mortgage), if Lender gives Tenant written notice within such sixty (60) day period of Lender's election to undertake the cure of the default and if curative action (including, without limitation, action to obtain possession and foreclosure) is instituted within thirty (30) days thereafter and is thereafter diligently pursued. Notwithstanding the foregoing, Lender shall have no obligation to cure any default under the Lease.

7. Notices. Any notice or communication required or permitted hereunder shall be in writing, and shall be given or delivered: (a) by United States mail, registered or certified, postage fully prepaid, return receipt requested, or (b) by recognized courier service or recognized overnight delivery service; and in any event addressed to the party for which it is intended at its address set forth below:

To Lender: _____
_____
_____

To Landlord: RJ Equities LP
2403 Sidney Street, Suite 200
Pittsburgh, PA 15203
Attention: Ronald J. Tarquinio

To Tenant: Cognition Therapeutics, Inc.
2403 Sidney Street, Suite 261
Pittsburgh, PA 15203
Attn: President

or such other address as such party may have previously specified by notice given or delivered in accordance with the foregoing. Any such notice shall be deemed to have been given and received on the date delivered or tendered for delivery during normal business hours as herein provided.

8. No Oral Change. This Agreement may not be modified orally or in any manner other than by an agreement in writing signed by the parties hereto or their respective successors in interest.

9. Payment of Rent To Lender. Tenant acknowledges that it has notice that the Lease and the rent and all sums due thereunder have been assigned to Lender as part of the security for the obligations

secured by the Mortgage. In the event Lender notifies Tenant of a default under the Loan and demands that Tenant pay its rent and all other sums due under the Lease to Lender, Tenant agrees that it will honor such demand and pay its rent and all other sums due under the Lease to Lender, or Lender's designated agent, until otherwise notified in writing by Lender. Landlord unconditionally authorizes and directs Tenant to make rent payments directly to Lender following receipt of such notice without any obligation to further inquire as to whether or not any default exists under the Mortgage or the Assignment and that Landlord shall have no right or claim against Tenant for or by reason of any payments of rent or other charges made by Tenant to Lender following receipt of such notice.

10. No Amendment or Cancellation of Lease. So long as the Mortgage remains undischarged of record, Tenant shall not amend, modify, cancel or terminate the Lease, or consent to an amendment, modification, cancellation or termination of the Lease, or agree to subordinate the Lease to any other mortgage, without Lender's prior written consent in each instance; provided however, the foregoing shall not be construed to require Lender's consent for Tenant to exercise any right to terminate expressly granted in the Lease.

11. Options. With respect to any options for additional space provided to Tenant under the Lease, Lender agrees to recognize the same if Tenant is entitled thereto under the Lease after the date on which Lender succeeds as landlord under the Lease by virtue of foreclosure or deed in lieu of foreclosure or Lender takes possession of the Premises; provided, however, Lender shall not be responsible for any acts of any prior landlord (including Landlord) under the Lease, or the act of any tenant, subtenant or other party which prevents Lender from complying with the provisions hereof and Tenant shall have no right to cancel the Lease or to make any claims against Lender on account thereof.

12. Captions. Captions and headings of sections are not parts of this Agreement and shall not be deemed to affect the meaning or construction of any of the provisions of this Agreement.

13. Counterparts. This Agreement may be executed in several counterparts each of which when executed and delivered is an original, but all of which together shall constitute one instrument.

14. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state where the Property is located.

15. Parties Bound. The provisions of this Agreement shall be binding upon and inure to the benefit of Tenant, Lender and Landlord and their respective successors and assigns; provided, however, reference to successors and assigns of Tenant shall not constitute a consent by Landlord or Lender to an assignment or sublease by Tenant, but has reference only to those instances in which such consent is not required pursuant to the Lease or for which such consent has been given.

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first above written.

ATTEST:

/s/ Anita Marocci

COGNITION THERAPEUTICS, INC.

By: /s/ Harold Safferstein
Name: Harold Safferstein
Title: SVP

ATTEST:

/s/ Anita Marocci

RJ EQUITIES LP

By: RD Equities, LLC, its General Partner

By: /s/ Ronald J. Tarquinio
Name: Ronald J. Tarquinio
Title: Member

ATTEST:

LENDER:

STATE OF)
) ss:
COUNTY OF)

The foregoing instrument was acknowledged before me this____day of_____, 20_____, 20_____, by_____of_____, a_____, on behalf of the corporation.

Notary Public
My Commission Expires:

STATE OF)
) ss:
COUNTY OF)

The foregoing instrument was acknowledged before me this____day of_____, 20_____, 20_____, by_____of_____, a_____, on behalf of the corporation.

Notary Public
My Commission Expires:

STATE OF)
) ss:
COUNTY OF)

The foregoing instrument was acknowledged before me this____day of_____, 20_____, 20_____, by_____of_____, a_____, on behalf of the corporation.

Notary Public
My Commission Expires:

Exhibit 10.5

FIRST AMENDMENT TO OFFICE LEASE AGREEMENT

This First Amendment to Office Lease Agreement ("Amendment") is made this 1st day of July, 2017, and is by and between **RJ EQUITIES LP,** a Pennsylvania limited partnership ("Landlord"), and **COGNITION THERAPEUTICS, INC.,** a Delaware corporation ("Tenant").

ARTICLE I- AMENDMENT OF BASIC TERMS

The parties, intending to be legally bound, do hereby agree to the amendment, ratification and restatement of certain terms of the Lease (as defined below) as follows:

a)	Lease:	That certain Office Lease Agreement dated January 20, 2015, as amended by this Amendment.
b)	Premises:	Suites 261, 263, and certain shared lab space all of which is located on the second floor of the commercial building (the "Building") situated at 2403 Sidney Street, Pittsburgh, PA 15203 (the "Development"), and all as more particularly described in the Lease.
c)	Term:	The term of the Lease is hereby extended from February 1, 2018, until June 30, 2020 (the "Extended Term"). Any reference in the Lease to the Termination Date shall hereafter mean June 30, 2020.
d)	Base Rent:	Base Rent during the Extended Term shall be Seven Thousand One Hundred Three and 17/100ths Dollars ($7,103.17) per month.
e)	Options:	The parties hereby acknowledge and agree that Article 3(c) of the Lease is hereby deleted in its entirety-the intent being that Tenant shall have no further extension options to extend the term of the Lease.
f)	Defaults:	The parties acknowledge and agree that the following shall constitute a default under the Lease: "a default or breach by Tenant beyond the expiration of applicable notice and/or cure periods under any other lease with Landlord in connection with the Building".
g)	Sublease:	Landlord has consented to the subleasing by Tenant, as sublessor, to Sharp Edge Labs, Inc. (the "Sublessee") of a portion of the lab space comprising the Premises, upon the condition that neither anything contained in the sublease nor Landlord's consent thereto shall (i) release Tenant

from any of its liabilities and obligations to Landlord under the Lease, (ii) constitute a novation, (iii) increase or modify Landlord's obligations under the Lease, or (iv) create any rights or remedies in Sublessee under the Lease itself. It is understood and agreed that Landlord shall have no obligation or liability under the terms of the sublease.

ARTICLE II - TENANT REPRESENTATION

By the execution of this Amendment, Tenant represents and warrants to Landlord as follows as of the date hereof:

a) That the Lease is in full force and effect and that, to Tenant's knowledge, there are no Landlord defaults and that the Lease has not been assigned, modified, supplemented or amended (except as expressly set forth above).

b) That there are no defenses or offsets against the Landlord's enforcement of the Lease that may be claimed by Tenant.

ARTICLE III - MISCELLANEOUS

a) Landlord and Tenant each represents and warrants to the other that it has had no dealings, negotiations or consultations with respect to the Premises, this Amendment or the transactions contemplated under the Lease with any broker or finder, except that Landlord was represented by TARQUINCoRE LLC (the "Broker"). Landlord shall pay all commissions and fees, if any, due to Broker in connection with this Amendment.

b) Except as expressly modified by this Amendment, all other terms and provisions of the Lease shall remain in full force and effect. Tenant accepts the Premises in its current "as- is, where-is" condition. All capitalized terms used herein shall have the meaning ascribed to such term in the Lease unless otherwise defined herein. This Amendment supersedes any prior discussions, proposals, negotiations and discussions between the parties and the Lease, as amended hereby, contains all of the agreements, conditions, understandings, representations and warranties made between the parties hereto with respect to the subject matter hereof.

c) This Amendment may be executed in any number of counterparts, each of which when taken together shall be deemed to be one and the same instrument. The parties acknowledge and agree that notwithstanding any law or presumption to the contrary, the exchange of copies of this Amendment and signature pages by electronic transmission shall constitute effective execution and delivery of this Amendment for all purposes, and signatures of the parties hereto transmitted electronically shall be deemed to be their original signature for all purposes.

d) Landlord and Tenant each represents and warrants to the other that the individual signing this Amendment on behalf of such party is duly authorized to execute and deliver this Amendment on behalf of such entity in accordance with the duly adopted authorizing instruments of such entity which have been adopted or approved in accordance with all legal requirements and the internal bylaws, agreements, or other organizing documents of the entity, and that this Amendment is binding upon such entity in accordance with its terms.

e) Each party shall indemnify and hold the other harmless from and against all liability, cost and expense, including attorney's fees and court costs, arising out of any misrepresentation or breach of warranty made in this Amendment.

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Witness the due execution of this Amendment the date first set forth above.

ATTEST:

By: /s/ Anita Marcocci
Anita Marcocci

COGNITION THERAPEUTICS, INC.

By: /s/ Harold T. Safferstein
Name: Harold T. Safferstein
Title: SVP

WITNESS:

By: /s/ Anita Marcocci
Anita Marcocci

RJ EQUITIES LP

By: RD Equities, LLC, its General Partner

By: /s/ Ronald J. Tarquinio
Name: Ronald J. Tarquinio
Title: Managing Member

Exhibit 10.6

Effective Date: October 1, 2007
Amended and Restated: January 16, 2009
Amended and Restated: December 14, 2010
Amended and Restated: March 25, 2011
Amended and Restated: November 27, 2011
Amended and Restated: March 20, 2014
Amended and Restated: February 22, 2016
Amended and Restated: October 28, 2016
Amended and Restated: January 10, 2017

COGNITION THERAPEUTICS, INC.

AMENDED AND RESTATED
2007 EQUITY INCENTIVE PLAN

The purpose of the Cognition Therapeutics, Inc. Amended and Restated 2007 Equity Incentive Plan (this "Plan") is to provide (i) designated employees of Cognition Therapeutics, Inc. (the "Company") and its parents and subsidiaries, (ii) certain consultants and advisors who perform services for the Company or its parents or subsidiaries and (iii) non-employee members of the Board of Directors of the Company (the "Board") with the opportunity to receive grants of incentive stock options, nonqualified stock options and stock awards. The Company believes that the Plan will encourage the participants to contribute materially to the growth of the Company, thereby benefitting the Company's stockholders, and will align the economic interests of the participants with those of the stockholders.

1. Administration.

(a) Committee. This Plan shall be administered and interpreted by the Board or by a committee consisting of members of the Board, which shall be appointed by the Board. After an initial public offering of the Company's stock as described in Section 17(b) (a "Public Offering"), this Plan shall be administered by a committee of Board members, which may consist of "outside directors" as defined under section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), and related Treasury regulations, and "non-employee directors" as defined under Rule 16b-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). However, the Board may ratify or approve any grants as it deems appropriate, and the Board shall approve and administer all grants made to non-employee directors. The committee may delegate authority to one or more subcommittees as it deems appropriate. To the extent that a committee or subcommittee administers this Plan, references in this Plan to the "Board" shall be deemed to refer to the committee or subcommittee.

(b) Board Authority. The Board shall have the sole authority to (i) determine the individuals to whom grants shall be made under this Plan, (ii) determine the type, size and terms of the grants to be made to each such individual, (iii) determine the time when the grants will be made and the duration of any applicable exercise or restriction period, including the criteria for exercisability and the acceleration of exercisability, (iv) amend the terms of any previously issued grant, and (v) deal with any other matters arising under this Plan.

(c) **Board Determinations.** The Board shall have full power and authority to administer and interpret this Plan, to make factual determinations and to adopt or amend such rules, regulations, agreements and instruments for implementing this Plan and for the conduct of its business as it deems necessary or advisable, in its sole discretion. The Board's interpretations of this Plan and all determinations made by the Board pursuant to the powers vested in it hereunder shall be conclusive and binding on all persons having any interest in this Plan or in any awards granted hereunder. All powers of the Board shall be executed in its sole discretion, in the best interest of the Company, not as a fiduciary, and in keeping with the objectives of this Plan and need not be uniform as to similarly situated individuals.

2. **Grants.** Awards under this Plan may consist of grants of incentive stock options as described in Section 5 ("Incentive Stock Options"), nonqualified stock options as described in Section 5 ("Nonqualified Stock Options") (Incentive Stock Options and Nonqualified Stock Options are collectively referred to as "Options") and stock awards as described in Section 6 ("Stock Awards") (hereinafter collectively referred to as "Grants"). All Grants shall be subject to the terms and conditions set forth herein and to such other terms and conditions consistent with this Plan as the Board deems appropriate and as are specified in writing by the Board to the individual in a grant instrument or an amendment to the grant instrument (the "Grant Instrument"). All Grants shall be made conditional upon the Grantee's acknowledgement, in writing or by acceptance of the Grant, that all decisions and determinations of the Board shall be final and binding on the Grantee, his or her beneficiaries and any other person having or claiming an interest under such Grant. The Board shall approve the form and provisions of each Grant Instrument. Grants under a particular Section of this Plan need not be uniform as among the grantees.

3. **Shares Subject to This Plan.**

(a) **Shares Authorized.** Subject to adjustment as described below, the aggregate number of shares of common stock of the Company ("Company Stock") that may be issued under this Plan is 11,189,392 shares, all of which may be issued as incentive stock options. After a Public Offering, the maximum aggregate number of shares of Company Stock that shall be subject to Grants made under this Plan to any individual during any calendar year shall be 3,900,000 shares, subject to adjustment as described below. Shares issued under this Plan may be authorized but unissued shares of Company Stock or reacquired shares of Company Stock, including shares purchased by the Company on the open market for purposes of this Plan. If and to the extent Options granted under this Plan terminate, expire, or are canceled, forfeited, exchanged or surrendered without having been exercised or if any Stock Awards (including restricted Stock Awards received upon the exercise of Options) are forfeited, the shares subject to such Grants shall again be available for purposes of this Plan.

(b) **Adjustments.** If there is any change in the number or kind of shares of Company Stock outstanding (i) by reason of a stock dividend, spinoff, recapitalization, stock split, or combination or exchange of shares, (ii) by reason of a merger, reorganization or consolidation, (iii) by reason of a reclassification or change in par value, or (iv) by reason of any other extraordinary or unusual event affecting the outstanding Company Stock as a class without the Company's receipt of consideration, or if the value of outstanding shares of Company Stock is substantially reduced as a result of a spinoff or the Company's payment of an extraordinary

dividend or distribution, the maximum number of shares of Company Stock available for Grants, the maximum number of shares of Company Stock that any individual participating in this Plan may be granted in any year, the number of shares covered by outstanding Grants, the kind of shares issued under this Plan, and the price per share of such Grants may be appropriately adjusted by the Board to reflect any increase or decrease in the number of, or change in the kind or value of, issued shares of Company Stock to preclude, to the extent practicable, the enlargement or dilution of rights and benefits under such Grants; provided, however, that any fractional shares resulting from such adjustment shall be eliminated. Any adjustments determined by the Board shall be final, binding and conclusive.

4. Eligibility for Participation.

(a) Eligible Persons. All employees of the Company and its parents or subsidiaries ("Employees"), including Employees who are officers or members of the Board, and members of the Board who are not Employees ("Non-Employee Directors") shall be eligible to participate in this Plan. Consultants and advisors who perform services for the Company or any of its parents or subsidiaries ("Key Advisors") shall be eligible to participate in this Plan if the Key Advisors render bona fide services to the Company or its parents or subsidiaries, the services are not in connection with the offer and sale of securities in a capital-raising transaction, and the Key Advisors do not directly or indirectly promote or maintain a market for the Company's securities.

(b) Selection of Grantees. The Board shall select the Employees, Non-Employee Directors and Key Advisors to receive Grants and shall determine the number of shares of Company Stock subject to a particular Grant in such manner as the Board determines. Employees, Key Advisors and Non-Employee Directors who receive Grants under this Plan shall hereinafter be referred to as "Grantees."

5. Granting of Options.

(a) Number of Shares. The Board shall determine the number of shares of Company Stock that will be subject to each Grant of Options to Employees, Non-Employee Directors and Key Advisors.

(b) Type of Option and Price.

(i) The Board may grant Incentive Stock Options that are intended to qualify as "incentive stock options" within the meaning of section 422 of the Code or Nonqualified Stock Options that are not intended so to qualify or any combination of Incentive Stock Options and Nonqualified Stock Options, all in accordance with the terms and conditions set forth herein. Incentive Stock Options may be granted only to employees of the Company or its parents or subsidiaries, as defined in Section 424 of the Code. Nonqualified Stock Options may be granted to Employees, Non-Employee Directors and Key Advisors.

(ii) The purchase price (the "Exercise Price") of Company Stock subject to an Option shall be determined by the Board and may be equal to or greater than the Fair Market Value (as defined below) of a share of Company Stock on the date the Option is granted; provided, however, that (x) the Exercise Price of an Incentive Stock Option shall be equal to, or

greater than, the Fair Market Value of a share of Company Stock on the date the Incentive Stock Option is granted and (y) an Incentive Stock Option may not be granted to an Employee who, at the time of grant, owns stock possessing more than ten percent of the total combined voting power of all classes of stock of the Company or any parent or subsidiary of the Company, unless the Exercise Price per share is not less than 110% of the Fair Market Value of Company Stock on the date of grant.

(iii) If the Company Stock is publicly traded, then the Fair Market Value per share shall be determined as follows: (x) if the principal trading market for the Company Stock is a national securities exchange or the Nasdaq National Market, the last reported sale price thereof on the relevant date or (if there were no trades on that date) the latest preceding date upon which a sale was reported, or (y) if the Company Stock is not principally traded on such exchange or market, the mean between the last reported "bid" and "asked" prices of Company Stock on the relevant date, as reported on Nasdaq or, if not so reported, as reported by the National Daily Quotation Bureau, Inc. or as reported in a customary financial reporting service, as applicable and as the Board determines. If the Company Stock is not publicly traded or, if publicly traded, is not subject to reported transactions or "bid" or "asked" quotations as set forth above, the Fair Market Value per share shall be as determined by the Board.

(c) Option Term. The Board shall determine the term of each Option. The term of any Option shall not exceed ten years from the date of grant. However, an Incentive Stock Option that is granted to an Employee who, at the time of grant, owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company, or any parent or subsidiary of the Company, may not have a term that exceeds five years from the date of grant.

(d) Exercisability of Options.

(i) Options shall become exercisable in accordance with such terms and conditions, consistent with this Plan, as may be determined by the Board and specified in the Grant Instrument. The Board may accelerate the exercisability of any or all outstanding Options at any time for any reason.

(ii) The Board may provide in a Grant Instrument that the Grantee may elect to exercise part or all of an Option before it otherwise has become exercisable. Any shares so purchased shall be restricted shares and shall be subject to a repurchase right in favor of the Company during a specified restriction period, with the repurchase price equal to the lesser of (i) the Exercise Price or (ii) the Fair Market Value of such shares at the time of repurchase, or such other restrictions as the Board deems appropriate.

(e) Grants to Non-Exempt Employees. Notwithstanding the foregoing, Options granted to persons who are non-exempt employees under the Fair Labor Standards Act of 1938, as amended, shall have an Exercise Price not less than the Fair Market Value of the Company Stock on the date of grant, and may not be exercisable for at least six months after the date of grant (except that such Options may become exercisable, as determined by the Board, upon the Grantee's death, Disability or retirement, or upon a Change of Control or other circumstances permitted by applicable regulations).

(f) Termination of Employment, Disability or Death.

(i) Except as provided below, an Option may only be exercised while the Grantee is employed by, or providing service to, the Employer (as defined below) as an Employee, Key Advisor or member of the Board. In the event that a Grantee ceases to be employed by, or provide service to, the Employer for any reason other than Disability, death, or termination for Cause, any Option which is otherwise exercisable by the Grantee shall terminate unless exercised within 90 days after the date on which the Grantee ceases to be employed by, or provide service to, the Employer (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options that are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Employer shall terminate as of such date.

(ii) In the event the Grantee ceases to be employed by, or provide service to, the Employer on account of a termination for Cause by the Employer, any Option held by the Grantee shall terminate as of the date the Grantee ceases to be employed by, or provide service to, the Employer. In addition, notwithstanding any other provisions of this Section 5, if the Board determines that the Grantee has engaged in conduct that constitutes Cause at any time while the Grantee is employed by, or providing service to, the Employer or after the Grantee's termination of employment or service, any Option held by the Grantee shall immediately terminate, and the Grantee shall automatically forfeit all shares underlying any exercised portion of an Option for which the Company has not yet delivered the share certificates, upon refund by the Company of the Exercise Price paid by the Grantee for such shares. Upon any exercise of an Option, the Company may withhold delivery of share certificates pending resolution of an inquiry that could lead to a finding resulting in a forfeiture.

(iii) In the event the Grantee ceases to be employed by, or provide service to, the Employer because the Grantee is Disabled, any Option which is otherwise exercisable by the Grantee shall terminate unless exercised within one year after the date on which the Grantee ceases to be employed by, or provide service to, the Employer (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options which are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Employer shall terminate as of such date.

(iv) If the Grantee dies while employed by, or providing service to, the Employer or within 90 days after the date on which the Grantee ceases to be employed or provide service on account of a termination specified in Section 5(f)(i) above (or within such other period of time as may be specified by the Board), any Option that is otherwise exercisable by the Grantee shall terminate unless exercised within one year after the date on which the Grantee ceases to be employed by, or provide service to, the Employer (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options that are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Employer shall terminate as of such date.

