Cognition Therapeutics Announces Publication Analyzing Biomarkers of Synapse Damage or Loss to Support Future Therapeutic Development Efforts in Alzheimer's Disease

March 17, 2020

NEW YORK, March 17, 2020 —Cognition Therapeutics, Inc., a clinical stage neuroscience company focused on the protection and restoration of synaptic function in Alzheimer's disease (AD) and other neurodegenerative disorders, today announced the publication of an article titled, The Clinical Promise of Biomarkers of Synapse Damage or Loss in Alzheimer's Disease , which reviews the foundational role of synapses in cognitive function and discusses available and experimental biomarkers that are designed to indicate synapse injury and loss in neurological diseases such as AD. The ability to measure synapse damage or loss would facilitate diagnosis of a broad range of neurological diseases and the clinical development of therapeutics against these diseases.

The key points of the article, which appears in the peer-reviewed journal, Alzheimer's Research & Therapy, include:

- Synapse loss correlates most strongly with cognitive decline in AD because synaptic numbers and function underly cognitive performance. Synapse damage and loss occurs before amyloidosis, tauopathy, inflammation and other pathological mechanisms can be detected;
- Compounds that halt or reduce synapse damage or loss have a strong rationale as treatments of AD;
- Biomarkers that measure synapse degeneration or loss in patients will facilitate clinical development of such drugs; and,
- The ability to measure synapse density sensitively in the brains of living patients provides a compelling case to use these types of measurements as biomarkers that quantify synapse damage or loss in clinical trials in AD patients.

The Clinical Promise of Biomarkers of Synapse Damage or Loss in Alzheimer's Disease is authored by the Synaptic Health Endpoints Working Group, the goal of which is to assist industry and regulators in the development and approval of synaptoprotective therapeutics for diseases associated with cognitive loss such as AD, dementia with Lewy bodies and Parkinson's disease. The Working Group is composed of thought leaders in the field of AD and synapse damage including Drs. Martí Colom-Cadena, Tara Spires-Jones, Henrik Zetterberg, Kaj Blennow, Anthony Caggiano, Steven T. DeKosky, Howard Fillit, John E. Harrison, Lon S. Schneider, Phillip Scheltens, Willem de Haan, Michael Grundman, Christopher H. van Dyck, Nicholas J. Izzo and Susan M. Catalano (see affiliations below).

"Cognition has incorporated several of these cutting-edge biomarkers into our clinical studies, particularly the ongoing SPARC synaptic imaging trial of CT1812, our lead candidate for AD," stated Susan M. Catalano, Ph.D., Cognition Therapeutics' chief science officer and the article's corresponding author. "As we advance CT1812 through its clinical program we look forward to presenting these biomarker results, which we hope will provide valuable insights into the activity of CT1812 and the broad utility of biomarkers in clinical trials."

SPARC (COG0105) is a randomized, double-blind, placebo-controlled study designed to compare changes in synaptic density in 21 AD patients who are receiving CT1812 or placebo once daily for up to 48 weeks. Synaptic density is measured using a non-invasive imaging technique, positron emission tomography (PET), in conjunction with a carbon-11-labeled radioligand tracer, UCB-J, that is selective for synaptic vesicle glycoprotein 2A (SV2A), a membrane protein expressed in the majority of synapses. If successful, this technique would facilitate visualization of synapses in the living brain and may be a predictor of disease progression. SPARC is being conducted under the direction of co-investigators Christopher H. van Dyck, M.D., director of the Yale Alzheimer's Disease Research Center and Richard E. Carson, Ph.D., professor of radiology and biomedical imaging and of biomedical engineering, and director of the Yale PET Center.

John E. Harrison, Ph.D., associate professor at the Alzheimer Center at Amsterdam University Medical Center and a member of the Working Group, added, "Biomarkers that measure the health or dysfunction of synapses and their associated systems will be of significant benefit to drug developers wishing to assess disease progression. Further, they have a role to play in helping to refine clinical trial patient selection and measuring the therapeutic benefits of experimental medicines. We anticipate that regulatory agencies will, in due course, incorporate such biomarkers into their evaluation of clinical programs or applications for marketing approval."

Author Affiliations

1. Martí Colom-Cadena, Ph.D., research fellow at the UK Dementia Research Institute and Centre for Discovery Brain Sciences, the University of Edinburgh.
2. Tara Spires-Jones, D.Phil., professor of neurodegeneration and deputy director of the Centre for Discovery Brain Sciences at the UK Dementia Research Institute, the University of Edinburgh.
3. Henrik Zetterberg, M.D., Ph.D., professor of neurochemistry and head of the Sahlgrenska Academy Department of Psychiatry and Neurochemistry at the University of Gothenburg and professor of neurochemistry at University College London.
4. Kaj Blennow, M.D., Ph.D., professor of clinical neurochemistry, head of Neurochemical Pathogenesis and Diagnostics at the University of Gothenburg and head of the Clinical Neurochemistry Laboratory at Sahlgrenska University Hospital.
5. Anthony Caggiano, M.D., Ph.D., chief medical officer of Cognition Therapeutics.
6. Steven T. DeKosky, M.D., professor of neurology and neuroscience, Aerts-Cosper Professor of Alzheimer's Research and deputy director of the McKnight Brain Institute at the University of Florida.
7. Howard Fillit, M.D., founding executive director and chief science officer of the Alzheimer's Drug Discovery Foundation and clinical professor of geriatric medicine & palliative care, medicine and neuroscience at the Icahn School of Medicine at Mount Sinai.
8. John E. Harrison, Ph.D., associate professor at the Alzheimer Center at Amsterdam University Medical Center (VUmc), visiting professor at the Institute of Psychiatry, Psychology and Neuroscience Kings College London and principal

consultant at Metis Cognition Ltd.

9. Lon S. Schneider, M.D., professor of psychiatry, neurology and gerontology at the Keck School of Medicine and Leonard Davis School of Gerontology at the University of Southern California;
10. Phillip Scheltens, M.D., Ph.D., professor of cognitive neurology at Amsterdam University Medical Center (VUmc) and director of the