(v) For purposes of this Section 5(f) and Section 6:

(A) The term "Employer" shall include the Company and its parent and subsidiary corporations or other entities, as appropriate and as determined by the Board.

(B) "Employed by, or provide service to, the Employer" shall mean employment or service as an Employee, Key Advisor or member of the Board (so that, for purposes of exercising Options and satisfying conditions with respect to Stock Awards, a Grantee shall not be considered to have terminated employment or service until the Grantee ceases to be an Employee, Key Advisor or member of the Board), unless the Board determines otherwise.

(C) "Disability" shall mean a Grantee's becoming disabled within the meaning of section 22(e)(3) of the Code, within the meaning of the Employer's long-term disability plan applicable to the Grantee, or as otherwise determined by the Board.

(D) "Cause" shall mean, except to the extent specified otherwise by the Board, a finding by the Board that the Grantee (i) has breached his or her employment or service contract with the Employer, (ii) has engaged in disloyalty to the Company, including, without limitation, fraud, embezzlement, theft, commission of a felony or proven dishonesty, (iii) has disclosed trade secrets or confidential information of the Employer to persons not entitled to receive such information, (iv) has breached any written noncompetition or nonsolicitation agreement between the Grantee and the Employer or (v) has engaged in such other behavior detrimental to the interests of the Employer as the Board determines.

(g) **Exercise of Options.** A Grantee may exercise an Option that has become exercisable, in whole or in part, by delivering a notice of exercise to the Company with payment of the Exercise Price. The Grantee shall pay the Exercise Price for an Option as specified by the Board (w) in cash, (x) with the approval of the Board, by delivering shares of Company Stock owned by the Grantee (including Company Stock acquired in connection with the exercise of an Option, subject to such restrictions as the Board deems appropriate) and having a Fair Market Value on the date of exercise equal to the Exercise Price or by attestation (on a form prescribed by the Board) to ownership of shares of Company Stock having a Fair Market Value on the date of exercise equal to the Exercise Price, (y) after a Public Offering, payment through a broker in accordance with procedures permitted by Regulation T of the Federal Reserve Board, or (z) by such other method as the Board may approve. The Board may authorize loans by the Company to Grantees in connection with the exercise of an Option, upon such terms and conditions as the Board, in its sole discretion, deems appropriate. Shares of Company Stock used to exercise an Option shall have been held by the Grantee for the requisite period of time to avoid adverse accounting consequences to the Company with respect to the Option. The Grantee shall pay the Exercise Price and the amount of any withholding tax due (pursuant to Section 7) at the time of exercise.

(h) **Limits on Incentive Stock Options.** Each Incentive Stock Option shall provide that, if the aggregate Fair Market Value of the stock on the date of the grant with respect to which Incentive Stock Options are exercisable for the first time by a Grantee during any calendar

year, under this Plan or any other stock option plan of the Company or a parent or subsidiary, exceeds $100,000, then the Option, as to the excess, shall be treated as a Nonqualified Stock Option. An Incentive Stock Option shall not be granted to any person who is not an Employee of the Company or a parent or subsidiary (within the meaning of section 424(f) of the Code) of the Company.

6. Stock Awards. The Board may issue shares of Company Stock to an Employee, Non-Employee Director or Key Advisor under a Stock Award, upon such terms as the Board deems appropriate. The following provisions are applicable to Stock Awards:

(a) General Requirements. Shares of Company Stock issued pursuant to Stock Awards may be issued for consideration or for no consideration, and subject to restrictions or no restrictions, as determined by the Board. The Board may establish conditions under which restrictions on Stock Awards shall lapse over a period of time or according to such other criteria as the Board deems appropriate. The period of time during which the Stock Award will remain subject to restrictions will be designated in the Grant Instrument as the "Restriction Period."

(b) Number of Shares. The Board shall determine the number of shares of Company Stock to be issued pursuant to a Stock Award and the restrictions applicable to such shares.

(c) Requirement of Employment or Service. If the Grantee ceases to be employed by, or provide service to, the Employer (as defined in Section 5(f)) during a period designated in the Grant Instrument as the Restriction Period, or if other specified conditions are not met, the Stock Award shall terminate as to all shares covered by the award as to which the restrictions have not lapsed, and those shares of Company Stock must be immediately returned to the Company. The Board may, however, provide for complete or partial exceptions to this requirement as it deems appropriate.

(d) Restrictions on Transfer and Legend on Stock Certificate. During the Restriction Period, a Grantee may not sell, assign, transfer, pledge or otherwise dispose of the shares of the Stock Award except to a successor under Section 8(a). Each certificate for Stock Awards shall contain a legend giving appropriate notice of the restrictions in the Grant. The Grantee shall be entitled to have the legend removed from the stock certificate covering the shares subject to restrictions when all restrictions on such shares have lapsed. The Board may determine that the Company will not issue certificates for Stock Awards until all restrictions on such shares have lapsed, or that the Company will retain possession of certificates for Stock Awards until all restrictions on such shares have lapsed.

(e) Right to Vote and to Receive Dividends. During the Restriction Period, the Grantee shall have the right to vote shares subject to Stock Awards and to receive any dividends or other distributions paid on such shares, subject to any restrictions deemed appropriate by the Board.

(f) Lapse of Restrictions. All restrictions imposed on Stock Awards shall lapse upon the expiration of the applicable Restriction Period and the satisfaction of all conditions imposed by the Board. The Board may determine, as to any or all Stock Awards, that the restrictions shall lapse without regard to any Restriction Period.

7. Withholding of Taxes.

(a) Required Withholding. All Grants under this Plan shall be subject to applicable federal (including FICA), state and local tax withholding requirements. The Employer may require that the Grantee or other person receiving or exercising Grants pay to the Employer the amount of any federal, state or local taxes that the Employer is required to withhold with respect to such Grants, or the Employer may deduct from other wages paid by the Employer the amount of any withholding taxes due with respect to such Grants.

(b) Election to Withhold Shares. If the Board so permits, a Grantee may elect to satisfy the Employer's income tax withholding obligation with respect to a Grant by having shares withheld up to an amount that does not exceed the Grantee's minimum applicable withholding tax rate for federal (including FICA), state and local tax liabilities. The election must be in a form and manner prescribed by the Board and may be subject to the prior approval of the Board.

8. Transferability of Grants.

(a) Nontransferability of Grants. Except as provided below, only the Grantee may exercise rights under a Grant during the Grantee's lifetime. A Grantee may not transfer those rights except (i) by will or by the laws of descent and distribution or (ii) with respect to Grants other than Incentive Stock Options, if permitted in any specific case by the Board, pursuant to a domestic relations order or otherwise as permitted by the Board. When a Grantee dies, the personal representative or other person entitled to succeed to the rights of the Grantee may exercise such rights. Any such successor must furnish proof satisfactory to the Company of his or her right to receive the Grant under the Grantee's will or under the applicable laws of descent and distribution.

(b) Transfer of Nonqualified Stock Options. Notwithstanding the foregoing, the Board may provide, in a Grant Instrument, that a Grantee may transfer Nonqualified Stock Options to family members, or one or more trusts or other entities for the benefit of or owned by family members, consistent with applicable securities laws, according to such terms as the Board may determine; provided that the Grantee receives no consideration for the transfer of an Option and the transferred Option shall continue to be subject to the same terms and conditions as were applicable to the Option immediately before the transfer.

9. Right of First Refusal; Repurchase Right.

(a) Offer. Prior to a Public Offering, if at any time an individual desires to sell, encumber, or otherwise dispose of shares of Company Stock that were distributed to him or her under this Plan and that are transferable, the individual may do so only pursuant to a bona fide written offer, and the individual shall first offer the shares to the Company by giving the Company written notice disclosing: (i) the name of the proposed transferee of the Company Stock; (ii) the certificate number and number of shares of Company Stock proposed to be transferred or encumbered; (iii) the proposed price; (iv) all other terms of the proposed transfer; and (v) a written copy of the proposed offer. Within 60 days after receipt of such notice, the Company shall have the option to purchase all or part of such Company Stock at the price and on

the terms described in the written notice; provided that the Company may pay such price in installments over a period not to exceed four years, at the discretion of the Board.

(b) **Sale.** In the event the Company (or a stockholder, as described below) does not exercise the option to purchase Company Stock, as provided above, the individual shall have the right to sell, encumber, or otherwise dispose of the shares of Company Stock described in subsection (a) at the price and on the terms of the transfer set forth in the written notice to the Company, provided such transfer is effected within 15 days after the expiration of the option period. If the transfer is not effected within such period, the Company must again be given an option to purchase, as provided above.

(c) **Assignment of Rights.** The Board, in its sole discretion, may waive the Company's right of first refusal and repurchase right under this Section 9. If the Company's right of first refusal or repurchase right is so waived, the Board may, in its sole discretion, assign such right to the remaining stockholders of the Company in the same proportion that each stockholder's stock ownership bears to the stock ownership of all the stockholders of the Company, as determined by the Board. To the extent that a stockholder has been given such right and does not purchase his or her allotment, the other stockholders shall have the right to purchase such allotment on the same basis.

(d) **Purchase by the Company.** Prior to a Public Offering, if a Grantee ceases to be employed by, or provide service to, the Employer, the Company shall have the right to purchase all or part of any Company Stock distributed to him or her under this Plan at its then current Fair Market Value (as defined in Section 5(b)) (or at such other price as may be established in the Grant Instrument); provided, however, that such repurchase shall be made in accordance with applicable accounting rules to avoid adverse accounting treatment.

(e) **Public Offering.** On and after a Public Offering, the Company shall have no further right to purchase shares of Company Stock under this Section 9.

(f) **Stockholders Agreement.** Notwithstanding the provisions of this Section 9, if the Board requires that a Grantee execute a Stockholders Agreement (or other agreement containing first refusal or repurchase rights) with respect to any Company Stock distributed pursuant to this Plan, such Grantee shall execute such Stockholders Agreement (or other such agreement) as a condition to retaining his or her rights to such Company Stock. If such Stockholders Agreement (or other such agreement) contains a right of first refusal or repurchase right, the provisions of this Section 9 shall not apply to such Company Stock for as long as those provisions of the Stockholders Agreement (or other agreement) are in effect, unless the Board determines otherwise.

10. **Change of Control of the Company.**

(a) **Definitions.**

As used in this Plan, a "Change of Control" shall mean:

(i) any merger or consolidation in which voting securities of the Company possessing more than 50% of the total combined voting power of the Company's outstanding

securities are Transferred to a person or persons different from the person holding those securities immediately prior to such transaction and the composition of the Board following such transaction is such that the directors of the Company prior to the transaction constitute less than 50% of the Board membership following the transaction;

(ii) any acquisition, directly or indirectly, by a person or related group of persons (other than the Company or a person that directly or indirectly controls, is controlled by, or is under common control with, the Company) of beneficial ownership of voting securities of the Company possessing more than 50% of the total combined voting power of the Company's outstanding securities; provided, however, that, no Change of Control shall be deemed to occur by reason of the acquisition of shares of the Company's capital stock by an investor in the Company in a capital-raising transaction;

(iii) any acquisition, directly or indirectly, by a person or related group of persons of the right to appoint a majority of the directors of the Company or otherwise directly or indirectly control the management, affairs and business of the Company;

(iv) any sale transfer or other disposition of all or substantially all of the assets of the Company; or

(v) a complete liquidation or dissolution of the Company.

As used in this Section 10, "Transfer" shall include any sale, exchange, assignment, gift, bequest, disposition, mortgage, charge, pledge, encumbrance, grant of a security interest or other arrangement by which possession, legal title or beneficial ownership passes from one Person to another, or to the same Person in a different capacity, whether or not voluntarily and whether or not for value, and including without limitation any merger or amalgamation and any agreement to effect any of the foregoing.

(b) Assumption of Grants. Upon a Change of Control where the Company is not the surviving corporation (or survives only as a subsidiary of another corporation), unless the Board determines otherwise, all outstanding Options that are not exercised shall be assumed by, or replaced with comparable options by the surviving corporation (or a parent or subsidiary of the surviving corporation), and outstanding Stock Awards shall be converted to Stock Awards of the surviving corporation (or a parent or subsidiary of the surviving corporation).

(c) Other Alternatives. Notwithstanding the foregoing, in the event of a Change of Control, the Board may take any of the following actions with respect to any or all outstanding Grants: the Board may (i) determine that outstanding Options shall accelerate and become exercisable, in whole or in part, upon the Change of Control or upon such other event as the Board determines, (ii) determine that the restrictions and conditions on outstanding Stock Awards shall lapse, in whole or in part, upon the Change of Control or upon such other event as the Board determines, (iii) require that Grantees surrender their outstanding Options in exchange for a payment by the Company, in cash or stock as determined by the Board, in an amount equal to the amount by which the then Fair Market Value of the shares of Company Stock subject to the Grantee's unexercised Options exceeds the Exercise Price of the Options or (iv) after giving Grantees an opportunity to exercise their outstanding Options, terminate any or all unexercised

Options at such time as the Board deems appropriate. Such surrender or termination shall take place as of the date of the Change of Control or such other date as the Board may specify. The Board shall have no obligation to take any of the foregoing actions, and, in the absence of any such actions, outstanding Options and Stock Awards shall continue in effect according to their terms (subject to any assumption pursuant to subsection (b)).

11. Requirements for Issuance of Shares.

(a) Stockholders Agreement/Voting Agreement. The Board may require that a Grantee execute a stockholders agreement and/or a voting agreement, in each case, with such terms as the Board deems appropriate, with respect to any Company Stock issued pursuant to this Plan.

(b) Limitations on Issuance of Shares. No Company Stock shall be issued in connection with any Grant hereunder unless and until all legal requirements applicable to the issuance of such Company Stock have been complied with to the satisfaction of the Board. The Board shall have the right to condition any Grant made to any Grantee hereunder on such Grantee's undertaking in writing to comply with such restrictions on his or her subsequent disposition of such shares of Company Stock as the Board shall deem necessary or advisable, and certificates representing such shares may be legended to reflect any such restrictions. Certificates representing shares of Company Stock issued under this Plan will be subject to such stop-transfer orders and other restrictions as may be required by applicable laws, regulations and interpretations, including any requirement that a legend be placed thereon.

(c) Lock-Up Period. If so requested by the Company or any representative of the underwriters (the "Managing Underwriter") in connection with any underwritten offering of securities of the Company under the Securities Act of 1933, as amended (the "Securities Act"), a Grantee (including any successor or assigns) shall not sell or otherwise transfer any shares or other securities of the Company during the 30-day period preceding and the 180-day period following the effective date of a registration statement of the Company filed under the Securities Act for such underwriting (or such shorter period as may be requested by the Managing Underwriter and agreed to by the Company) (the "Market Standoff Period"). If so requested, the Grantee shall enter into a separate written agreement to such effect in form and substance requested by the Company or the Managing Underwriter. The Company may impose stoptransfer instructions with respect to securities subject to the foregoing restrictions until the end of such Market Standoff Period. Notwithstanding the foregoing, the Company may require that a Grantee execute a Stockholders Agreement or other agreement containing lock-up provisions. If such Stockholders Agreement or other agreement contains any lock-up or market standoff provisions that differ from the provisions of this Section 11(c), for as long as the provisions of such other agreement are in effect, the provisions of this Section 11(c) shall not apply to such Company Stock, unless the Board determines otherwise.

12. Amendment and Termination of This Plan.

(a) Amendment. The Board may amend or terminate this Plan at any time; provided, however, that the Board shall not amend this Plan without stockholder approval if such

approval is required in order to comply with the Code or other applicable laws, or, after a Public Offering, to comply with applicable stock exchange requirements.

(b) **Termination of This Plan.** This Plan shall terminate on the day immediately preceding the tenth anniversary of its effective date, unless this Plan is terminated earlier by the Board or is extended by the Board with the approval of the stockholders.

(c) **Termination and Amendment of Outstanding Grants.** A termination or amendment of this Plan that occurs after a Grant is made shall not materially impair the rights of a Grantee unless the Grantee consents or unless the Board acts under Section 18(b). The termination of this Plan shall not impair the power and authority of the Board with respect to an outstanding Grant. Whether or not this Plan has terminated, an outstanding Grant may be terminated or amended under Section 18(b) or may be amended by agreement of the Company and the Grantee consistent with this Plan.

(d) **Governing Document.** This Plan shall be the controlling document. No other statements, representations, explanatory materials or examples, oral or written, may amend this Plan in any manner. This Plan shall be binding upon and enforceable against the Company and its successors and assigns.

13. **Funding of This Plan.** This Plan shall be unfunded. The Company shall not be required to establish any special or separate fund or to make any other segregation of assets to assure the payment of any Grants under this Plan. In no event shall interest be paid or accrued on any Grant, including unpaid installments of Grants.

14. **Rights of Participants.** Nothing in this Plan shall entitle any Employee, Key Advisor, Non-Employee Director or other person to any claim or right to be granted a Grant under this Plan. Neither this Plan nor any action taken hereunder shall be construed as giving any individual any rights to be retained by or in the employ of the Employer or any other employment rights.

15. **No Fractional Shares.** No fractional shares of Company Stock shall be issued or delivered pursuant to this Plan or any Grant. The Board shall determine whether cash, other awards or other property shall be issued or paid in lieu of such fractional shares or whether such fractional shares or any rights thereto shall be forfeited or otherwise eliminated.

16. **Headings.** Section headings are for reference only. In the event of a conflict between a title and the content of a Section, the content of the Section shall control.

17. **Effective Date of this Plan.**

(a) **Effective Date.** The 2007 Equity Incentive Plan of the Company was originally effective as of October 1, 2007. This Plan shall be effective as of January 10, 2017.

(b) **Public Offering.** The provisions of this Plan that refer to a Public Offering, or that refer to, or are applicable to persons subject to, section 16 of the Exchange Act or section 162(m) of the Code, shall be effective, if at all, upon the initial registration of the Company

Stock under section 12(g) of the Exchange Act, and shall remain effective thereafter for as long as such stock is so registered.

18. Miscellaneous.

(a) Grants in Connection with Corporate Transactions and Otherwise. Nothing contained in this Plan shall be construed to (i) limit the right of the Board to make Grants under this Plan in connection with the acquisition, by purchase, lease, merger, consolidation or otherwise, of the business or assets of any corporation, firm or association, including Grants to employees thereof who become Employees, or for other proper corporate purposes, or (ii) limit the right of the Company to grant stock options or make other awards outside of this Plan. Without limiting the foregoing, the Board may make a Grant to an employee of another corporation who becomes an Employee by reason of a corporate merger, consolidation, acquisition of stock or property, reorganization or liquidation involving the Company, the Parent or any of their subsidiaries in substitution for a stock option or Stock Awards grant made by such corporation. The terms and conditions of the substitute grants may vary from the terms and conditions required by this Plan and from those of the substituted stock incentives. The Board shall prescribe the provisions of the substitute grants.

(b) Compliance with Law. This Plan, the exercise of Options and the obligations of the Company to issue shares of Company Stock under Grants shall be subject to all applicable laws and to approvals by any governmental or regulatory agency as may be required. With respect to persons subject to section 16 of the Exchange Act, after a Public Offering it is the intent of the Company that this Plan and all transactions under this Plan comply with all applicable provisions of Rule 16b-3 or its successors under the Exchange Act. In addition, it is the intent of the Company that this Plan and applicable Grants under this Plan comply with the applicable provisions of section 162(m) of the Code, after a Public Offering, and section 422 of the Code. To the extent that any legal requirement of section 16 of the Exchange Act or section 162(m) or 422 of the Code as set forth in this Plan ceases to be required under section 16 of the Exchange Act or section 162(m) or 422 of the Code, that Plan provision shall cease to apply. The Board may revoke any Grant if it is contrary to law or modify a Grant to bring it into compliance with any valid and mandatory government regulation. The Board may also adopt rules regarding the withholding of taxes on payments to Grantees. The Board may, in its sole discretion, agree to limit its authority under this Section.

(c) Employees Subject to Taxation Outside the United States. With respect to Grantees who are subject to taxation in countries other than the United States, the Board may make Grants on such terms and conditions as the Board deems appropriate to comply with the laws of the applicable countries, and the Board may create such procedures, addenda and subplans and make such modifications as may be necessary or advisable to comply with such laws.

(d) Governing Law. The validity, construction, interpretation and effect of this Plan and Grant Instruments issued under this Plan shall be governed and construed by and determined in accordance with the laws of the State of Delaware, without giving effect to the conflict of laws provisions thereof.

Effective Date: September 20, 2017

COGNITION THERAPEUTICS, INC.

2017 EQUITY INCENTIVE PLAN

The purpose of the Cognition Therapeutics, Inc. 2017 Equity Incentive Plan (this "Plan") is to provide (i) designated employees of Cognition Therapeutics, Inc. (the "Company") and its parents and subsidiaries, (ii) certain consultants and advisors who perform services for the Company or its parents or subsidiaries and (iii) non-employee members of the Board of Directors of the Company (the "Board") with the opportunity to receive grants of incentive stock options, nonqualified stock options and stock awards. The Company believes that this Plan will encourage the participants to contribute materially to the growth of the Company, thereby benefitting the Company's stockholders, and will align the economic interests of the participants with those of the stockholders.

This Plan is intended as the successor to the Company's Amended and Restated 2007 Equity Incentive Plan (the "Prior Plan"). Following the effective date of this Plan set forth above (the "Effective Date"), no additional grants of options or stock awards shall be granted under the Prior Plan. Any shares remaining available for issuance pursuant to the exercise of options or settlement of stock awards under the Prior Plan shall become available for issuance under this Plan pursuant to Grants (as defined in Section 2) granted hereunder, as provided in Section 3(a). Any shares subject to outstanding stock options or stock awards granted under the Prior Plan that expire or terminate or are repurchased by the Company for any reason prior to exercise, settlement or vesting shall become available for issuance under this Plan pursuant to stock options and stock awards granted hereunder. All outstanding stock options and stock awards granted under the Prior Plan shall remain subject to the terms of the Prior Plan with respect to which they were originally granted.

1. Administration.

(a) Committee. This Plan shall be administered and interpreted by the Board or by a committee consisting of members of the Board, which shall be appointed by the Board. After an initial public offering of the Company's stock as described in Section 17(b) (a "Public Offering"), this Plan shall be administered by a committee of Board members, which may consist of "outside directors" as defined under section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), and related Treasury regulations, and "non-employee directors" as defined under Rule 16b-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). However, the Board may ratify or approve any grants as it deems appropriate, and the Board shall approve and administer all grants made to non-employee directors. The committee may delegate authority to one or more subcommittees as it deems appropriate. To the extent that a committee or subcommittee administers this Plan, references in this Plan to the "Board" shall be deemed to refer to the committee or subcommittee; provided, however, that the Board of Directors itself may, at any time, exercise any and all rights and authority granted by it to a committee or subcommittee.

(b) Board Authority. The Board shall have the sole authority to (i) determine the individuals to whom grants shall be made under this Plan, (ii) determine the type, size and terms of the grants to be made to each such individual, (iii) determine the time when the grants will be made and the duration of any applicable exercise or restriction period, including the criteria for exercisability and the acceleration of exercisability, (iv) amend the terms of any previously issued grant, and (v) deal with any other matters arising under this Plan.

(c) Board Determinations. The Board shall have full power and authority to administer and interpret this Plan, to make factual determinations and to adopt or amend such rules, regulations, agreements and instruments for implementing this Plan and for the conduct of its business as it deems necessary or advisable, in its sole discretion. The Board's interpretations of this Plan and all determinations made by the Board pursuant to the powers vested in it hereunder shall be conclusive and binding on all persons having any interest in this Plan or in any awards granted hereunder. All powers of the Board shall be executed in its sole discretion, in the best interest of the Company, not as a fiduciary, and in keeping with the objectives of this Plan and need not be uniform as to similarly situated individuals.

(d) Delegation to Officers. To the extent permitted by applicable law, the Board may delegate to one or more officers of the Company the power to grant Options and Stock Awards (as each such term is defined in Section 2) to employees or officers of the Company or any of its present or future subsidiary corporations and to exercise such other powers under this Plan as the Board may determine, provided that the Board shall fix the terms of the Options and Stock Awards to be granted by such officers (including the exercise price of such Options, and the consideration, if any, for the Stock Awards, which may include a formula by which the exercise price or purchase price, if any, will be determined) and the maximum number of shares subject to Options and Stock Awards that the officers may grant; provided further, however, that no officer shall be authorized to grant any Options or Stock Awards to himself or herself.

2. Grants. Awards under this Plan may consist of grants of incentive stock options as described in Section 5 (“Incentive Stock Options”), nonqualified stock options as described in Section 5 (“Nonqualified Stock Options”) (Incentive Stock Options and Nonqualified Stock Options are collectively referred to as “Options”) and stock awards as described in Section 6 (“Stock Awards”) (hereinafter collectively referred to as “Grants”). All Grants shall be subject to the terms and conditions set forth herein and to such other terms and conditions consistent with this Plan as the Board deems appropriate and as are specified in writing by the Board to the individual in a grant instrument or an amendment to the grant instrument (the “Grant Instrument”). All Grants shall be made conditional upon the Grantee's acknowledgement, in writing or by acceptance of the Grant, that all decisions and determinations of the Board shall be final and binding on the Grantee, his or her beneficiaries and any other person having or claiming an interest under such Grant. The Board shall approve the form and provisions of each Grant Instrument. Grants under a particular Section of this Plan need not be uniform as among the grantees.

3. Shares Subject to This Plan.

(a) Shares Reserved. Subject to adjustment as described below, the aggregate number of shares of common stock of the Company (“Company Stock”) that may be issued

under this Plan is equal to (i) the 798,908 shares remaining available for issuance under the Prior Plan as of the Effective Date, and (ii) the number of shares that may be added to this Plan pursuant to Section 3(b) (collectively the "Share Reserve"), each of which may be granted as an Incentive Stock Option, up to the maximum limit set forth in Section 3(d) below. After a Public Offering, the maximum aggregate number of shares of Company Stock that shall be subject to Grants made under this Plan to (i) any employee during any calendar year shall be 3,900,000 shares and (ii) any non-employee member of the Board during any calendar year shall be 600,000 shares, subject to adjustment as described below. Shares issued under this Plan may be authorized but unissued shares of Company Stock or reacquired shares of Company Stock, including shares purchased by the Company on the open market for purposes of this Plan.

(b) Additions to the Share Reserve. The Share Reserve also shall be increased from time to time by a number of shares equal to the number of shares of Company Stock that (i) are issuable pursuant to options outstanding under the Prior Plan as of the Effective Date and (ii) but for the termination of the Prior Plan as of the Effective Date, would otherwise have reverted to the share reserve of the Prior Plan pursuant to the provisions thereof.

(c) Reversion of Shares to the Share Reserve. If and to the extent Options granted under this Plan terminate, expire, or are canceled, forfeited, exchanged or surrendered without having been exercised or if any Stock Awards (including restricted Stock Awards received upon the exercise of Options) are forfeited, the shares subject to such Grants shall again be available for purposes of this Plan.

(d) Incentive Stock Option Limit. Notwithstanding anything to the contrary in this Section 3, subject to the provisions of Section 3(e) relating to capitalization adjustments, the aggregate maximum number of shares of Company Stock that may be issued pursuant to the exercise of Incentive Stock Options shall be 798,908 shares of Company Stock plus the amount of any increase in the number of shares that may be available for issuance pursuant to Grants pursuant to Section 3(b), but in no event shall greater than 11,189,392 shares of Company Stock be issued as Incentive Stock Options (the "Maximum Incentive Stock Option Limit"). Any additional shares added to the Plan pursuant to the Share Reserve in excess of the Maximum Incentive Stock Option Limit shall not be issued as Incentive Stock Options but may be issued as Nonqualified Stock Options or Stock Awards.

(e) Adjustments. If there is any change in the number or kind of shares of Company Stock outstanding (i) by reason of a stock dividend, spinoff, recapitalization, stock split, or combination or exchange of shares, (ii) by reason of a merger, reorganization or consolidation, (iii) by reason of a reclassification or change in par value, or (iv) by reason of any other extraordinary or unusual event affecting the outstanding Company Stock as a class without the Company's receipt of consideration, or if the value of outstanding shares of Company Stock is substantially reduced as a result of a spinoff or the Company's payment of an extraordinary dividend or distribution, the maximum number of shares of Company Stock available for Grants, the maximum number of shares of Company Stock that any individual participating in this Plan may be granted in any year, the number of shares covered by outstanding Grants, the kind of shares issued under this Plan, and the price per share of such Grants shall be appropriately adjusted by the Board to reflect any increase or decrease in the number of, or change in the kind or value of, issued shares of Company Stock to preclude, to the extent practicable, the

enlargement or dilution of rights and benefits under such Grants; provided, however, that any fractional shares resulting from such adjustment shall be eliminated. Any adjustments determined by the Board shall be final, binding and conclusive.

4. Eligibility for Participation.

(a) Eligible Persons. All employees of the Company and its parents or subsidiaries ("Employees"), including Employees who are officers or members of the Board, and members of the Board who are not Employees ("Non-Employee Directors") shall be eligible to participate in this Plan. Consultants and advisors who perform services for the Company or any of its parents or subsidiaries ("Key Advisors") shall be eligible to participate in this Plan if the Key Advisors render bona fide services to the Company or its parents or subsidiaries, the services are not in connection with the offer and sale of securities in a capital-raising transaction, and the Key Advisors do not directly or indirectly promote or maintain a market for the Company's securities.

(b) Selection of Grantees. The Board shall select the Employees, Non-Employee Directors and Key Advisors to receive Grants and shall determine the number of shares of Company Stock subject to a particular Grant in such manner as the Board determines. Employees, Key Advisors and Non-Employee Directors who receive Grants under this Plan shall hereinafter be referred to as "Grantees."

5. Granting of Options.

(a) Number of Shares. The Board shall determine the number of shares of Company Stock that will be subject to each Grant of Options to Employees, Non-Employee Directors and Key Advisors.

(b) Type of Option and Price.

(i) The Board may grant Incentive Stock Options that are intended to qualify as "incentive stock options" within the meaning of section 422 of the Code or Nonqualified Stock Options that are not intended so to qualify or any combination of Incentive Stock Options and Nonqualified Stock Options, all in accordance with the terms and conditions set forth herein. Incentive Stock Options may be granted only to employees of the Company or its parents or subsidiaries, as defined in section 424 of the Code. Nonqualified Stock Options may be granted to Employees, Non-Employee Directors and Key Advisors. The date of grant of an Option shall be the date on which the Board makes the determination to grant such Option unless a later date is otherwise specified by the Board.

(ii) The purchase price (the "Exercise Price") of Company Stock subject to an Option shall be determined by the Board and may be equal to or greater than the Fair Market Value (as defined below) of a share of Company Stock on the date the Option is granted; provided, however, that (x) the Exercise Price of an Incentive Stock Option shall be equal to, or greater than, the Fair Market Value of a share of Company Stock on the date the Incentive Stock Option is granted and (y) an Incentive Stock Option may not be granted to an Employee who, at the time of grant, owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or any parent or subsidiary of the Company, unless the

Exercise Price per share is not less than 110% of the Fair Market Value of Company Stock on the date of grant.

(iii) If the Company Stock is publicly traded, then the Fair Market Value per share shall be determined as follows: (x) if the principal trading market for the Company Stock is a national securities exchange, the last reported sale price thereof on the relevant date or (if there were no trades on that date) the latest preceding date upon which a sale was reported, or (y) if the Company Stock is not principally traded on such exchange or market, the mean between the last reported "bid" and "asked" prices of Company Stock on the relevant date, as reported by the National Daily Quotation Bureau, Inc. or as reported in a customary financial reporting service, as applicable and as the Board determines. If the Company Stock is not publicly traded or, if publicly traded, is not subject to reported transactions or "bid" or "asked" quotations as set forth above, the Fair Market Value per share shall be as determined by the Board.

(c) Option Term. The Board shall determine the term of each Option. The term of any Option shall not exceed ten years from the date of grant. However, an Incentive Stock Option that is granted to an Employee who, at the time of grant, owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company, or any parent or subsidiary of the Company, may not have a term that exceeds five years from the date of grant.

(d) Exercisability of Options.

(i) Options shall become exercisable in accordance with such terms and conditions, consistent with this Plan, as may be determined by the Board and specified in the Grant Instrument. The Board may accelerate the exercisability of any or all outstanding Options at any time for any reason.

(ii) The Board may provide in a Grant Instrument that the Grantee may elect to exercise part or all of an Option before it otherwise has become exercisable. Any shares so purchased shall be restricted shares and shall be subject to a repurchase right in favor of the Company during a specified restriction period, with the repurchase price equal to the lesser of (i) the Exercise Price or (ii) the Fair Market Value of such shares at the time of repurchase, or such other restrictions as the Board deems appropriate.

(e) Grants to Non-Exempt Employees. Notwithstanding the foregoing, Options granted to persons who are non-exempt employees under the Fair Labor Standards Act of 1938, as amended, shall have an Exercise Price not less than the Fair Market Value of the Company Stock on the date of grant, and may not be exercisable for at least six months after the date of grant (except that such Options may become exercisable, as determined by the Board, upon the Grantee's death, Disability or retirement, or upon a Change of Control or other circumstances permitted by applicable regulations).

(f) Termination of Employment, Disability or Death.

(i) Except as provided below, an Option may only be exercised while the Grantee is employed by, or providing service to, the Employer (as defined below) as an Employee, Key Advisor or member of the Board. In the event that a Grantee ceases to be

employed by, or provide service to, the Employer for any reason other than Disability, death, or termination for Cause, any Option which is otherwise exercisable by the Grantee shall terminate unless exercised within three months after the date on which the Grantee ceases to be employed by, or provide service to, the Employer (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options that are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Employer shall terminate as of such date.

(ii) In the event the Grantee ceases to be employed by, or provide service to, the Employer on account of a termination for Cause by the Employer, any Option held by the Grantee shall terminate as of the date the Grantee ceases to be employed by, or provide service to, the Employer. In addition, notwithstanding any other provisions of this Section 5, if the Board determines that the Grantee has engaged in conduct that constitutes Cause at any time while the Grantee is employed by, or providing service to, the Employer or after the Grantee's termination of employment or service, any Option held by the Grantee shall immediately terminate, and the Grantee shall automatically forfeit all shares underlying any exercised portion of an Option for which the Company has not yet delivered the share certificates, upon refund by the Company of the Exercise Price paid by the Grantee for such shares. Upon any exercise of an Option, the Company may withhold delivery of share certificates pending resolution of an inquiry that could lead to a finding resulting in a forfeiture.

(iii) In the event the Grantee ceases to be employed by, or provide service to, the Employer because the Grantee is Disabled, any Option which is otherwise exercisable by the Grantee shall terminate unless exercised within one year after the date on which the Grantee ceases to be employed by, or provide service to, the Employer (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options which are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Employer shall terminate as of such date.

(iv) If the Grantee dies while employed by, or providing service to, the Employer or within three months after the date on which the Grantee ceases to be employed or provide service on account of a termination specified in Section 5(f)(i) (or within such other period of time as may be specified by the Board), any Option that is otherwise exercisable by the Grantee shall terminate unless exercised within one year after the date on which the Grantee ceases to be employed by, or provide service to, the Employer (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options that are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Employer shall terminate as of such date.

(v) For purposes of this Section 5(f) and Section 6:

(A) The term “Employer” shall include the Company and its parent and subsidiary corporations or other entities, as appropriate and as determined by the Board.

(B) “Employed by, or provide service to, the Employer” shall mean employment or service as an Employee, Key Advisor or member of the Board (so that, for purposes of exercising Options and satisfying conditions with respect to Stock Awards, a Grantee shall not be considered to have terminated employment or service until the Grantee ceases to be an Employee, Key Advisor or member of the Board), unless the Board determines otherwise.

(C) “Disability” shall mean a Grantee's becoming disabled within the meaning of section 22(e)(3) of the Code, within the meaning of the Employer's long-term disability plan applicable to the Grantee, or as otherwise determined by the Board.

(D) “Cause” shall mean, except to the extent specified otherwise by the Board, a finding by the Board that the Grantee (i) has breached his or her employment or service contract with the Employer, (ii) has engaged in disloyalty to the Company, including, without limitation, fraud, embezzlement, theft, commission of a felony or proven dishonesty, (iii) has disclosed trade secrets or confidential information of the Employer to persons not entitled to receive such information, (iv) has breached any written noncompetition or nonsolicitation agreement between the Grantee and the Employer or (v) has engaged in such other behavior detrimental to the interests of the Employer as the Board determines.

(g) Exercise of Options. A Grantee may exercise an Option that has become exercisable, in whole or in part, by delivering a notice of exercise to the Company with payment of the Exercise Price: provided, however, that the Committee shall have the power to permit: (i) the exercise of unvested Options, or portions thereof, for the purchase of shares of restricted Common Stock subject to a repurchase right in favor of the Company, with the repurchase price being equal to the lesser of (x) the original purchase price or (y) the Fair Market Value of the shares on the date of repurchase, or to any other restrictions as the Committee deems to be appropriate, and (ii) the acceleration of previously established exercise terms, in each case upon such circumstances and subject to such terms and conditions as the Committee shall determine. The Grantee shall pay the Exercise Price for an Option as specified by the Board (I) in cash, (II) with the approval of the Board, by delivering shares of Company Stock owned by the Grantee (including Company Stock acquired in connection with the exercise of an Option, subject to such restrictions as the Board deems appropriate) and having a Fair Market Value on the date of exercise equal to the Exercise Price or by attestation (on a form prescribed by the Board) to ownership of shares of Company Stock having a Fair Market Value on the date of exercise equal to the Exercise Price, (III) after a Public Offering, payment through a broker in accordance with procedures permitted by Regulation T of the Federal Reserve Board, or (IV) by such other method as the Board may approve. The Board may authorize loans by the Company to Grantees in connection with the exercise of an Option, upon such terms and conditions as the Board, in its sole discretion, deems appropriate. Shares of Company Stock used to exercise an Option shall have been held by the Grantee for the requisite period of time to avoid adverse accounting consequences to the Company with respect to the Option. The Grantee shall pay the Exercise Price and the amount of any withholding tax due (pursuant to Section 7) at the time of exercise.

(h) Limits on Incentive Stock Options. Each Incentive Stock Option shall provide that, if the aggregate Fair Market Value of the stock on the date of the grant with respect to

which Incentive Stock Options are exercisable for the first time by a Grantee during any calendar year, under this Plan or any other stock option plan of the Company or a parent or subsidiary, exceeds $100,000, then the Option, as to the excess, shall be treated as a Nonqualified Stock Option. An Incentive Stock Option shall not be granted to any person who is not an Employee of the Company or a parent or subsidiary (within the meaning of section 424(f) of the Code) of the Company.

6. Stock Awards. The Board may issue shares of Company Stock to an Employee, Non-Employee Director or Key Advisor under a Stock Award, upon such terms as the Board deems appropriate. The following provisions are applicable to Stock Awards:

(a) General Requirements. Shares of Company Stock issued pursuant to Stock Awards may be issued for consideration or for no consideration, and subject to restrictions or no restrictions, as determined by the Board. The Board may establish conditions under which restrictions on Stock Awards shall lapse over a period of time or according to such other criteria as the Board deems appropriate. The period of time during which the Stock Award will remain subject to restrictions will be designated in the Grant Instrument as the "Restriction Period."

(b) Number of Shares. The Board shall determine the number of shares of Company Stock to be issued pursuant to a Stock Award and the restrictions applicable to such shares.

(c) Requirement of Employment or Service. If the Grantee ceases to be employed by, or provide service to, the Employer (as defined in Section 5(f)) during a period designated in the Grant Instrument as the Restriction Period, or if other specified conditions are not met, the Stock Award shall terminate as to all shares covered by the award as to which the restrictions have not lapsed, and those shares of Company Stock must be immediately returned to the Company. The Board may, however, provide for complete or partial exceptions to this requirement as it deems appropriate.

(d) Restrictions on Transfer and Legend on Stock Certificate. During the Restriction Period, a Grantee may not sell, assign, transfer, pledge or otherwise dispose of the shares of the Stock Award except to a successor under Section 8(a). Each certificate for Stock Awards shall contain a legend giving appropriate notice of the restrictions in the Grant. The Grantee shall be entitled to have the legend removed from the stock certificate covering the shares subject to restrictions when all restrictions on such shares have lapsed. The Board may determine that the Company will not issue certificates for Stock Awards until all restrictions on such shares have lapsed, or that the Company will retain possession of certificates for Stock Awards until all restrictions on such shares have lapsed.

(e) Right to Vote and to Receive Dividends. During the Restriction Period, the Grantee shall have the right to vote shares subject to Stock Awards and to receive any dividends or other distributions paid on such shares, subject to any restrictions deemed appropriate by the Board.

(f) Lapse of Restrictions. All restrictions imposed on Stock Awards shall lapse upon the expiration of the applicable Restriction Period and the satisfaction of all conditions

imposed by the Board. The Board may determine, as to any or all Stock Awards, that the restrictions shall lapse without regard to any Restriction Period.

7. Withholding of Taxes.

(a) Required Withholding. All Grants under this Plan shall be subject to applicable federal (including FICA), state and local tax withholding requirements. The Employer may require that the Grantee or other person receiving or exercising Grants pay to the Employer the amount of any federal, state or local taxes that the Employer is required to withhold with respect to such Grants, or the Employer may deduct from other wages paid by the Employer the amount of any withholding taxes due with respect to such Grants.

(b) Election to Withhold Shares. If the Board so permits, a Grantee may elect to satisfy the Employer's income tax withholding obligation with respect to a Grant by having shares withheld up to an amount that does not exceed the Grantee's minimum applicable withholding tax rate for federal (including FICA), state and local tax liabilities. The election must be in a form and manner prescribed by the Board and may be subject to the prior approval of the Board.

8. Transferability of Grants.

(a) Nontransferability of Grants. Except as provided below, only the Grantee may exercise rights under a Grant during the Grantee's lifetime. A Grantee may not transfer those rights except (i) by will or by the laws of descent and distribution or (ii) with respect to Grants other than Incentive Stock Options, if permitted in any specific case by the Board, pursuant to a domestic relations order or otherwise as permitted by the Board. When a Grantee dies, the personal representative or other person entitled to succeed to the rights of the Grantee may exercise such rights. Any such successor must furnish proof satisfactory to the Company of his or her right to receive the Grant under the Grantee's will or under the applicable laws of descent and distribution.

(b) Transfer of Nonqualified Stock Options. Notwithstanding the foregoing, the Board may provide, in a Grant Instrument, that a Grantee may transfer Nonqualified Stock Options to family members, or one or more trusts or other entities for the benefit of or owned by family members, consistent with applicable securities laws, according to such terms as the Board may determine; provided that the Grantee receives no consideration for the transfer of an Option and the transferred Option shall continue to be subject to the same terms and conditions as were applicable to the Option immediately before the transfer.

9. Right of First Refusal; Repurchase Right.

(a) Offer. Prior to a Public Offering, if at any time an individual desires to sell, encumber, or otherwise dispose of shares of Company Stock that were distributed to him or her under this Plan and that are transferable, the individual may do so only pursuant to a bona fide written offer, and the individual shall first offer the shares to the Company by giving the Company written notice disclosing: (i) the name of the proposed transferee of the Company Stock; (ii) the certificate number and number of shares of Company Stock proposed to be transferred or encumbered; (iii) the proposed price; (iv) all other terms of the proposed transfer;

and (v) a written copy of the proposed offer. Within 60 days after receipt of such notice, the Company shall have the option to purchase all or part of such Company Stock at the price and on the terms described in the written notice; provided that the Company may pay such price in installments over a period not to exceed four years, at the discretion of the Board.

(b) Sale. In the event the Company (or a stockholder, as described below) does not exercise the option to purchase Company Stock, as provided above, the individual shall have the right to sell, encumber, or otherwise dispose of the shares of Company Stock described in Section 9(a) at the price and on the terms of the transfer set forth in the written notice to the Company, provided such transfer is effected within 15 days after the expiration of the option period. If the transfer is not effected within such period, the Company must again be given an option to purchase, as provided above.

(c) Assignment of Rights. The Board, in its sole discretion, may waive the Company's right of first refusal and repurchase right under this Section 9. If the Company's right of first refusal or repurchase right is so waived, the Board may, in its sole discretion, assign such right to the remaining stockholders of the Company in the same proportion that each stockholder's stock ownership bears to the stock ownership of all the stockholders of the Company, as determined by the Board. To the extent that a stockholder has been given such right and does not purchase his or her allotment, the other stockholders shall have the right to purchase such allotment on the same basis.

(d) Purchase by the Company. Prior to a Public Offering, if a Grantee ceases to be employed by, or provide service to, the Employer, the Company shall have the right to purchase all or part of any Company Stock distributed to him or her under this Plan at its then current Fair Market Value (as defined in Section 5(b)) (or at such other price as may be established in the Grant Instrument); provided, however, that such repurchase shall be made in accordance with applicable accounting rules to avoid adverse accounting treatment.

(e) Public Offering. On and after a Public Offering, the Company shall have no further right to purchase shares of Company Stock under this Section 9.

(f) Stockholders Agreement. Notwithstanding the provisions of this Section 9, if the Board requires that a Grantee execute a Stockholders Agreement (or other agreement containing first refusal or repurchase rights) with respect to any Company Stock distributed pursuant to this Plan, such Grantee shall execute such Stockholders Agreement (or other such agreement) as a condition to retaining his or her rights to such Company Stock. If such Stockholders Agreement (or other such agreement) contains a right of first refusal or repurchase right, the provisions of this Section 9 shall not apply to such Company Stock for as long as those provisions of the Stockholders Agreement (or other agreement) are in effect, unless the Board determines otherwise.

10. Change of Control of the Company.

(a) Definitions.

As used in this Plan, a “Change of Control” shall mean:

(i) any merger or consolidation in which voting securities of the Company possessing more than 50% of the total combined voting power of the Company's outstanding securities are Transferred to a person or persons different from the person holding those securities immediately prior to such transaction and the composition of the Board following such transaction is such that the directors of the Company prior to the transaction constitute less than 50% of the Board membership following the transaction;

(ii) any acquisition, directly or indirectly, by a person or related group of persons (other than the Company or a person that directly or indirectly controls, is controlled by, or is under common control with, the Company) of beneficial ownership of voting securities of the Company possessing more than 50% of the total combined voting power of the Company's outstanding securities; provided, however, that, no Change of Control shall be deemed to occur by reason of the acquisition of shares of the Company's capital stock by an investor in the Company in a capital-raising transaction;

(iii) any acquisition, directly or indirectly, by a person or related group of persons of the right to appoint a majority of the directors of the Company or otherwise directly or indirectly control the management, affairs and business of the Company;

(iv) any sale, transfer or other disposition of all or substantially all of the assets of the Company; or

(v) a complete liquidation or dissolution of the Company.

As used in this Section 10, “Transfer” shall include any sale, exchange, assignment, gift, bequest, disposition, mortgage, charge, pledge, encumbrance, grant of a security interest or other arrangement by which possession, legal title or beneficial ownership passes from one Person to another, or to the same Person in a different capacity, whether or not voluntarily and whether or not for value, and including without limitation any merger or amalgamation and any agreement to effect any of the foregoing.

(b) Assumption of Grants. Upon a Change of Control where the Company is not the surviving corporation (or survives only as a subsidiary of another corporation), unless the Board determines otherwise, all outstanding Options that are not exercised shall be assumed by, or replaced with comparable options by the surviving corporation (or a parent or subsidiary of the surviving corporation), and outstanding Stock Awards shall be converted to Stock Awards of the surviving corporation (or a parent or subsidiary of the surviving corporation).

(c) Other Alternatives. Notwithstanding the foregoing, in the event of a Change of Control, the Board may take any of the following actions with respect to any or all outstanding Grants: the Board may (i) determine that outstanding Options shall accelerate and become exercisable, in whole or in part, upon the Change of Control or upon such other event as the Board determines, (ii) determine that the restrictions and conditions on outstanding Stock Awards shall lapse, in whole or in part, upon the Change of Control or upon such other event as the Board determines, (iii) require that Grantees surrender their outstanding Options in exchange for a payment by the Company, in cash or stock as determined by the Board, in an amount equal to the amount by which the then Fair Market Value of the shares of Company Stock subject to

the Grantee's unexercised Options exceeds the Exercise Price of the Options or (iv) after giving Grantees an opportunity to exercise their outstanding Options, terminate any or all unexercised Options at such time as the Board deems appropriate. Such surrender or termination shall take place as of the date of the Change of Control or such other date as the Board may specify. The Board shall have no obligation to take any of the foregoing actions, and, in the absence of any such actions, outstanding Options and Stock Awards shall continue in effect according to their terms (subject to any assumption pursuant to subsection (b)).

11. Requirements for Issuance of Shares.

(a) Stockholders Agreement/Voting Agreement. The Board may require that a Grantee execute a stockholders agreement and/or a voting agreement, in each case, with such terms as the Board deems appropriate, with respect to any Company Stock issued pursuant to this Plan.

(b) Limitations on Issuance of Shares. No Company Stock shall be issued in connection with any Grant hereunder unless and until all legal requirements applicable to the issuance of such Company Stock have been complied with to the satisfaction of the Board. The Board shall have the right to condition any Grant made to any Grantee hereunder on such Grantee's undertaking in writing to comply with such restrictions on his or her subsequent disposition of such shares of Company Stock as the Board shall deem necessary or advisable, and certificates representing such shares may be legended to reflect any such restrictions. Certificates representing shares of Company Stock issued under this Plan will be subject to such stop-transfer orders and other restrictions as may be required by applicable laws, regulations and interpretations, including any requirement that a legend be placed thereon.

(c) Lock-Up Period. If so requested by the Company or any representative of the underwriters (the "Managing Underwriter") in connection with any underwritten offering of securities of the Company under the Securities Act of 1933, as amended (the "Securities Act"), a Grantee (including any successor or assigns) shall not sell or otherwise transfer any shares or other securities of the Company during the 30-day period preceding and the 180-day period following the effective date of a registration statement of the Company filed under the Securities Act for such underwriting (or such shorter period as may be requested by the Managing Underwriter and agreed to by the Company) (the "Market Standoff Period"). If so requested, the Grantee shall enter into a separate written agreement to such effect in form and substance requested by the Company or the Managing Underwriter. The Company may impose stoptransfer instructions with respect to securities subject to the foregoing restrictions until the end of such Market Standoff Period. Notwithstanding the foregoing, the Company may require that a Grantee execute a Stockholders Agreement or other agreement containing lock-up provisions. If such Stockholders Agreement or other agreement contains any lock-up or market standoff provisions that differ from the provisions of this Section 11(c), for as long as the provisions of such other agreement are in effect, the provisions of this Section 11(c) shall not apply to such Company Stock, unless the Board determines otherwise.

12. Amendment and Termination of This Plan.

(a) Amendment. The Board may amend or terminate this Plan at any time; provided, however, that the Board shall not amend this Plan without stockholder approval if such approval is required in order to comply with the Code or other applicable laws, or, after a Public Offering, to comply with applicable stock exchange requirements.

(b) Termination of This Plan. This Plan shall terminate on the day immediately preceding the tenth anniversary of the Effective Date, unless this Plan is terminated earlier by the Board or is extended by the Board with the approval of the stockholders.

(c) Termination and Amendment of Outstanding Grants. A termination or amendment of this Plan that occurs after a Grant is made shall not materially impair the rights of a Grantee unless the Grantee consents or unless the Board acts under Section 18(b). The termination of this Plan shall not impair the power and authority of the Board with respect to an outstanding Grant. Whether or not this Plan has terminated, an outstanding Grant may be terminated or amended under Section 18(b) or may be amended by agreement of the Company and the Grantee consistent with this Plan.

(d) Governing Document. This Plan shall be the controlling document. No other statements, representations, explanatory materials or examples, oral or written, may amend this Plan in any manner. This Plan shall be binding upon and enforceable against the Company and its successors and assigns.

13. Funding of This Plan. This Plan shall be unfunded. The Company shall not be required to establish any special or separate fund or to make any other segregation of assets to assure the payment of any Grants under this Plan. In no event shall interest be paid or accrued on any Grant, including unpaid installments of Grants.

14. Rights of Participants. Nothing in this Plan shall entitle any Employee, Key Advisor, Non-Employee Director or other person to any claim or right to be granted a Grant under this Plan. Neither this Plan nor any action taken hereunder shall be construed as giving any individual any rights to be retained by or in the employ of the Employer or any other employment rights.

15. No Fractional Shares. No fractional shares of Company Stock shall be issued or delivered pursuant to this Plan or any Grant. The Board shall determine whether cash, other awards or other property shall be issued or paid in lieu of such fractional shares or whether such fractional shares or any rights thereto shall be forfeited or otherwise eliminated.

16. Headings. Section headings are for reference only. In the event of a conflict between a title and the content of a Section, the content of the Section shall control.

17. Effective Date of This Plan.

(a) Effective Date. This Plan shall be effective on the Effective Date set forth on the first page above.

(b) Public Offering. The provisions of this Plan that refer to a Public Offering, or that refer to, or are applicable to persons subject to, section 16 of the Exchange Act or section 162(m) of the Code, shall be effective, if at all, upon the initial registration of the Company Stock under section 12(b) or 12(g) of the Exchange Act, and shall remain effective thereafter for as long as such stock is so registered.

18. Miscellaneous.

(a) Grants in Connection with Corporate Transactions and Otherwise. Nothing contained in this Plan shall be construed to (i) limit the right of the Board to make Grants under this Plan in connection with the acquisition, by purchase, lease, merger, consolidation or otherwise, of the business or assets of any corporation, firm or association, including Grants to employees thereof who become Employees, or for other proper corporate purposes, or (ii) limit the right of the Company to grant stock options or make other awards outside of this Plan. Without limiting the foregoing, the Board may make a Grant to an employee of another corporation who becomes an Employee by reason of a corporate merger, consolidation, acquisition of stock or property, reorganization or liquidation involving the Company, the Parent or any of their subsidiaries in substitution for a stock option or Stock Awards grant made by such corporation. The terms and conditions of the substitute grants may vary from the terms and conditions required by this Plan and from those of the substituted stock incentives. The Board shall prescribe the provisions of the substitute grants.

(b) Compliance with Law. This Plan, the exercise of Options and the obligations of the Company to issue shares of Company Stock under Grants shall be subject to all applicable laws and to approvals by any governmental or regulatory agency as may be required. With respect to persons subject to section 16 of the Exchange Act, after a Public Offering it is the intent of the Company that this Plan and all transactions under this Plan comply with all applicable provisions of Rule 16b-3 or its successors under the Exchange Act. In addition, it is the intent of the Company that this Plan and applicable Grants under this Plan comply with the applicable provisions of section 162(m) of the Code, after a Public Offering, and section 422 of the Code. To the extent that any legal requirement of section 16 of the Exchange Act or section 162(m) or 422 of the Code as set forth in this Plan ceases to be required under section 16 of the Exchange Act or section 162(m) or 422 of the Code, that Plan provision shall cease to apply. The Board may revoke any Grant if it is contrary to law or modify a Grant to bring it into compliance with any valid and mandatory government regulation. The Board may also adopt rules regarding the withholding of taxes on payments to Grantees. The Board may, in its sole discretion, agree to limit its authority under this Section.

(c) Employees Subject to Taxation Outside the United States. With respect to Grantees who are subject to taxation in countries other than the United States, the Board may make Grants on such terms and conditions as the Board deems appropriate to comply with the laws of the applicable countries, and the Board may create such procedures, addenda and subplans and make such modifications as may be necessary or advisable to comply with such laws.

(d) Governing Law. The validity, construction, interpretation and effect of this Plan and Grant Instruments issued under this Plan shall be governed and construed by and determined

in accordance with the laws of the State of Delaware, without giving effect to the conflict of laws provisions thereof.

Exhibit 10.8

AMENDMENT TO
THE COGNITION THERAPEUTICS, INC.
2017 EQUITY INCENTIVE PLAN

WHEREAS, Cognition Therapeutics, Inc. (the "***Company***") has adopted the Cognition Therapeutics, Inc. 2017 Equity Incentive Plan (the "***Plan***");

WHEREAS, Section 12(a) of the Plan permits the Board of Directors of the Company (the *"**Board**")* to amend the Plan from time to time;

WHEREAS, pursuant to Section 3 of the Plan, a total of 798,908 shares of Common Stock of the Company, par value $.001 per share *("**Common Stock**")*, plus any share of Common Stock that would otherwise revert to the share reserve of the Company's Amended and Restated 2007 Equity Incentive Plan, have been reserved for issuance under the Plan;

WHEREAS, the Company desires to increase the number of shares issuable under the Plan by 2,000,000 shares of Common Stock.

NOW, THEREFORE, the following amendments and modifications are hereby made a part of the Plan subject to, and effective as of the date of, the approval of shareholders of the Plan as amended:

1. Section 3(a) of the Plan is hereby amended by revising the first sentence of such section in its entirety to read as follows:

   "Subject to adjustment as described below, the aggregate number of shares of common stock of the Company ("Company Stock") that may be issued under this Plan is equal to (i) 2,798,908 and (ii) the number of shares that may be added to this Plan pursuant to Section 3(b) (collectively the "Share Reserve"), each of which may be granted as an Incentive Stock Option, up to the maximum limit set forth in Section 3(d) below."

2. Section 3(d) of the Plan is hereby amended by revising the first sentence of such section in its entirety to read as follows:

   "Notwithstanding anything to the contrary in this Section 3, subject to the provisions of Section 3(e) relating to capitalization adjustments, the aggregate maximum number of shares of Company Stock that may be issued pursuant to the exercise of Incentive Stock Options shall be 2,798,908 shares of Company Stock plus the amount of any increase in the number of shares that may be available for issuance pursuant to Grants pursuant to Section 3(h), but in no event shall greater than 13,189,392 shares of Company Stock be issued as Incentive Stock Options (the "Maximum Incentive Stock Option Limit")."

3. In all other respects, the Plan, as amended, is hereby ratified and confirmed and shall remain in full force and effect.

Exhibit 10.9

AMENDMENT TO
THE COGNITION THERAPEUTICS, INC.
2017 EQUITY INCENTIVE PLAN

WHEREAS, Cognition Therapeutics, Inc. (the "***Company***") has adopted the Cognition Therapeutics, Inc. 2017 Equity Incentive Plan (the "***Plan***");

WHEREAS, Section 12(a) of the Plan permits the Board of Directors of the Company (the *"**Board**")* to amend the Plan from time to time;

WHEREAS, pursuant to Section 3 of the Plan, as amended, a total of 2,798,908 shares of Common Stock of the Company, par value $.001 per share *("**Common Stock**")*, plus any share of Common Stock that would otherwise revert to the share reserve of the Company's Amended and Restated 2007 Equity Incentive Plan, have been reserved for issuance under the Plan;

WHEREAS, the Company desires to increase the number of shares issuable under the Plan by 1,224,597 shares of Common Stock.

NOW, THEREFORE, the following amendments and modifications are hereby made a part of the Plan subject to, and effective as of the date of, the approval of shareholders of the Plan as amended:

1. Section 3(a) of the Plan is hereby amended by revising the first sentence of such section in its entirety to read as follows:

   "Subject to adjustment as described below, the aggregate number of shares of common stock of the Company ("Company Stock") that may be issued under this Plan is equal to (i) 4,023,505 and (ii) the number of shares that may be added to this Plan pursuant to Section 3(b) (collectively the "Share Reserve"), each of which may be granted as an Incentive Stock Option, up to the maximum limit set forth in Section 3(d) below."

2. Section 3(d) of the Plan is hereby amended by revising the first sentence of such section in its entirety to read as follows:

   "Notwithstanding anything to the contrary in this Section 3, subject to the provisions of Section 3(e) relating to capitalization adjustments, the aggregate maximum number of shares of Company Stock that may be issued pursuant to the exercise of Incentive Stock Options shall be 4,203,505 shares of Company Stock plus the amount of any increase in the number of shares that may be available for issuance pursuant to Grants pursuant to Section 3(h), but in no event shall greater than 14,413,989 shares of Company Stock be issued as Incentive Stock Options (the "Maximum Incentive Stock Option Limit")."

3. In all other respects, the Plan, as amended, is hereby ratified and confirmed and shall remain in full force and effect.

Exhibit 10.14

Execution Version

EMPLOYMENT AGREEMENT

EMPLOYMENT AGREEMENT effective as of June 1, 2020 (this "Agreement") between Cognition Therapeutics, Inc. (the "Company"), a Delaware corporation, and Lisa Ricciardi (the "Executive").

Background:

Executive and the Company entered into an employment agreement dated March 30, 2020 (the "Interim CEO Contract") for Executive to serve as Interim Chief Executive Officer of the Company for a term specified therein.

The parties desire to terminate the Interim CEO Contract and enter into this Agreement to provide for the employment of the Executive by the Company as CEO and for certain other matters in collection with such employment, all as set forth more fully in this Agreement. Certain capitalized terms used in this Agreement have the respective meanings given to them in Exhibit A hereto.

Terms:

NOW, THEREFORE, in consideration of the premises and covenants set forth herein, and intending to be legally bound hereby, the parties to this Agreement hereby agree as follows:

1. Termination of Interim CEO Contract; Position and Duties; Board Seat.

(a) **Termination of Interim CEO Contract.** The parties acknowledge and agree that the Interim CEO Contract shall terminate on the Effective Date and all matters related to Executive's employment shall be governed by this Agreement.

(b) **Position and Duties.** The Company agrees that the Executive shall be employed by the Company to serve as Chief Executive Officer and President of the Company. The Executive shall report directly to the Board of Directors of the Company (the "Board"). The Executive agrees to be so employed by the Company and agrees to devote substantially all of her business time, attention, skill and efforts to perform services for the Company and to faithfully and diligently discharge and fulfill her duties hereunder to the best of her abilities. In so doing, the Executive shall perform such executive, managerial, administrative and financial functions as are required to develop the Company's business and to perform other duties assigned to the Executive by the Board that are consistent with the Executive's title as Chief Executive Officer and President. The Executive shall perform her duties hereunder primarily at the Company's principal offices, currently located in Pittsburgh, Pennsylvania. In the performance of her duties, the Executive shall travel to such other places at the Company's expense at such times as the needs of the Company may from time-to-time dictate or be desirable.

(c) **Other Activities.** Notwithstanding Section 1(a), nothing shall preclude the Executive from engaging in professional, education, religious, civic, charitable or similar types of activities, community affairs and/or managing her personal investments and affairs,

provided that these activities do not interfere or conflict with the performance of her duties and responsibilities hereunder. The Executive may continue to serve on up to five boards of directors of other enterprises.

(d) **Board Seat.** Promptly after the date hereof, the Executive will be nominated for election to a seat on the Board, which the Executive shall occupy for as long as the Executive continues to serve as Chief Executive Officer. The Executive will automatically be deemed to have resigned the Executive's position as a member of the Board if the Executive resigns or is terminated as the Chief Executive Officer for any reason, and, without limiting the foregoing, the Executive agrees to submit the Executive's written resignation in such event upon the Company's request.

2. Term. The Executive's employment under this Agreement shall commence on the Commencement Date and shall end when terminated pursuant to Section 4.

3. Compensation.

(a) **Base Salary.** The Executive shall initially be paid an annual salary at the rate of $386,000 (the "Base Salary"), payable in accordance with the Company's payroll practices and policies in effect from time to time and subject to applicable withholding of income taxes, social security taxes and other such payroll deductions as are required by law or applicable employee benefit programs; provided, however, Executive's Base Salary shall be evaluated when similarly situated executives are evaluated for raises. Notwithstanding the above, Executive's Base Salary shall be increased to $425,000 upon a successful raise of an additional $50,000,000 in the Series C at a share price of $1.25 per share or higher. The Board shall review the Executive's Base Salary for annual increases beyond the set increase noted above.

(b) **Cash Bonus.** With respect to each fiscal year of the Company during the continued full-time employment of the Executive hereunder, commencing with the 2020 fiscal year, the Executive will be eligible to an annual performance bonus (the "Cash Bonus") in an amount up to 40% of the Executive's Base Salary; provided, however, that the Cash Bonus for the 2020 fiscal year shall be prorated based on the portion of such fiscal year during with the Executive is actually employed by the Company pursuant to the Interim CEO Contract and this Agreement. For the avoidance of doubt, the prorated bonus for the 2020 fiscal year shall be calculated using Executive's start date under the Interim CEO Contract. The Cash Bonus, if any, will be awarded by the Board in its reasonable discretion based on the achievement of Company and personal performance metrics established by the Board on an annual basis, and in any event not later than the 60th day of the applicable fiscal year, following good faith consultation with the Executive. Except as set forth in Section 4 of this Agreement, any Cash Bonus allocable to the Executive hereunder shall be earned by the Executive if and only if the Executive actively employed on a full-time basis with the Company and is otherwise in compliance with the Executive's obligations under this Agreement through the end of the fiscal year to which such Cash Bonus relates and, subject to sub-sections (a) and (b) of Section 4, on the payment date therefor. Any Cash Bonus awarded to the Executive hereunder will be payable in a single lump sum cash payment, less applicable taxes and withholdings, not later than two and one-half months after the end of the

fiscal year to which it relates in accordance with the Company's customary practices for annual bonus payments.

(c) **Equity Incentives.** Subject to the approval of the Board, the Executive shall be granted stock options under the Equity Incentive Plan as specified on Exhibit B hereto. In addition, the Executive shall be eligible to participate in equity incentive programs established by the Company from time to time in accordance with the terms of those programs.

(d) **Participation in Employee Benefit Plans.** The Executive shall be eligible to continue to participate in any and all employee benefit plans from time to time in effect for employees of the Company generally. Such participation shall be subject to (i) the terms of the applicable plan documents, and (ii) generally applicable Company policies.

(e) **Vacation and Fringe Benefits.** The Executive shall be entitled to participate in all vacation and other fringe benefit programs of the Company to the extent and on the same terms and conditions as are accorded to other senior management employees of the Company.

(f) **Reimbursement of Other Expenses.**

(i) The Company will directly pay for the attorneys' fees incurred by the Executive in connection with the review and negotiation of this Agreement, as well as all other documents in connection with the commencement of her employment with the Company in an aggregate amount up to $15,000. Upon receiving a summary invoice and Form W9 from Outten & Golden LLP, the Company shall issue payment to Outten & Golden LLP no later than 10 business days following the Executive's submission of such documentation.

(ii) The Company shall reimburse the Executive for the reasonable and necessary out-of-pocket business expenses incurred by the Executive for or on behalf of the Company in furtherance of the performance of the Executive's duties hereunder in accordance with the Company's policies as approved by the Board from time to time, subject in all cases to the Company's requirements with respect to reporting and documentation of such expenses.

(g) **Section 409A.** If any reimbursement under this Section 3 is not exempt from Section 409A of the Internal Revenue Code of 1986, as amended (the "Code") then (i) any reimbursement in one calendar year shall not affect the amount that may be reimbursed in any other calendar year; (ii) a reimbursement (or right thereto) may not be exchanged or liquidated for another benefit or payment; and (iii) a reimbursement shall be made no later than the end of the calendar year following the calendar year in which the Executive incurred the related expense.

4. Termination.

(a) **Death.** The Executive's employment with the Company shall automatically terminate effective as of the date of the Executive's death, in which event the Company shall not have any further obligation or liability under this Agreement except that the Company shall pay to the Executive's estate: (i) any portion of the Executive's Base

Salary for the period up to the Executive's date of death that has been earned but remains unpaid; (ii) any expenses properly incurred but not yet reimbursed, including, without limitation, the reimbursements provided for in sub-sections (d) and (f) of Section 3; (iii) any benefits that have accrued to the Executive under the terms of the employee benefit plans of the Company, which benefits shall be paid in accordance with the terms of those plans (the payments in clauses (i) through (iii) collectively, the "Accrued Obligations"); (iv) the Cash Bonus awarded pursuant to Section 3(b), if any, with respect to the fiscal year prior to the fiscal year of termination, to the extent unpaid (the "Earned Bonus"). The Accrued Obligations shall be paid on the first payroll date following the last date of employment to the extent administratively feasible and, if not, then on the second payroll date following the last date of employment. The Earned Bonus, if any, will be paid when it would have been paid had Executive remained employed with the Company.

(b) **Disability.** The Company may terminate the employment of the Executive immediately upon written notice to the Executive in the event of the Disability of the Executive, in which event the Company shall not have any further obligation or liability under this Agreement except for the Accrued Obligations and the Earned Bonus. The Accrued Obligations shall be paid on the first payroll date following the last date of employment to the extent administratively feasible and, if not, then on the second payroll date following the last date of employment. The Earned Bonus, if any, will be paid when it would have been paid had Executive remained employed with the Company.

(c) **Termination of the Executive's Employment for Cause.** The Company may terminate the employment of the Executive for Cause immediately upon providing written notice of such termination to the Executive. If the Executive's employment with the Company is terminated by the Company for Cause, the Company shall not have any further obligation or liability under this Agreement except for the Accrued Obligations. The Accrued Obligations shall be paid on the first payroll date following the last date of employment to the extent administratively feasible and, if not, then on the second payroll date following the last date of employment.

(d) **Other Termination by the Company.** The Company may terminate the employment of the Executive for any reason other than one specified in Section 4(b) or Section 4(c) immediately upon written notice of termination to the Executive. If the Executive's employment with the Company is terminated by the Company for any reason other than one specified in Section 4(b) or Section 4(c), in addition to the Accrued Obligations and the Earned Bonus, and subject to the execution by the Executive of a release in the form of Exhibit C hereto (the "Release") and the compliance by the Executive with the Release and all terms and provisions of this Agreement and the Invention Assignment Agreement (as defined in Section 5(b)) that survive the termination of the Executive's employment by the Company the Executive shall be entitled to receive (i) severance payments in an amount equal to the Base Salary for the for the twelve (12) month period following the termination date; (ii) direct payment by the Company of COBRA premiums at the same level of employer subsidization as was in effect on the termination date until the earlier of the end of the twelve (12) month period following the termination date or (2) the date the Executive becomes eligible for group health insurance through another employer and (iii) with regard to any of the Executive's awarded and outstanding options to purchase shares of the Company's Common Stock that are subject to

time-based vesting, a number of option shares equal to the number of shares that would have vested if Executive continued to be employed for a period equal to 9 months after the date of termination shall become vested and exercisable. Notwithstanding the foregoing, if the Executive's employment with the Company is terminated by the Company (or its successor) for any reason other than one specified in Section 4(b) or Section 4(c) within the twelve (12) month period following a Change of Control, then, in addition to the Accrued Obligations and the Earned Bonus, and subject to the execution by the Executive of the Release and the compliance by the Executive with the Release and all terms and provisions of this Agreement and the Invention Assignment Agreement (as defined in Section 5(b)) that survive the termination of the Executive s employment by the Company, the Executive shall be entitled to (A) receive severance payments in the form of continued payment of the Base Salary for the eighteen (18) month period following the termination date, (B) direct payment by the Company of COBRA premiums at the same level of employer subsidization as was in effect on the termination date until the earlier of (1) the date that is eighteen (18) months following the termination date or (2) the date the Executive becomes eligible for group health insurance through another employer, (C) an amount equal to the target Cash Bonus and (D) with regard to any of the Executive's awarded and outstanding options to purchase shares of the Company's Common Stock that are subject to time-based vesting, a number of option shares equal to the number of shares that would have vested if Executive continued to be employed for a period equal to 9 months after the date of termination shall become vested and exercisable. Any payments and benefits due pursuant to this Section 4(d), other than the Accrued Obligations and Earned Bonus, shall be paid or commence as soon as administratively feasible within 60 days, but no earlier than 30 days, after the date of the Executive's termination of employment, provided the Executive has timely executed and returned the Release and, if a revocation period is applicable, the Executive has not revoked the Release; provided however, that if the 60-day period begins in one calendar year and ends in a second calendar year, the severance payments shall begin to be paid in the second calendar year. On the date that payments pursuant to this Section 4(d) commence, the Company will pay the Executive in a single lump sum payment, less applicable taxes and withholding, the payments that the Executive would have received on or prior to such date but for the delay imposed by the immediately preceding sentence, with the balance of the payments to be paid as originally scheduled. The Accrued Obligations will be paid on the first payroll date following last date of employment to the extent administratively feasible and, if not, then on the second payroll date following the last date of employment. The Earned Bonus will be paid when it would have been paid had Executive remained employed with the Company. If the Executive's employment with the Company is terminated by the Company pursuant to this Section 4(d), the Company shall not have any further obligation or liability under this Agreement except for the payments specified in this Section 4(d) and payment of the Accrued Obligations and the Earned Bonus.

(e) **Termination by the Executive for Good Reason.** The Executive may terminate her employment with the Company for Good Reason immediately upon providing written notice of such termination to the Company. If the Executive shall terminate the Executive's employment with the Company for Good Reason, the Executive shall be entitled to receive the same payments and benefits on the same terms and conditions as would be applicable upon a termination of the Executive's employment by the Company as provided in Section 4(d) and subject to the satisfaction of the other provisions of such Section 4(d) and this Section 4(e). If the Executive's employment with the Company is terminated by the

Executive for Good Reason pursuant to this Section 4(e), the Company shall not have any further obligation or liability under this Agreement except for the payments specified in Section 4(d) and payment of the Accrued Obligations and the Earned Bonus. The Executive may not terminate her employment with the Company for Good Reason pursuant to this Section 4(e), and shall not be considered to have done so for any purpose of this Agreement, unless (A) the Executive, within 60 days after the initial existence of the act or failure to act by the Company that constitutes "Good Reason" within the meaning of this Agreement, provides the Company with written notice that describes in particular detail, the act or failure to act that the Executive believes to constitute "Good Reason" and identifies the particular clause of this Section 4(e) that the Executive contends is applicable to such act or failure to act; (B) the Company, within 30 days after its receipt of such notice, fails or refuses to rescind such act or remedy such failure to act so as to eliminate "Good Reason" for the termination by the Executive of the Executive's employment relationship with the Company; and (C) the Executive actually resigns from the employ of the Company on or before that date that is 12 calendar months after the initial existence of the act or failure to act by the Company that constitutes "Good Reason." If the requirements of the immediately preceding sentence are not fully satisfied on a timely basis, then the resignation by the Executive from the employ of the Company shall not be deemed to have been for "Good Reason," the Executive shall not be entitled to any of the benefits to which the Executive would have been entitled if the Executive had resigned from the employ of the Company for "Good Reason," and the Company shall not be required to pay any amount or provide any benefit that would otherwise have been due to the Executive under this Section 4(e) had the Executive resigned with "Good Reason."

(f) **Other Termination by the Executive.** The Executive may terminate the Executive's employment for any reason other than one specified in Section 4(e) upon 30 days' prior written notice of termination to the Company. In the event the Executive shall terminate the Executive's employment pursuant to this Section 4(f), the Company shall not have any further obligation or liability under this Agreement, except for the Accrued Obligations, which shall be paid on the first payroll date following last date of employment to the extent administratively feasible and if not, then on the second payroll date following the last date of employment. The Company shall not have the right following Executive's provision of notice to terminate the Executive's employment prior to the end of the notice period unless the Company pays the Executive for the full notice period.

(g) **Base Salary Continuation.** The Base Salary continuation set forth in Sections 4(d) and (e) above shall be intended either (i) to satisfy the safe harbor set forth in the Treas. Regs. 1.409A-1(b)(9)(iii), or (ii) be treated as a Short-term Deferral as that term is defined Treas. Regs. 1.409A-1(b)(4). To the extent such continuation payments exceed the applicable safe harbor amount or do not constitute a Short-term Deferral, the excess amount shall be treated as deferred compensation under Code section 409A and as such shall be payable pursuant to the following schedule: such excess amount shall be paid via standard payroll in periodic installments in accordance with the Company's usual practice for its senior executives. Solely for the purposes of Code section 409A, each installment payment is considered a separate payment. Notwithstanding any provision in this Agreement to the contrary, in the event that the Executive is a "specified employee" as defined in Code section 409A, any continuation payment, continuation benefits or other amounts payable under this Agreement that would be subject to the special rule regarding payments to "specified employees" under Section 409(A)(a)(2)(B) of the

Code shall not be paid before the expiration of a period of six months following the date of the Executive's termination of employment or before the date of the Executive's death, if earlier.

(h) **Parachute Provisions.** In the event a Change of Control occurs, the Company will engage an independent accounting firm (the "Accounting Firm") at its expense to determine whether the Executive received, is entitled to receive or will become entitled to receive any benefits or payments in the nature of compensation (within the meaning of Section 280G(b)(2) of the Code) (the "Total Payments") and whether the Total Payments will be subject to the tax (the "Excise Tax") imposed by Section 4999 of the Code. If the Total Payments will be subject to the Excise Tax, at the Executive's election, (i) the Company shall use reasonable efforts to obtain the approval of Company's stockholders in the manner contemplated by Q&A 7 of Treas. Reg. Section 1.280G such that the Excise Tax shall not apply to any portion of the Total Payments, or (ii) the aggregate present value of the Total Payments shall be reduced (but not below $1) if reducing the Total Payments will provide the Executive with a greater net after-tax amount than would be the case if no reduction was made. Any reduction shall be done in accordance with Section 409A of the Code.

5. Restrictive Covenants.

(a) **Non-Competition and Non-Solicitation.** The Executive shall not, and shall not permit any person or entity directly or indirectly controlled by the Executive (alone or together with others) (the "Executive Affiliates") to, directly or indirectly (including, without limitation, through ownership, management, operation or control of any other person or entity, or participation in the ownership, management, operation or control of any other person or entity, or by having any interest, as a stockholder, lender, investor, agent, consultant, employee, partner or otherwise, in or with respect to any other person or entity) do any of the following:

(i) During the period of the Executive's employment with the Company and for 12 months following the date of termination of the Executive's employment for any reason (the "Restricted Period"), own, manage, operate, control, invest in, participate in, provide consulting services to, or be involved or associated with in any capacity, any person or entity that is engaged in a Competitive Business anywhere in the world; provided that the foregoing shall not prohibit the Executive and Executive Affiliates from owning in the aggregate less than one percent of any class of securities listed on a national securities exchange or traded publicly in the over-the-counter market;

(ii) During the Restricted Period: (A) solicit, encourage or entice any client, customer, vendor, licensee, licensor, consultant or supplier of or to the Company to cease to do business with, or to reduce or modify the business such person or entity has done with or intends to do with, or to end, reduce or modify any relationship or proposed relationship of such person or entity with, the Company, or (B) interfere with, disrupt or attempt to disrupt or otherwise jeopardize any relationship of the Company with any client, customer, vendor, licensee, licensor, consultant or supplier or any other person or entity with whom the Company has a business relationship; and

(iii) During the Restricted Period, solicit, hire, contract for services or otherwise employ any person who at the time of the Executive's termination of employment or at any time during the six-month period immediately preceding such termination is or was an employee of, or a consultant to, the Company, or otherwise encourage any such individual to leave the employ of, or to terminate any such consulting arrangement with, the Company, or, with respect to any such employee or consultant who is then an employee of or consultant to the Company, to become an employee of, or consultant to, any other person or entity, or employ or retain any such person.

(b) **Invention Assignment Agreement.** The Executive and the Company have entered into that certain Employment Confidentiality and Invention Agreement dated as of the date hereof (the "Invention Assignment Agreement") and attached hereto as Exhibit D, the terms and conditions of which are incorporated by reference herein and made a part hereof.

(c) **Injunctive Relief.** The Executive acknowledges that the Executive's compliance with the agreements in this Section 5 is necessary to protect the good will and other proprietary interests of the Company and that the Executive is one of the principal executives of the Company and conversant with its affairs, its trade secrets and other proprietary information. The Executive acknowledges that a breach of any of the Executive's agreements in this Section 5 may result in irreparable and continuing damage to the Company for which there may be no adequate remedy at law; and the Executive agrees that in the event of any material breach of the aforesaid agreements, the Company and its successors and assigns shall be entitled to seek injunctive relief and to such other and further relief as may be proper.

(d) **Tolling.** The Restricted Period and any additional periods thereafter under this Section 5 shall be tolled and shall cease to run during the period of any violation by the Executive of any of the Restrictive Covenants.

6. **No Conflicts.** The Executive represents and warrants that the Executive is not party to any agreement, contract or understanding, whether of employment, consultancy or otherwise, in conflict with this Agreement or which would in any way restrict or prohibit the Executive from undertaking or performing services for the Company or otherwise from entering into or performing this Agreement or the Invention Assignment Agreement.

7. **Full Agreement.** This Agreement (including the Exhibits hereto), constitutes the entire agreement of the parties concerning its subject matter and supersedes all other oral or written understandings, discussions, and agreements, and may be modified only in a writing signed by both parties. The parties acknowledge that they have read and fully understand the contents of this Agreement and execute it after having an opportunity to consult with legal counsel.

8. **Amendments.** Any amendment to this Agreement shall be made in writing and signed by the parties hereto.

9. **Enforceability.** If any provision of this Agreement shall be invalid or unenforceable, in whole or in part, then such provision shall be deemed to be modified or restricted to the extent and in the manner necessary to render the same valid and enforceable,

or shall be deemed excised from this Agreement, as the case may require, and this Agreement shall be construed and enforced to the maximum extent permitted by law as if such provision had been originally incorporated herein as so modified or restricted or as if such provision had not been originally incorporated herein, as the case may be.

10. Construction. This Agreement shall be construed and interpreted in accordance with the internal laws of the Commonwealth of Pennsylvania.

11. Assignment.

(a) **By the Company.** The rights and obligations of the Company under this Agreement shall inure to the benefit of, and shall be binding upon, the successors and assigns of the Company. This Agreement may be assigned to the Company without the consent of the Executive.

(b) **By the Executive.** This Agreement and the obligations created hereunder may not be assigned by the Executives, but all rights of the Executive hereunder shall inure to the benefit of and be enforceable by the Executive's heirs, devisees, legatees executors, administrators and personal representatives. Any attempted assignment in violation of this Section 11(b) shall be null and void.

12. Notice. All notices required or permitted to be given hereunder shall be in writing and shall be deemed to have been given when mailed by certified mail, return receipt requested, or delivered by a national overnight delivery service addressed to the intended recipient as follows:

If to the Company:

Cognition Therapeutics, Inc.
2403 Sidney St # 261
Pittsburgh, PA 15203
Attention: Chairman of the Board

If to the Executive:

Lisa Ricciardi
40 Old Post Road
Rye, NY 10580

With a copy to:

Wendi S. Lazar, Esq.
Outten & Golden, LLP
685 Third Avenue, Floor 25
New York, NY 10017

Any party may from time to time change its address for the purpose of notices to that party by a similar notice specifying a new address, but no such change shall be deemed to have been given until it is actually received by the party sought to be charged with its contents.

13. Waivers. No claim or right arising out of a breach or default under this Agreement shall be discharged in whole or in part by a waiver of that claim or right unless the waiver is supported by consideration and is in writing and executed by the aggrieved party hereto or such party's duly authorized agent. A waiver by any party hereto of a breach or default by the other party hereto of any provision of this Agreement shall not be deemed a waiver of future compliance therewith, and such provisions shall remain in full force and effect.

14. Survival of Covenants. The provisions of Section 4 through this Section 14 shall survive the termination of the Executive's employment shall continue in effect thereafter.

(Signature page follows)

IN WITNESS WHEREOF, this Agreement has been executed by the parties on the date(s) indicated below first above written.

COGNITION THERAPEUTICS, INC.

By: /s/ Robert Gailus

Title: Chairman of the Board

Date: 6/6/20

/s/ Lisa Ricciardi
Lisa Ricciardi

Date: 6/9/20

EXHIBIT A

CERTAIN DEFINITIONS

The following terms have the meaning set forth below wherever they are used in this Agreement.

"Cause" for the Company (or a successor, if appropriate) to terminate the Executive's employment will exist upon the occurrence of any of the following events: (i) the Executive's material breach of this Agreement or any material violation of the Company's written policies or rules; (ii) the Executive's having committed willful fraud or willful misconduct, in any such case which is materially injurious to the Company; (iii) the Executive's having been convicted of a felony involving moral turpitude that results in material harm to the standing or reputation of the Company; or (iv) the Executive's material breach of the terms of the Invention Assignment Agreement; provided, however, that no Cause shall exist unless the Company has provided written notice to Executive describing in detail such Cause conduct and, to the extent an at or omission giving rise to Cause is reasonably susceptible to cure, Executive shall be given a reasonable opportunity, not to exceed thirty (30) days, after written notice by the Company to cure such act or omission.

"Change of Control" shall have the meaning set forth in the Equity Incentive Plan.

"Code" means the Internal Revenue Code of 1986, as amended.

"Commencement Date" means May ___, 2020.

"Competitive Business" means a business that is engaged in the research, development, marketing, manufacturing, sale or other commercialization of any compound or other agent that targets the sigma-2/PGRMC1 receptor for the prevention and/or treatment of Alzheimer's Disease or any other neurodegenerative indication or condition.

"Disability means a condition entitling the Executive to benefits under the Company's long term disability plan, policy or arrangement; provided, however, that if no such plan, policy or arrangement is then maintained by the Company and applicable to the Executive, "Disability" will mean an illness, incapacity or a mental or physical condition that renders the Executive unable or incompetent, with or without a reasonable accommodation, to carry out the job responsibilities that the Executive held or the tasks that the Executive was assigned at the time the disability commenced, as determined in good faith by a physician mutually acceptable to the Company and the Executive, for a period of 90 consecutive days, or 180 non-consecutive days in any rolling 12-month period.

"Equity Incentive Plan" means the Cognition Therapeutics, Inc. 2017 Equity Incentive Plan, as amended from time to time, and any successor thereto.

"Full Diluted Equity" means the issued and outstanding shares of the Company's Common Stock, determined on a fully-diluted, as-converted basis as of the date of grant of the applicable stock options.

"Good Reason" for the Executive to resign from the employ of the Company will exist upon the occurrence of any of the following events, subject to compliance with the other provisions of Section 4(e): (a) a reduction in the Base Salary, as then in effect; (b) a material reduction of the Executive's authority, position, responsibilities or duties, except that, following a Change of Control, a reduction in authority, position, responsibilities or duties solely by virtue of the Company being acquired and becoming part of a larger entity or operated as a subsidiary shall not constitute Good Reason; (c) a change in title or reporting line; (d) Executive no longer holding a board seat in accordance with Section 1(c); (c) the Company's material breach of this Agreement; or (d) a relocation of the Executive's principal workplace by more than 30 miles from the Company's principal offices as of the Commencement Date.

EXHIBIT B

STOCK OPTION TERMS

Initial Stock Option. In addition to the options granted to Executive under the Interim CEO Contract, the Executive will be granted additional stock options under the Equity Incentive Plan exercisable for the purchase of shares of the Company's Common Stock ("Share") representing 5% of the Company's Fully Diluted Equity (the "Initial Stock Options"). The Initial Stock Options will vest over a four-year period as follows: (i) 25% vesting on the first anniversary of the Commencement Date; and (ii) 75% vesting in equal monthly installments over the following 36 months.

The Executive will be granted additional stock options upon completion of the Series C if completed as an up round at $1.15 per share to maintain her Fully Diluted Equity position at a minimum of 5%. Notwithstanding the above, if the Executive's performance exceeds expectation, but does not reach the specified share price hurdle noted above, the Board will not unreasonably withhold the additional stock options grant to maintain her Fully Diluted Equity position at a minimum of 5%. Notwithstanding anything to the contrary, the Executive shall be entitled to the immediate vesting of any unvested Shares subject to the Initial Stock Options if the Company undergoes a Change of Control and the Executive is still actively employed by the Company on the closing of such Change of Control.

Additional Stock Option. If the Company closes an offering of its equity securities at a price per share of the Company's Preferred Stock of at least $1.75, and the Executive is actively employed by the Company on the date of such closing, the Company shall grant the Executive an additional stock option ("Additional Option") to purchase Shares representing 1% of the Company's Fully Diluted Equity, taking into account the securities issued in the applicable offering), after giving effect to such grant. The Additional Option will vest as follows: (i) 25% of the Shares underlying the Additional Option shall vest and become exercisable on the date of grant ("Grant Date"); and (ii) the remaining 75% of the Shares underlying the Additional Option shall vest and become exercisable in 36 substantially equal monthly installments, with each such installment vesting on the first day of every calendar month commencing on the first day of the first full calendar month following the Grant Date, subject to the Executive's continued employment by the Company through each such date.

Notwithstanding anything to the contrary, if the Company undergoes a Change of Control at a price per share of the Company's Preferred Stock of at least $1.75 but less than $3.50, and the Executive is still actively employed by the Company on the closing of such Change of Control, the Executive shall be entitled to the immediate vesting of any unvested Shares subject to the Additional Option, then held by the Executive.

Second Additional Option. If the Company closes an offering of its equity securities at a price per share of the Company's Preferred Stock of at least $3.50, and the Executive is actively employed by the Company on the date of such closing, the Company shall grant the Executive an additional stock option ("Second Additional Option") to

purchase Shares representing 1% of the Company's Fully Diluted Equity, taking into account the securities issued in the applicable offering), after giving effect to such grant. The Second Additional Option will vest as follows: (i) 25% of the Shares underlying the Second Additional Option shall vest and become exercisable on the date of grant (the "Second Grant Date"); and (ii) the remaining 75% of the Shares underlying the Second Additional Option shall vest and become exercisable in 36 substantially equal monthly installments, with each such installment vesting on the first day of every calendar month commencing on the first day of the first full calendar month following the Second Grant Date, subject to the Executive's continued employment by the Company through each such date.

Notwithstanding anything to the contrary, if the Company undergoes a Change of Control at a price per share of the Company's Preferred Stock of at least $3.50, and the Executive is still actively employed by the Company on the closing of such Change of Control, the Executive shall be entitled to the immediate vesting of any unvested Shares subject to the Additional Option and Second Additional Option then held by the Executive.

The exercise price of all stock options will be the fair market value per share of Common Stock as determined by the Board, and the grant thereof will be subject to the execution of a stock option agreement in the form approved by the Company. In addition, the following terms shall apply to all such stock option grants: (i) the stock options shall have a 10-year terms, (ii) the stock options shall remain exercisable, to the extent vested, for a period equal to the lesser of three years plus 90 days (or 2 years plus 90 days in the event that Executive is terminated for Cause) after the date of termination or until the end of the 10-year term, regardless of the Executive's employment status with the Company, (iii) the definition of "Cause" for purposes of the stock options shall have the meaning set forth in this Agreement and not the Equity Incentive Plan and (iv) subject to applicable legal requirements and limitations with respect to vesting, exercisability and other applicable terms, it is intended that all stock options granted to the Executive be treated as incentive stock options under Section 422 of the Code, with any portion that does not so qualify being treated as nonqualified stock options.

EXHIBIT C

RELEASE OF CLAIMS

1. Termination of Employment. Lisa Ricciardi ("Executive") hereby agrees and recognizes that, as of _____, 20__, Executive's employment relationship with Cognition Therapeutics, Inc., a Delaware corporation (the "Company"), will be permanently and irrevocably severed.

2. Release of Claims. In consideration of the payments and benefits described in Section 4(d) and Section 4(e) of the employment agreement (the "Employment Agreement"), effective May ___, 2020, by and between Executive and the Company, to which Executive agrees Executive is not entitled until and unless Executive executes and does not revoke this Release, Executive, for and on behalf of herself and her heirs, executors, administrators and assigns, hereby waives and releases any and all complaints, claims, suits, controversies, and actions, whether known or unknown, suspected or claimed, which Executive, or any of the Executive's heirs, executors, administrators or assigns ever had, now has or may have against the Company and/or its respective predecessors, successors, past or present parents or subsidiaries, affiliates, investors, branches or related entities, in their respective capacities as such (collectively, including the Company, the "Entities") and/or the Entities' past or present stockholders, insurers, assigns, trustees, directors, officers, limited and general partners, managers, joint venturers, members, employees or agents in their respective capacities as such (collectively with the Entities, the "Releasees") by reason of circumstances, acts or omissions which have occurred on or prior to the date that this Release becomes effective, including, without limitation, (a) any complaint, charge or cause of action arising under (i) federal, state or local laws pertaining to employment or termination of employment, including the Age Discrimination in Employment Act of 1967 (the "ADEA," a law which prohibits discrimination on the basis of age), the National Labor Relations Act, as amended, the Civil Rights Act of 1991, as amended, the Americans with Disabilities Act of 1990, as amended, Title VII of the Civil Rights Act of 1964, as amended, the Equal Pay Act of 1963, as amended, the Family and Medical Leave Act of 1993, as amended, the Worker Adjustment Restraining and Notification Act, as amended, the Executive Retirement Income Security Act of 1974, as amended, any applicable Executive Order Programs, the Fair Labor Standards Act, or their state or local counterparts (including, but not limited to, the Pennsylvania Human Relations Act); (ii) any other federal, state or local civil or human rights law; (iii) any other local, state, or federal law, regulation or ordinance; (iv) any public policy, contract and/or quasi-contract or tort (including, but not limited to, claims of breach of the Employment Agreement, an expressed or implied contract, tortious interference with contract or prospective business advantage, breach of the covenant of good faith and fair dealing, promissory estoppel, detrimental reliance, invasion of privacy, nonphysical injury, personal injury or sickness or any other harm, wrongful or retaliatory discharge, fraud, defamation, slander, libel, false imprisonment, negligent or intentional infliction of emotional distress); (v) common law; or (vi) any policies, practices or procedures of the Company; or (b) any claim for costs, fees, or other expenses, including attorneys' fees incurred in these matters (the "Released Claims"). By signing this Release, Executive acknowledges that she intends to waive and release any rights known or unknown that she may have against the Releasees under these and any other laws. Notwithstanding the foregoing, Executive does not release, discharge or waive: any rights to indemnification

that she may have under the certificate of incorporation, the by-laws or equivalent governing documents of the Company or its subsidiaries or affiliates, the laws of the State of Delaware or any other state of which any such subsidiary or affiliate is a domiciliary, the Employment Agreement or any indemnification agreement between Executive and the Company, including those that cannot be released as a matter of law, such as her rights to COBRA, workers compensation, and unemployment insurance; any rights to insurance coverage under any directors' and officers' personal liability insurance or fiduciary insurance policy; any rights she may have in her capacity as a stockholder of the Company; any rights she may have to enforce the vested terms of any equity or other incentive agreement previously provided to her; any rights she may have to severance benefits and payment of Accrued Obligations or the Earned Bonus under the Employment Agreement (the "Excluded Claims"). The Executive acknowledges that she has made no assignment or transfer of any right, claim, demand, cause of action, or other matter covered by this Section 1.

3. Proceedings. Executive acknowledges that she has not filed any complaint charge, claim or proceeding, if any, or assigned to any other person the right to bring any such complaint, charge, claim, or proceeding, relating to the Related Claims against any of the Releasees before any local, state or federal agency, court or other body (each individually a "Proceeding"). Executive (i) acknowledges that she will not initiate or cause to be initiated on her behalf any Proceeding and will not participate in any Proceeding, in each case, except as required by law and (ii) waives any right she may have to benefit in any manner from any relief (whether monetary or otherwise) arising out of any Proceeding, including any Proceeding conducted by the Equal Employment Opportunity Commission (the "EEOC"). Further, Executive understands that, by executing this Release, she will be limiting the availability of certain remedies that she may have against the Releasees and limiting also her ability to pursue certain claims against the Releasees. Notwithstanding the above, nothing in Section 1 of this Release shall prevent Executive from (i) initiating or causing to be initiated on her behalf any complaint, charge, claim or proceeding against any Releasee before any local, state or federal agency, court or other body challenging the validity of the waiver of her claims under the ADEA contained in Section 1 of this Release (but no other portion of such waiver), (ii) initiating or participating in an investigation or proceeding conducted by the EEOC or (iii) reporting possible violations of federal, state or local law, ordinance or regulation to any governmental agency or entity, including, but not limited to, the Department of Justice, the U.S. Securities and Exchange Commission (the "SEC"), the Congress and any agency Inspector General, or otherwise taking action or making disclosures that are protected under the whistleblower provisions of any federal, state or local law, ordinance or regulation, including, but not limited to, Rule 21F-17 promulgated under the Securities Exchange Act of 1934, as amended, or (iv) receiving a monetary award for information provided to the SEC pursuant to Rule 21F-17 promulgated under the Securities Exchange Act of 1934, as amended. The Executive acknowledges and agrees that the Executive's separation from employment with the Company in compliance with the terms of the Employment Agreement shall not serve as the basis for any claim or action (including, without limitation, any claim under the Age Discrimination in Employment Act of 1967).

4. Time to Consider. Executive acknowledges that she has been advised that she has twenty-one (21)/forty-five(45) days from the date of receipt of this Release to consider all the provisions of this Release and, further, that if Executive signs this Release prior to the expiration of such twenty-one(21)/forty-five (45) day period, she does hereby knowingly and voluntarily waive said given twenty-one(21)/forty-five (45) day period. EXECUTIVE FURTHER ACKNOWLEDGES THAT SHE HAS RELEASE THIS RELEASE CAREFULLY, HAS BEEN ADVISED BY THE COMPANY TO, AND HAS IN FACT, CONSULTED AN ATTORNEY, AND FULLY UNDERSTANDS THAT BY SIGNING BELOW SHE IS GIVING UP CERTAIN RIGHTS WHICH SHE MAY HAVE TO SUE OR ASSERT A CLAIM AGAINST ANY OF THE RELEASEES, AS DESCRIBED IN SECTION 1 OF THIS RELEASE AND THE OTHER PROVISIONS HEREOF. EXECUTIVE ACKNOWLEDGES THAT SHE HAS NOT BEEN FORCED OR PRESSURED IN ANY MANNER WHATSOEVER TO SIGN THIS RELEASE, AND EXECUTIVE AGREES TO ALL OF ITS TERMS VOLUNTARILY. [EXECUTIVE ALSO ACKNOWLEDGES THAT SHE HAS RECEIVED ALL INFORMATION REQUIRED TO BE DISCLOSED IN CONNECTION WITH AN EXIT INCENTIVE OR OTHER EMPLOYMENT TERMINATION PROGRAM.]

5. Revocation. Executive hereby acknowledges and understands that Executive shall have seven (7) days from the date of her execution of this Release to revoke this Release (including, without limitation, any and all claims arising under the ADEA) and that neither the Company nor any other person is obligated to provide any benefits to Executive pursuant to Section 4(d) or Section 4(e) of the Employment Agreement until eight (8) days have passed since Executive's signing of this Release without Executive having revoked this Release, in which event the Company immediately shall arrange and/or pay for any such benefits otherwise attributable to said eight (8) day period, consistent with the term of the Employment Agreement. If Executive revokes this Release, Executive will be deemed not to have accepted the terms of this Release, no action or forbearance of action will be required of the Company under any section of this Release, and Executive shall not be entitled to receive any portion of the severance compensation and benefits which are conditioned on the delivery of this Release.

6. No Admission. This Release does not constitute an admission of liability or wrongdoing of any kind by Executive or the Company.

7. Confidentiality. Executive agrees that Executive will not communicate or disclose the terms of this Release to any persons with the exception of members of Executive's immediate family and Executive's attorney and financial advisor, or as permitted by Section 3 above.

8. Return of Company Property. Executive represents that all equipment and other property of the Company, including any documents and files, whether electronically stored or maintained in hard copy, have been returned to the Company, and that Executive has

not retained any copies of the same. Notwithstanding anything to the contrary in this Agreement, Executive may retain her contact lists, whether in electronic or paper form (e.g. rolodex, Outlook contacts, etc.) and copies of documents related to Executive's compensation and benefits.

9. Non-Disparagement. Executive will not disparage any Releasee or otherwise take any action which could reasonably be expected to adversely affect the personal or professional reputation of any Releasee. The Company's directors, officers and senior executives shall not disparage or otherwise take any action which could reasonably be expected to adversely affect the personal or professional reputation of the Executive.

10. Post-Employment Obligations. Executive reaffirms that she will comply with all of her post-employment obligations as set forth in Section 5 of the Employment Agreement.

11. Entire Agreement. This Agreement constitutes the entire agreement between the parties and supersedes any and all prior representations, agreements, written or oral, expressed or implied, except for Section 5 of the Employment Agreement, which survives the termination of Executive's employment and is incorporated herein by reference, and except for any agreements with respect to Executive's options to acquire Common Stock of the Company. This Agreement may not be modified or amended other than by an agreement in writing signed by an officer of the Company.

12. Acknowledgement. Executive acknowledges and agrees that, subsequent to the termination of Executive's employment, Executive shall not be eligible for any payments from the Company or Company-paid benefits, except as expressly set forth in this Agreement. Executive also acknowledges and agrees that Executive has been paid for all time worked and has received all other compensation owed to her.

13. Assignment. This Agreement shall be binding upon and be for the benefit of the parties as well as Executive's heirs and the Company's successors and assigns.

14. General Provisions. A failure of any of the Releasees to insist on strict compliance with any provision of this Release shall not be deemed a waiver of such provision or any other provision hereof. If any provision of this Release is determined to be so broad as to be unenforceable, such provision shall be interpreted to be only so broad as is enforceable, and in the event that any provision is determined to be entirely unenforceable, such provision shall be deemed severable, such that all other provisions of this Release shall remain valid and binding upon Executive and the Releasees.

15. Governing Law. The validity, interpretations, construction and performance of this Release shall be governed by the laws of the Commonwealth of Pennsylvania without giving effect to conflict of laws principles.

IN WITNESS WHEREOF, Executive has hereunto set Executive's hand as of the day and year set forth opposite her signature below.

Exhibit 10.15

SEPARATION AND RELEASE AGREEMENT

THIS SEPARATION AND RELEASE AGREEMENT (this "***Agreement***") is made by and between Kenneth I. Moch (the "***Executive***") and Cognition Therapeutics, Inc. (the "***Company***").

WHEREAS, the Company and the Executive entered into an Employment Agreement, effective October 11, 2016 and subsequently amended (the "***Employment Agreement***"), which governs the Executive's employment with the Company; and

WHEREAS, the Executive's employment with the Company and its affiliates ceased as of March 17, 2020 (the "***Termination Date***"); and

WHEREAS, the Company has agreed to pay the Executive certain amounts and provide certain benefits in connection with the Executive's termination of his employment, subject to his execution of this Agreement.

NOW THEREFORE, in consideration of these premises and the mutual promises contained herein, and intending to be legally bound hereby, the parties agree as follows:

1. Termination of Employment. Executive hereby agrees and recognizes that, as of the Termination Date his employment relationship with the Company has been permanently and irrevocably severed and all officer, director and fiduciary positions with the Company or any of its affiliates, including with respect to any benefit plan sponsored by or contributed to by the Company or any of its affiliates, held by the Executive terminated effective as of the Termination Date. Executive shall execute any document reasonably requested to effect his resignation from the Company's board of directors and termination of his officer and other positions with the Company. Notwithstanding the foregoing, Executive shall serve the Company in an advisory role pursuant to the Advisor Services Agreement with the Company dated as of March 17, 2020.

2. Consideration; Acknowledgements.

a. In connection with the cessation of the Executive's employment, and in consideration of the Executive's execution of this Agreement, and this Agreement becoming irrevocable in accordance with its terms, the Company will (1) continue to pay Executive's base salary (at the rate of $386,250) for the twelve (12) month period following the Termination Date, (2) in satisfaction of any and all bonus amounts payable to Executive, make a lump sum payment to Executive of $104,287.50 and (3) waive in the entirety the medical insurance premiums under COBRA until the earlier of the first anniversary of the Termination Date and the date Executive becomes eligible for medical benefits through another employer. The payment described in this Section 2 shall commence as soon as administratively feasible following the date that this Agreement becomes irrevocable, provided that the Company will pay Executive in a single lump sum payment the payments that Executive would have received between the Termination Date and the date this Agreement becomes irrevocable, with the balance of the payments to be paid as originally scheduled. The Company shall also pay Executive his accrued but unused vacation time (i.e. ten (10) days) no later than the second payroll date of the Company occurring after the Termination Date.

b. Executive acknowledges that: (1) he has no entitlement or rights under any severance or similar arrangement maintained by the Company or any of its affiliates, and (2) except as otherwise provided specifically in this Section 2 of this Agreement, the Company and its affiliates do

not and will not have any other liability or obligation to the Executive, including under the Employment Agreement. The Executive further acknowledges that, in the absence of his execution of this Agreement, the payments specified in this Section 2, would not otherwise be payable. Executive further acknowledges and agrees that all incentive equity awards made by the Company to Executive, including without limitation any options to purchase Common Stock of the Company, shall cease to vest as of the Termination Date and no portion of any options that are not exercisable as of the Termination Date shall thereafter become exercisable, regardless of any service or availability of Executive to the Company following the Termination Date.

3. Release of Claims. In consideration of the payments and benefits described in Section 2 hereof, to which Executive agrees Executive is not entitled until and unless Executive executes and does not revoke this Agreement, Executive, for and on behalf of himself and his heirs, executors, administrators and assigns, hereby waives and releases any and all complaints, claims, suits, controversies, and actions, whether known or unknown, suspected or claimed, which Executive, or any of the Executive's heirs, executors, administrators or assigns ever had, now has or may have against the Company and/or its respective predecessors, successors, past or present parents or subsidiaries, affiliates, investors, branches or related entities (collectively, including the Company, the "***Entities***") and/or the Entities' past or present stockholders, insurers, assigns, trustees, directors, officers, limited and general partners, managers, joint venturers, members, employees or agents in their respective capacities as such (collectively with the Entities, the "***Releasees***") by reason of circumstances, acts or omissions which have occurred on or prior to the date that this Agreement becomes effective, including, without limitation, (a) any complaint, charge or cause of action arising under (i) federal, state or local laws pertaining to employment or termination of employment, including the Age Discrimination in Employment Act of 1967 (the "***ADEA***," a law which prohibits discrimination on the basis of age), the National Labor Relations Act, as amended, the Civil Rights Act of 1991, as amended, the Americans with Disabilities Act of 1990, as amended, Title VII of the Civil Rights Act of 1964, as amended, the Equal Pay Act of 1963, as amended, the Family and Medical Leave Act of 1993, as amended, the Worker Adjustment Retraining and Notification Act, as amended, the Executive Retirement Income Security Act of 1974, as amended, any applicable Executive Order Programs, the Fair Labor Standards Act, or their state or local counterparts (including, but not limited to, the Pennsylvania Human Relations Act); (ii) any other federal, state or local civil or human rights law; (iii) any other local, state, or federal law, regulation or ordinance; (iv) any public policy, contract and/or quasi-contract or tort (including, but not limited to, claims of breach of the Employment Agreement, an expressed or implied contract, tortious interference with contract or prospective business advantage, breach of the covenant of good faith and fair dealing, promissory estoppel, detrimental reliance, invasion of privacy, nonphysical injury, personal injury or sickness or any other harm, wrongful or retaliatory discharge, fraud, defamation, slander, libel, false imprisonment, negligent or intentional infliction of emotional distress); (v) common law; or (vi) any policies, practices or procedures of the Company; or (b) any claim for costs, fees, or other expenses, including attorneys' fees incurred in these matters (the "***Released Claims***"). By signing this Agreement, Executive acknowledges that he intends to waive and release any rights known or unknown that he may have against the Releasees under these and any other laws. Notwithstanding the foregoing, Executive does not release, discharge or waive: any rights to indemnification that he may have under the certificate of incorporation, the by-laws or equivalent governing documents of the Company or its subsidiaries or affiliates, the laws of the State of Delaware or any other state of which any such subsidiary or affiliate is a domiciliary, the Employment Agreement or any indemnification agreement between Executive and the Company; any rights to insurance coverage under any directors' and officers' personal liability insurance or fiduciary insurance policy; any rights he may have in his capacity as a stockholder of the Company; any rights he may have to enforce the vested terms of any equity or other incentive agreement previously provided to him; any rights he may have to the Accrued Obligations under the Employment Agreement

and severance benefits describe in Section 2 hereof. The Executive acknowledges that he has made no assignment or transfer of any right, claim, demand, cause of action, or other matter covered by this Section 3.

4. Proceedings. Executive acknowledges that he has not filed any complaint, charge, claim or proceeding, if any, or assigned to any other person the right to bring any such complaint, charge, claim, or proceeding, relating to the Released Claims against any of the Releasees before any local, state or federal agency, court or other body (each individually a "***Proceeding***"). Executive (i) acknowledges that he will not initiate or cause to be initiated on her behalf any Proceeding and will not participate in any Proceeding, in each case, except as required by law and (ii) waives any right he may have to benefit in any manner from any relief (whether monetary or otherwise) arising out of any Proceeding, including any Proceeding conducted by the Equal Employment Opportunity Commission (the "***EEOC***"). Further, Executive understands that, by executing this Agreement, he will be limiting the availability of certain remedies that he may have against the Releasees and limiting also his ability to pursue certain claims against the Releasees. Notwithstanding the above, nothing in Section 3 of this Agreement shall prevent Executive from (i) initiating or causing to be initiated on his behalf any complaint, charge, claim or proceeding against any Releasee before any local, state or federal agency, court or other body challenging the validity of the waiver of his claims under the ADEA contained in Section 3 of this Agreement (but no other portion of such waiver), (ii) initiating or participating in an investigation or proceeding conducted by the EEOC or (iii) reporting possible violations of federal, state or local law, ordinance or regulation to any governmental agency or entity, including, but not limited to, the Department of Justice, the U.S. Securities and Exchange Commission (the "***SEC***"), the Congress and any agency Inspector General, or otherwise taking action or making disclosures that are protected under the whistleblower provisions of any federal, state or local law, ordinance or regulation, including, but not limited to, Rule 21F-17 promulgated under the Securities Exchange Act of 1934, as amended; or (iv) receiving a monetary award for information provided to the SEC pursuant to Rule 21F-17 promulgated under the Securities Exchange Act of 1934, as amended. The Executive acknowledges and agrees that the Executive's separation from employment with the Company in compliance with the terms of the Employment Agreement shall not serve as the basis for any claim or action (including, without limitation, any claim under the Age Discrimination in Employment Act of 1967).

5. Time to Consider. Executive acknowledges that he has been advised that he has twenty- one (21) days from the date of receipt of this Agreement to consider all the provisions of this Agreement and, further, that if Executive signs this Agreement prior to the expiration of such twenty-one (21) day period, he does hereby knowingly and voluntarily waive said given twenty-one (21) day period. EXECUTIVE FURTHER ACKNOWLEDGES THAT HE HAS READ THIS AGREEMENT CAREFULLY, HAS BEEN ADVISED BY THE COMPANY TO, AND HAS IN FACT, CONSULTED AN ATTORNEY, AND FULLY UNDERSTANDS THAT BY SIGNING BELOW HE IS GIVING UP CERTAIN RIGHTS WHICH HE MAY HAVE TO SUE OR ASSERT A CLAIM AGAINST ANY OF THE RELEASEES, AS DESCRIBED IN SECTION 3 OF THIS AGREEMENT AND THE OTHER PROVISIONS HEREOF. EXECUTIVE ACKNOWLEDGES THAT HE HAS NOT BEEN FORCED OR PRESSURED IN ANY MANNER WHATSOEVER TO SIGN THIS AGREEMENT, AND EXECUTIVE AGREES TO ALL OF ITS TERMS VOLUNTARILY.

6. Revocation. Executive hereby acknowledges and understands that Executive shall have seven (7) days from the date of his execution of this Agreement to revoke this Agreement (including, without limitation, any and all claims arising under the ADEA) and that neither the Company nor any other person is obligated to provide any benefits to Executive pursuant to Section 2 of this Agreement until eight (8) days have passed since Executive's signing of this Agreement without Executive having

revoked this Agreement. If Executive revokes this Agreement, Executive will be deemed not to have accepted the terms of this Agreement, no action or forbearance of action will be required of the Company under any section of this Agreement, and Executive shall not be entitled to receive any portion of the severance compensation and benefits which are conditioned on the delivery of this Agreement.

7. No Admission. This Agreement does not constitute an admission of liability or wrongdoing of any kind by Executive or the Company.

8. Confidentiality. Executive agrees that Executive will not communicate or disclose the terms of this Agreement to any persons with the exception of members of Executive's immediate family and Executive's attorney and financial advisor, or as permitted by Section 4 above.

9. Return of Company Property; Expenses. Executive represents that all equipment and other property of the Company, including any documents and files containing Confidential Information (as such term is defined in the Employee Non-Disclosure and Invention Assignment Agreement by and between the Company and the Executive) whether electronically stored or maintained in hard copy, have been returned or will be promptly returned to the Company. In furtherance thereof, Executive will, no later than May 1, 2020, deliver all Company files held by him to an electronic dropbox, dataroom or other electronic platform established by the Company, or by such other method determined by the Company in its discretion. Notwithstanding the foregoing, the Company agrees that Executive may keep the Company-issued laptop computer currently in his possession, provided that Executive shall deliver any new documents and files electronically stored thereon to the Company, no later than one month after the termination of the Advisory Services Agreement, and that Executive will not retain any copies of the Confidential Information. The Company will reimburse all properly incurred business expenses pursuant to the Company's expense reimbursement policy, provided, that Executive submits any such business expenses within sixty (60) days following the Termination Date. The Company will reimburse up to $5,000 of the reasonable attorneys' fees incurred by Executive in connection with entry into this Agreement and the Advisor Services Agreement.

10. Non-Disparagement. Executive will not disparage any Releasee or otherwise take any action which could reasonably be expected to adversely affect the personal or professional reputation of any Releasee. The Company's directors, officers and senior executives shall not disparage or otherwise take any action which could reasonably be expected to adversely affect the personal or professional reputation of the Executive.

11. Post-Employment Obligations. Executive reaffirms that he will comply with all of his post-employment obligations as set forth in Section 5 of the Employment Agreement.

12. Stock Options. Reference is hereby made to the Incentive Stock Option Agreement between the Executive and the Company dated as of April 28, 2017, as amended, pursuant to which the Executive was awarded 3,834,211 shares of the Company's Common Stock (the "***2017 Option Shares***"). As of the Termination Date, 2,339,304 of the 2017 Option Shares are vested and have an exercise price of $0.27 per share. The parties further agree that the remaining 2017 Option Shares (i.e., 1,494,907 shares of Company Common Stock) were automatically forfeited as of the Termination Date. Reference is hereby made to the Incentive Stock Option Agreement between the Executive and the Company dated as of April 24, 2019, pursuant to which the Executive was awarded 100,000 shares of the Company's Common Stock (the "***2019 Option Shares***"). As of the Termination Date, none of the 2019 Option Shares are vested and the entirety of the 2019 Option Shares were automatically forfeited as of the Termination Date. The parties acknowledge and agree that 1,282,272 of the vested 2017 Option Shares are eligible to be treated as incentive stock options under Section 422 of the Code if exercised by the deadline prescribed under applicable law. The remainder of the vested 2017 Option Shares, together with any of such 1,282,272 vested 2017 Option Shares

that are not exercised by the applicable deadline and not eligible for tax treatment under Section 422 of the Code, subject to Section 1(b) of that certain Option Transfer Agreement by and among the Company, the Executive and The 2012 Kenneth Ian Moch Irrevocable GST Trust F/B/O Ellen Gray Stolzman and Descendants dated May 25, 2012 (the "***Trust***"), have been or shall be deemed transferred to the Trust pursuant to and subject to the terms and conditions of the Option Transfer Agreement dated as of July 20, 2019 by and among the Company, the Executive and the Trust. The 2017 Option Shares shall remain subject to the terms of the Incentive Stock Option Agreement and the Cognition Therapeutics, Inc. Amended and Restated 2007 Equity Incentive Plan, including, without limitation, permitting exercise of the 2017 Option Shares up to the date that is three (3) years plus three (3) months after the Termination Date.

13. Entire Agreement. This Agreement constitutes the entire agreement between the parties and supersedes any and all prior representations, agreements, written or oral, expressed or implied, except for Section 5 of the Employment Agreement, which survives the termination of Executive's employment and is incorporated herein by reference, and except for any agreements with respect to Executive's options to acquire Common Stock of the Company. This Agreement may not be modified or amended other than by an agreement in writing signed by an officer of the Company.

14. Acknowledgement. Executive acknowledges and agrees that, subsequent to the termination of Executive's employment, Executive shall not be eligible for any payments from the Company or Company-paid benefits, except as expressly set forth in this Agreement. Executive also acknowledges and agrees that Executive has been paid for all time worked and has received all other compensation owed to him.

15. Assignment. This Agreement shall be binding upon and be for the benefit of the parties as well as Executive's heirs and the Company's successors and assigns.

16. General Provisions. A failure of any of the Releasees to insist on strict compliance with any provision of this Agreement shall not be deemed a waiver of such provision or any other provision hereof. If any provision of this Agreement is determined to be so broad as to be unenforceable, such provision shall be interpreted to be only so broad as is enforceable, and in the event that any provision is determined to be entirely unenforceable, such provision shall be deemed severable, such that all other provisions of this Agreement shall remain valid and binding upon Executive and the Releasees.

17. Governing Law. The validity, interpretations, construction and performance of this Agreement shall be governed by the laws of the Commonwealth of Pennsylvania without giving effect to conflict of laws principles.

18. Counterparts and Facsimiles. This Agreement may be executed, including execution by facsimile signature, in multiple counterparts, each of which shall be deemed an original, and all of which together shall be deemed to be one and the same instrument.

[*space intentionally left blank; signature page follows*]

IN WITNESS WHEREOF, the Company has caused this Agreement to be executed by its respective duly authorized officer, and the Executive has executed this Agreement, on the date(s) below written.

COGNITION THERAPEUTICS, INC.

By: /s/ Robert Gailus
Name & Title: Robert Gailus
Date: April 21, 2020

KENNETH I. MOCH

/s/ Kenneth I. Moch

Date: April 21, 2020

Exhibit 10.16

ADVISOR SERVICES AGREEMENT

This Advisor Services Agreement ("Agreement"), effective as of March 17, 2020, is made between **Cognition Therapeutics, Inc.** (the "Company") and **Kenneth I. Moch** ("Advisor").

WHEREAS, Advisor's employment by the Company ceased on March 17, 2020 (the "Termination Date") and in connection therewith the Company and Advisor entered into a Separation and Release Agreement dated as of April 21, 2020 (the "Separation Agreement"); and

WHEREAS, the Company wishes to retain the services of Advisor following the Termination Date to advise and consult the Company in various matters in which Advisor has expertise and that are relative to the Company's business, and Advisor is willing to provide such services.

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and promises contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

1. For the twelve (12) month period following the Termination Date (the "Initial Term"), subject to earlier termination or extension in accordance with Section 9, Advisor will (i) advise and act on the Company's behalf to assist the Company in transitioning his duties and responsibilities (related to his prior employment) and (ii) perform such other consulting services, including with respect to the Company's business strategy, and legal matters and investor relations, as the Company's Chief Executive Officer (including any interim Chief Executive Officer) may reasonably request and as reasonably agreed to by Advisor. Advisor will perform such services in good faith, to the best of his ability and in compliance with all applicable laws. Advisor will be reasonably available to the Company (and to persons the Company may designate) at reasonable times (on-site, by telephone and/or by email) on an as-needed basis with regard to the performance of the services, and Advisor agrees to commit sufficient time to the performance of the services, which will not exceed 40 hours per month.

2. Company agrees to pay Advisor for his consulting services an aggregate amount of $100,000 for the Initial Term, paid in substantially equal monthly installments in accordance with the Company's normal practices. The fees payable in any Renewal Term, if applicable, will be determined between the parties.

3. Advisor acknowledges and agrees that all incentive equity awards made by Company to Advisor during or in connection with his employment by Company, including without limitation any options to purchase Common Stock of Company, ceased to vest as of the Termination Date and no portion of any options that are not exercisable as of the Termination Date shall thereafter become exercisable.

4. Company will reimburse Advisor for all reasonable business expenses incurred in connection with the engagement reflected by this Agreement. Any such expenses that are beyond incidental costs (including, without limitation, any travel expenses) incurred in connection with the performance of Advisor's duties must be approved by Company in advance.

5. Advisor shall act strictly in a professional consulting capacity as an independent contractor for all purposes, including without limitation, federal, state and local withholding, employment and payroll tax purposes, and in all situations and shall not be considered an employee of the Company for any purposes. Advisor acknowledges that during the Term he will not be eligible to participate in any retirement, welfare, or other employee benefit plan or arrangement maintained by the Company or its affiliates (other than in accordance with COBRA and consistent with the Separation Agreement) and agrees that he will

not claim any such benefits. Advisor shall make no representation to any third party that Advisor is an agent or employee of Company. Advisor shall have no authority to bind Company or to incur other obligations on behalf of Company.

6. Advisor agrees that all the Intellectual Property (as defined below) is considered to be "works made for hire" as that term is defined in Section 101 of the Copyright Act (17 U.S.C. § 101) and that all right, title and interest in such Intellectual Property shall be the sole and exclusive property of Company and its subsidiaries and affiliates (collectively, the "Company Parties" and each a "Company Party"). To the extent that any of the Intellectual Property may not by law be considered a work made for hire, or to the extent that, notwithstanding the foregoing, Advisor retains any interest in the Intellectual Property, Advisor hereby irrevocably assigns and transfers to the Company Parties any and all right, title, or interest that Advisor may now or in the future have in the Intellectual Property under patent, copyright, trade secret, trademark or other law, in perpetuity or for the longest period otherwise permitted by law, without the necessity of further consideration. The Company Parties will be entitled to obtain and hold in its own name all copyrights, patents, trade secrets, trademarks and other similar registrations with respect to such Intellectual Property. Advisor further agrees to execute any and all documents and provide any further cooperation or assistance reasonably required by the Company to perfect, maintain or otherwise protect its rights in the Intellectual Property. If the Company or any other Company Party, as applicable, are unable after reasonable efforts to secure the Advisor's signature, cooperation or assistance in accordance with the preceding sentence, whether because of the Advisor's incapacity or any other reason whatsoever, Advisor hereby designates and appoints each Company Party or its designee as the Advisor's agent and attorney-in-fact, to act on his behalf, to execute and file documents and to do all other lawfully permitted acts necessary or desirable to perfect, maintain or otherwise protect the Company Parties' rights in the Intellectual Property. Advisor acknowledges and agrees that such appointment is coupled with an interest and is therefore irrevocable. "Intellectual Property" means inventions, original works of authorship, developments, concepts, improvements or any trade secrets which relate in any manner to the Company Parties' business or proposed business, whether or not patentable or registrable under patent, copyright or similar laws, which Advisor may solely or jointly conceives or develops or reduces to practice or causes to be conceived or developed or reduced to practice, at any time and at any place while Advisor is engaged by Company (collectively referred to as "Inventions"), including any and all intellectual property rights inherent in the Inventions and appurtenant thereto including, without limitation, all patent rights, copyrights, trademark rights and trade secret rights.

7. Advisor recognizes and acknowledges that the Confidential Information (as defined below) is a valuable, special and unique asset of the business of the Company. As a result, both during the term of this Agreement and thereafter, Advisor will not, without the prior written consent of Company, for any reason divulge to any third-party or use for his own benefit, or for any purpose other than the exclusive benefit of Company, any Confidential Information. All right, title and interest in and to Confidential Information shall be and remain the sole and exclusive property of the Company Parties. Advisor shall not remove from the offices or premises of any Company Party any documents, records, notebooks, files, correspondence, reports, memoranda or similar materials of or containing Confidential Information, or other materials or property of any kind belonging to any of the Company Parties unless necessary or appropriate in the performance of his duties to the Company Parties. If Advisor removes such materials or property in the performance of his services, he will return such materials or property promptly after the removal has served its purpose. Advisor will not make, retain, remove and/or distribute any copies of any such materials or property, or divulge to any third person the nature of and/or contents of such materials or property, except to the extent necessary to satisfy contractual obligations of any of the Company Parties and to perform his services on behalf of the Company Parties. Upon termination of the Advisor's engagement by the Company, he shall leave with the Company Parties or promptly return to the Company Parties all originals and copies of such materials or property then in his possession. "Confidential

Information" means any Company Party's proprietary or confidential information, technical data, trade secrets or know-how, including, but not limited to, research, product plans and developments, prototypes, products, services, customer lists and customers, prospective customers and contacts, proposals, customer purchasing practices, prices and pricing methodology, cost information, terms and conditions of business relationships with customers, customer research and other needs, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, distribution and sales methods and systems, sales and profit figures, finances, personnel information including, information regarding compensation, skills, training, promotions, and duties, as well as reports and other business information that Advisor learns of, obtains, or that is disclosed to Advisor relating to the Company Parties at any time prior to or during Advisor's engagement by the Company, either directly or indirectly, in writing, orally or by review or inspection of documents or other tangible property. Failure by any of the Company Parties to mark any of the Confidential Information as confidential or proprietary shall not affect its status as Confidential Information.

8. Advisor acknowledges that any breach by him, willfully or otherwise, of Sections 6 or 7 of this Agreement will cause continuing and irreparable injury to the Company Parties for which monetary damages would not be an adequate remedy. Advisor shall not, in any action or proceeding to enforce any of the provisions of this Agreement, assert the claim or defense that such an adequate remedy at law exists. In the event of any such breach or threatened breach by Advisor of Section 6 or 7, the Company Parties shall be entitled to injunctive or other similar equitable relief in any court, without any requirement that a bond or other security be posted, and this Agreement shall not in any way limit remedies of law or in equity otherwise available to the Company Parties.

9. This Agreement shall automatically terminate upon the one-year anniversary of the Termination Date (the "Initial Term"), provided that Advisor and Company may agree to extend the engagement of Advisor (such extension period a "Renewal Term" and together with the Initial Term, the "Term"). Either party may terminate this Agreement during the Term upon ten (10) days advance written notice to the other party, in which case no further fees shall be payable to Advisor; provided, however, in the event that Company terminates this Agreement and Advisor's engagement during the Initial Term without "Cause", Company shall continue to pay Advisor the balance of fees during the remainder of the Initial Term pursuant to Section 2. For purposes of this Agreement, "Cause" means (i) the Advisors' continued failure to substantially perform his duties and obligations to Company pursuant to this Agreement, including but not limited to any material breach of this Agreement, and failure to cure the same within ten (10) business days after being notified by Company, (ii) Advisor having committed willful fraud or willful misconduct, in any such case which is materially injurious to the Company; (iii) Advisor having been convicted of a felony involving moral turpitude that results in material harm to the standing or reputation of Company; (iv) Advisor's material breach of the terms of the Separation Agreement or Section 5 of the Employment Agreement effective October 11, 2016 and subsequently amended, by and between Company and Advisor; or (v) Advisor engages in such other behavior detrimental to the interests of the Company during the Term as the Board reasonably determines.

10. Company may assign this Agreement to any parent company or direct or indirect subsidiary of the Company, or any successor to all or substantially all of the assets and business of the Company by means of liquidation, dissolution, merger, consolidation, transfer of assets, sale of stock or otherwise. The duties of Advisor hereunder are personal to Advisor and may not be assigned by him.

11. This Agreement will be governed by the laws of the Commonwealth of Pennsylvania, without regard to conflict of law principles. The Parties (i) agree that any legal proceeding arising out of this Agreement may be brought in the courts of record of the Commonwealth of Pennsylvania or the courts of the United States located in the Commonwealth of Pennsylvania; (ii) consent to the jurisdiction of each

such court in any such suit, action or proceeding; and (iii) waive any objection which said Parties may have to the laying of venue of any such suit, action or proceeding in any of such courts.

[*signature page follows*]

IN WITNESS WHEREOF, the Company has caused this Agreement to be executed by its duly authorized officer, and Advisor has executed this Agreement, in each case on the dates indicated below.

ADVISOR	COGNITION THERAPEUTICS, INC.
/s/ Kenneth I. Moch	By:
Kenneth I. Moch	Name:
	Title:
Date: : April 21, 2020	Date:

IN WITNESS WHEREOF, the Company has caused this Agreement to be executed by its duly authorized officer, and Advisor has executed this Agreement, in each case on the dates indicated below.

ADVISOR	COGNITION THERAPEUTICS, INC.
	By: /s/ Robert Gailus
Kenneth I. Moch	Name: Robert Gailus Title: Chairman, Cognition Therapeutics, Inc.
Date:	Date: April 21, 2020

Cognition Therapeutics Inc.
2403 Sidney Street
Pittsburgh PA 15203
t: 412 481 2210 f: 412 481 2216

www.cogrx com

October 7, 2019

Mr. James O'Brien
20 Hollow Tree Ridge Road
Darien, Connecticut 06820

Dear Jim:

This letter agreement (the "Agreement") sets forth the terms and conditions of your employment with Cognition Therapeutics, Inc., a Delaware corporation (the "Company").

1. Position and Duties.

(a) Position. Effective October 28, 2019 (the "Start Date"), you shall commence your employment with the Company as its Chief Financial Officer. This Agreement will set forth the terms and conditions of your employment in such capacity.

(b) Duties. Your employment by the Company shall be full-time and exclusive of any other employment and you shall devote all of your business time, attention and services to the Company and its Affiliates (as defined below). You will perform such duties as may be customary to, and consistent with, the position of Chief Financial Officer, and such duties that may reasonably be assigned from time to time by the Chief Executive Officer. You will devote your best efforts, business judgment, skill and knowledge to the advancement of the business and interests of the Company and to the discharge of your duties and responsibilities to the Company. Notwithstanding the foregoing, during the term of your employment, you may participate in charitable activities and manage your passive investments, in each case so long as such activities do not interfere with the performance of your duties and responsibilities hereunder or present a conflict of interest with the Company or its Affiliates.

(c) Office Location. You shall perform your services hereunder primarily at the Company's offices to be established in the Tri-State (New York, New Jersey, Connecticut) area, and in Pittsburgh, PA, subject to reasonable business travel.

2. Compensation and Benefits. During your employment, as compensation for all services performed by you for the Company, the Company will provide you the following pay and benefits:

(a) Base Salary. The Company will pay you a base salary (the "Base Salary") at the rate of $340,000 per year, payable in accordance with the regular payroll practices of the Company and subject to adjustment from time to time by the Company's Board of Directors (the "Board") in its discretion.

(b) Bonus Compensation. During your employment, you will be considered annually for a cash bonus targeted at 30% of your Base Salary. The amount of any bonus awarded to you for any year will be determined by the Board in its discretion, based on your performance and that of the Company against the specific priorities and/or goals established for each such annual period by the Board. Any annual bonus will be paid in the year following the fiscal year with respect to which such annual bonus was earned and attributable, at the same time as other executives receive any applicable bonus compensation and as soon as practicable following the availability of the Company's results of operations for the applicable fiscal year. Subject to Section 5(a)(i), in order for you to receive payment of any such annual bonus, you must be employed by the Company on the date of payment.

(c) Stock Options. In connection with the commencement of your employment, the Company's management will recommend that the Board grant you a stock option (the "Option"), under and subject in all respects to the Cognition Therapeutics 2017 Equity Incentive Plan (the "Plan") and award agreement, to purchase the number of shares of the Company's common stock, par value $0.001 per share (the "Common Stock") equal to 0.75% of the Company's outstanding equity on a fully diluted basis. The Option will: (A) have an exercise price per share equal to the fair market value per share of Common Stock on the date of the grant, as determined by the Board; and (B) will be subject to vesting requirements such that (i) 25% of the shares of Common Stock underlying the Option shall vest as of the first anniversary of the Start Date, and (ii) the remaining 75% of the shares of Common Stock underlying the Option shall vest in 36 substantially equal monthly installments as of the last day of each month thereafter, in each case if you remain continuously employed by the Company through the applicable vesting dates; *provided*, however, that any then-unvested portion of the Option shall vest upon the closing of a Change in Control (as defined in Section 6) if you remain employed through such event.

(d) Participation in Employee Benefit Plans. You shall be eligible to participate in any and all employee benefit plans from time to time in effect for employees of the Company generally. The Company shall not be required to establish or maintain any such program or plan. Such participation shall be subject to (i) the terms of the applicable plan documents, and (ii) generally applicable Company policies. The Company may alter, modify, add to or terminate its employee benefit plans at any time as it, in its sole discretion, determines to be appropriate.

(e) Paid Time Off. You will be entitled to 4 weeks vacation, in addition to holidays observed by the Company, pursuant to the Company's paid-time-off policies. Vacation may be taken at such times and intervals as you shall determine, subject to the business needs of the Company and prior notice to the Chief Executive Officer.

(f) Business Expenses. The Company will pay or reimburse you for all reasonable business expenses incurred or paid by you in the performance of your duties and responsibilities for the Company, subject to any maximum annual limit and other restrictions on such expenses set forth by the Company and to such reasonable substantiation and documentation as the Company may specify from time to time.

3. Confidential Information; Restricted Activities; Intellectual Property. To induce the Company to enter into this Agreement, as a condition to your employment by the Company, and in recognition of (i) the compensation payable to you pursuant to this Agreement, and (ii) such other consideration payable to you by the Company or any of its Affiliates, you must sign and return to the

Company no later than your Start Date the Confidential Disclosure, Invention Assignment, Noncompetition, Non-Solicitation and Non-Interference Agreement attached hereto as Exhibit A (the "Restrictive Covenants Agreement").

4. Termination of Employment. Your employment under this Agreement shall continue for no definite term until terminated pursuant to this Section 4.

(a) The Company may terminate your employment for Cause upon notice to you setting forth in reasonable detail the nature of the Cause (as defined below). The following, as determined by the Company in its reasonable judgment, shall constitute "Cause" for termination: (i) your persistent and willful refusal to follow reasonable directives of the Chief Executive Officer; (ii) gross negligence or willful misconduct in the performance of your duties and responsibilities to the Company or any of its Affiliates; (iii) your material breach of this Agreement or any other agreement between you and the Company, which breach continues for more than 15 days after the Company gives you written notice that sets forth in reasonable detail the nature of such breach; or (iv) other conduct by you that is or could reasonably anticipated to be materially harmful to the business, interests or reputation of the Company or any of its Affiliates. The Company may terminate your employment as a result of your Disability and at any time other than for Cause upon notice to you. Termination of your employment as a result of your Disability will not be construed as a termination by the Company "other than for Cause."

(b) You may terminate your employment at any time upon 60 days' notice to the Company without Good Reason. You may also terminate your employment with Good Reason. "Good Reason" means, without your consent: (i) a material diminution by the Company of your responsibilities with the position you then hold, or (ii) the Company reduces your Base Salary, other than in connection with the same percentage across-the-board decrease in base salaries applicable to other key executives; provided that, in each case, written notice of your resignation for Good Reason must be delivered to the Company within thirty (30) days after the occurrence of the event falling within the definition of Good Reason in order for your resignation for Good Reason to be effective, the Company fails to cure such event within thirty (30) days after delivery of such notice to cure any such event and you resign your employment within thirty (30) days following the expiration of that cure period.

(c) This Agreement shall automatically terminate in the event of your death during employment.

5. Severance Payments and Other Matters Related to Termination.

(a) Involuntary Termination/Good Reason Termination.

(i) In the event of termination of your employment by the Company other than for Cause, or your resignation of employment for Good Reason, the Company (or its successor, as applicable) will (A) continue to pay you your Base Salary for a period of six (6) months after the date of termination; (B) pay you for any bonus to which you would have otherwise been entitled for the prior fiscal year but for the termination of your employment prior to payment of such bonus; and (C) waive the applicable premium otherwise payable for COBRA continuation coverage for you (and, to the extent covered immediately prior to the date of such cessation, your eligible dependents) for a period equal to six (6) months following termination; provided, however, that if such termination occurs within eighteen (18)

months after your Start Date, the Base Salary continuation described in subsection (A), and the subsidized COBRA coverage described in subject (C), shall be provided for nine (9) months in lieu of six (6) months. The Company will also pay you any Base Salary earned but not paid through the date of termination, pay for any vacation time accrued but not used to that date and reimburse any business expenses incurred in accordance with Company policy and subject to the Company's policies regarding appropriate documentation (the "Accrued Rights").

(ii) Notwithstanding the foregoing, in the event your employment is terminated by the Company (or its successor) other than for Cause or by you for Good Reason, in each case during the twelve (12) month period immediately following the occurrence of a Change in Control (as defined below), you will receive the payments and benefits described in Section 5(a)(i) above, subject to the following modifications: (A) references in in Section 5(a)(i) to "six (6) months" or "nine (9) months" (as applicable) will each be replaced with a reference to "twelve (12) months"; and (B) all unvested restricted stock, stock options and other equity incentives awarded to you by the Company will become immediately and automatically fully vested and exercisable (as applicable). The payments described in subsection (A) of this Section 5(a)(ii) shall be paid in a lump sum not later than the forty-fifty (45th) day following your termination of employment.

(b) Limitation of Payments. If any payment or benefit due under this Agreement, together with all other payments and benefits you receive or are entitled to receive from the Company or any of its Affiliates, would (if paid or provided) constitute an excess parachute payment (within the meaning of Section 280G(b)(1) of the Code), the amounts otherwise payable and benefits otherwise due under this Agreement will be limited to the minimum extent necessary to ensure that no portion thereof will fail to be tax-deductible to the Company by reason of Section 280G of the Code or result in an excise tax pursuant to Section 4999 of the Code. The determination of whether any payment or benefit would (if paid or provided) constitute an excess parachute payment will be made by the Board, in its sole discretion. If a reduction to the payments otherwise payable under this Agreement or any other arrangement is required pursuant to this Section 5(b), such reduction shall be made in the following order: (i) first, any future cash payments (if necessary, to zero); (ii) second, any current cash payments (if necessary, to zero); (iii) third, all non-cash payments (other than equity' or equity derivative related payments) (if necessary, to zero); and (iv) fourth, all equity or equity derivative payments; provided that in all events, such reductions shall be done in a manner consistent with the requirements of Section 409A of the Code, to the extent applicable.

(c) Severance Conditional upon Release. The payments and benefits described in Section 5(a) are in lieu of, and not in addition to, any other severance arrangement maintained by the Company. Notwithstanding any provision of this Agreement, the payments described in Section 5(a) (other than the Accrued Rights) are conditioned on your execution and delivery to the Company of a general release of all claims against the Company and its Affiliates in a manner consistent with the requirements of the Older Workers Benefit Protection Act and any other applicable law, and in a form reasonably prescribed by the Company (the "Release") and such Release becoming irrevocable within sixty (60) days following the date of termination and (ii) your continued compliance with the Restrictive Covenants Agreement. The severance benefits described in Section 5(a) (other than the Accrued Rights) will be paid or begin to be paid or provided within sixty (60) days following your date of termination; provided that the initial payment of Base Salary continuation shall include a catch-up payment to cover amounts retroactive to the day immediately following the effective date of your termination of employment. If the severance benefits payable pursuant to Section 5(a) are deferred compensation subject to the requirements of Section 409A of

the Code, and if the 60-day period described herein begins in one taxable year and ends in a second taxable year, such payments shall not commence until the second taxable year.

(d) Termination for Cause, upon Disability, or by Voluntary Termination. In the event of termination of your employment by the Company for Cause or Disability, or your voluntary termination of employment, the Company will pay you the Accrued Rights. The Company shall have no other obligation to you, including any bonus or severance payments.

(e) Survival of Certain Provisions. Provisions of this Agreement shall survive any termination if so provided in this Agreement or if necessary or desirable to accomplish the purposes of other surviving provisions. The obligation of the Company to make payments to you under this Section 5, and your right to retain such payments, are expressly conditioned upon your continued full performance of your obligations under the Restrictive Covenants Agreement. Upon termination by either you or the Company, all rights, duties and obligations of you and the Company to each other shall cease, except as otherwise expressly provided in this Agreement.

6. Definitions. For purposes of this Agreement, the following definitions apply:

"Affiliate" means any Person that controls, is controlled by or under common control of the Person, with "control" meaning the ownership or right to vote at least a majority of the equity interests of such Person.

"Change in Control" means (A) the sale, lease, exchange, transfer or other disposition of all or substantially all of the assets of the Company and its Affiliates, or (B) any sale, merger, consolidation or other business combination that results in the holders of the outstanding voting securities of the Company immediately prior to such transaction beneficially owning or controlling less than a majority of the voting securities of the surviving entity immediately thereafter.

"Code" means the Internal Revenue Code of 1986, as amended from time to time.

"Disability" means a condition that, in the judgment of the Board, renders you incapable of performing your duties under this Agreement with or without a reasonable accommodation.

"Person" means an individual, a corporation, a limited liability company, an association, a partnership, an estate, a trust or any other entity or organization, other than the Company or any of its Affiliates.

7. Conflicting Agreements. You hereby represent and warrant that your signing of this Agreement and the performance of your obligations under it will not breach or be in conflict with any other agreement to which you are a party or are bound, and that you are not now subject to any covenants against competition or similar covenants or any court orders that could affect the performance of your obligations under this Agreement. You agree that you will not disclose to or use on behalf of the Company any proprietary information of a third party without that party's consent.

8. Withholding. All payments made by the Company under this Agreement shall be reduced by any tax or other amounts required to be withheld by the Company under applicable law.

9. Assignment. Neither you nor the Company may make any assignment of this Agreement or any interest in it, by operation of law or otherwise, without the prior written consent of the other; provided, however, that the Company may assign its rights and obligations under this Agreement without your consent to one of its Affiliates or to any Person with whom the Company shall hereafter effect a reorganization, consolidate with, or merge into or to whom it transfers all or substantially all of its properties or assets. This Agreement shall inure to the benefit of and be binding upon you and the Company, and each of our respective successors, executors, administrators, heirs and permitted assigns.

10. Severability. If any portion or provision of this Agreement shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

11. Miscellaneous. This Agreement sets forth the entire agreement between you and the Company and replaces all prior and contemporaneous communications, agreements and understandings, written or oral, with respect to the terms and conditions of your employment. This Agreement may not be modified or amended, and no breach shall be deemed to be waived, unless agreed to in writing by you and an expressly authorized representative of the Board. The headings and captions in this Agreement are for convenience only and in no way define or describe the scope or content of any provision of this Agreement. This Agreement may be executed in two counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument. This Agreement shall be governed and construed in accordance with the laws of the Commonwealth of Pennsylvania, without regard to the conflict of laws principles thereof.

12. Notices. Any notices provided for in this Agreement shall be in writing and shall be effective when delivered in person or deposited in the United States mail, postage prepaid, and addressed to you at your last known address on the books of the Company or, in the case of the Company, to it at its principal place of business, attention of the Chief Executive Officer, or to such other address as either party may specify by notice to the other actually received.

13. Section 409A. It is intended that this Agreement be drafted and administered in compliance with section 409A of the Code, including, but not limited to, ally future amendments to Code section 409A, and any other Internal Revenue Service or other governmental rulings or interpretations (together, "Section 409A") issued pursuant to Section 409A so as not to subject you to payment of interest or any additional tax under Code section 409A. The parties intend for any payments under this Agreement to either satisfy the requirements of Section 409A or to be exempt from the application of Section 409A, and this Agreement shall be construed and interpreted accordingly. Notwithstanding anything in this Agreement to the contrary, all payments to be made upon a termination of employment under this Agreement will only be made upon a "separation from service" within the meaning of Section 409A. To the maximum extent permitted under Section 409A, the cash severance benefits payable under this Agreement are intended to meet the requirements of the short-term deferral exemption under Section 409A and the "separation pay exception" under Treas. Reg. § 1.409A-1(b)(9)(iii). For purposes of the application of Treas. Reg. § 1.409A-1(b)(4)(or any successor provision), each payment in a series of payments to you will be deemed a separate payment. Notwithstanding anything herein to the contrary, to the extent any expense, reimbursement or in-kind benefit provided to you constitutes a "deferral of compensation" within

the meaning of Section 409A of the Code (i) the amount of expenses eligible for reimbursement or in-kind benefits provided to you during any calendar year will not affect the amount of expenses eligible for reimbursement or in-kind benefits provided to you in any other calendar year, (ii) the reimbursements for expenses for which you are entitled to be reimbursed shall be made on or before the last day of the calendar year following the calendar year in which the applicable expense is incurred and (iii) the light to payment or reimbursement or in-kind benefits hereunder may not be liquidated or exchanged for any other benefit.

14. Arbitration. Any dispute or controversy arising under or in connection with this Agreement or your employment with the Company, other than a claim for injunctive relief pursuant to the Restrictive Covenants Agreement, shall be settled exclusively by arbitration, conducted before a single arbitrator in Pittsburgh, Pennsylvania (applying Pennsylvania law) in accordance with the National Rules for the Resolution of Employment Disputes of the American Arbitration Association then in effect. However, prior to resorting to arbitration, both parties agree to negotiate in good faith to resolve any such dispute or controversy. The arbiter shall be selected in accordance with the rules of the American Arbitration Association. The decision of the arbitrator shall be final and binding upon the parties hereto and judgment may be entered on the arbitrator's award in any court having jurisdiction. The prevailing party in any such proceeding shall be entitled to receive from the other party all reasonable attorneys' fees incurred by such prevailing party and all costs incurred in connection therewith if and to the extent so awarded by the arbitrator.

[remainder of page intentionally left blank]

Please sign this Agreement in the space provided and return it to me. At the time you sign and return it, and the Company counter-signs it this Agreement will take effect as a binding agreement between you and the Company on the basis set forth above.

COGNITION THERAPEUTICS, INC.

By:	/s/ Kenneth I. Moch	By:	/s/ James O'Brien
Name:	Kenneth I. Moch		James O'Brien
Title:	President and Chief Executive Officer		
Date signed:	October 7, 2019	Date signed:	October 8, 2019

EXHIBIT A

Restrictive Covenants Agreement

EMPLOYEE NON-DISCLOSURE AND
INVENTION ASSIGNMENT AGREEMENT

THIS AGREEMENT between Cognition Therapeutics, Inc. (the "Company"), a Delaware corporation with its principal offices at 2403 Sidney St., Suite 261, Pittsburgh, PA 15203 and James M. O'Brien (the "Employee"), an individual residing at the address set forth on the signature page to this Agreement.

Recitals:

The parties desire to enter into this Agreement in connection with the Employee's employment by the Company.

NOW, THEREFORE, in consideration of the employment of the Employee by the Company and the payment by the Company of compensation to the Employee for services rendered and to be rendered, and intending to be legally bound hereby, the parties hereto agree as follows:

1. Non-Disclosure of Confidential Information. The Employee acknowledges that in the course of performing services for the Company, the Employee may obtain knowledge of the Company's business plans, products, processes, software, know-how, trade secrets, formulas, methods, models, prototypes, discoveries, inventions, materials and reagents, improvements, disclosures, customer and supplier lists, names and positions of employees and/or other proprietary and/or confidential information (collectively, the "Confidential Information"). The Employee agrees to keep the Confidential Information secret and confidential and not to publish, disclose or divulge to any other party, or use for the Employee's own benefit or to the detriment of the Company, any Confidential Information without the prior written consent of the Company, whether or not such Confidential Information was discovered or developed by the Employee. The Employee also agrees not to divulge, publish or use any proprietary and/or confidential information of others that the Company is obligated to maintain in confidence.

2. Inventions and Discoveries.

(a) Disclosure. The Employee shall promptly and fully disclose to the Company, with all necessary detail, all developments, know-how, discoveries, inventions, improvements, concepts, ideas, formulae, processes and methods (whether copyrightable, patentable or otherwise) made, received, conceived, acquired or written by the Employee (whether or not at the request or upon the suggestion of the Company), solely or jointly with others, during the period of the Employee's engagement by the Company as a consultant hereunder that (i) relate to any line of business, activity or field of interest or investigation with respect to which the Employee renders services to the Company or (ii) are otherwise made through the use of the Company's time, facilities or materials (all of the foregoing being hereinafter referred to collectively as the "Inventions").

(b) Assignment and Transfer. The Employee agrees to assign and transfer to the Company all of the Employee's right, title and interest in and to the Inventions, and the Employee further agrees to deliver to the Company any and all drawings, notes, specifications

and data relating to the Inventions, and to sign, acknowledge and deliver all such further papers, including applications for and assignments of copyrights and patents, and all renewals thereof, as may be necessary to obtain copyrights and patents for any Inventions in any and all countries and to vest title thereto in the Company and its successors and assigns and to otherwise protect the Company ’s interests therein.

(c) Power of Attorney. If the Company is unable, after reasonable effort, to secure the Consultant’s signature on any application for patent, copyright, trademark or other analogous registration or other documents regarding any legal protection relating to an Invention, whether because of the Employee’s physical or mental incapacity or for any other reason whatsoever, the Employee hereby irrevocably designates and appoints each of the President and each Vice President of the Company as the Employee’s agent and attorney-in-fact, to act for and in the Employee’s behalf and stead to execute and file any such application or applications or other documents and to do all other lawfully permitted acts to further the prosecution and issuance of patent, copyright, trademark or other registrations or any other legal protection thereon with respect to an Invention with the same legal force and effect as if executed by the Employee.

(d) Documentation and Records. The Employee shall hold in a fiduciary capacity for the benefit of the Company all documentation, disks, programs, data, records, drawings, manuals, reports, sketches, blueprints, letters, notes, notebooks and all other writings, electronic data, graphics and tangible information and materials of a secret, confidential or proprietary information nature relating to the Company or the Company’s business that are in the possession or under the control of the Employee. The Employee agrees that in connection with any research, development or other services performed for the Company, the Employee will maintain careful, adequate and contemporaneous written records of all Inventions, which records shall be the property of the Company.

3. Injunctive Relief. The Employee acknowledges that compliance with this Agreement is necessary to protect the goodwill and other proprietary interests of the Company. The Employee acknowledges that a breach of this Agreement will result in irreparable and continuing damage to the Company and its business, for which there will be no adequate remedy at law. The Employee further agrees that in the event of any breach of this Agreement, the Company and its successors and assigns shall be entitled to injunctive relief and to such other and further relief and damages as may be proper.

4. No Right to Employment. It is expressly understood that this Agreement is not intended to define the scope of the Employee’s employment by the Company or the terms of such employment other than as specifically provided herein. Any such other terms may or may not be contained in a written agreement. In any event, nothing contained in this Agreement shall be interpreted to create an employment relationship other than at will.

5. Survival of Agreement; Binding Nature. It is expressly agreed that the provisions of this Agreement shall survive and apply after the termination of the Employee’s employment with the Company. This Agreement shall be binding on and inure to the benefit of the Employee’s executors, administrators or other legal representatives or assigns and on the Company’s successors and assigns. The Company shall have the right to assign this Agreement without the consent of the Employee.

6. Enforceability. If any provision of this Agreement shall be invalid or unenforceable, in whole or in part, then such provision shall be deemed to be modified or restricted to the extent and in the manner necessary to render the same valid and enforceable, or shall be deemed excised from this Agreement, as the case may require, and this Agreement shall be construed and enforced accordingly to the maximum extent permitted by law.

7. No Waiver. No claim or right arising out of a breach or default under this Agreement shall be discharged in whole or in part by a waiver of that claim or right unless the waiver is in writing and signed by the aggrieved party.

8. Construction. This Agreement shall be construed and interpreted in accordance with the substantive laws of the Commonwealth of Pennsylvania. This Agreement supersedes and replaces any existing agreement between the Employee and the Company relating generally to the same subject matter; and this Agreement may not be modified, in whole or in part, except in writing signed by both of the parties.

IN WITNESS WHEREOF, this Agreement has been signed by the parties as of the date set forth below next to the name of the Employee.

COGNITION THERAPEUTICS, INC.

Date: October 7, 2019

By: /s/ Kenneth I. Moch

Name: Kenneth I. Moch
Title: President & CEO

Date: October 8, 2019

/s/ James M. O'Brien
Employee's Signature

James M. O'Brien
Name of Employee (please print or type)

Employee's Address:
20 Hollow Tree Ridge Rd
Darien, CT 06828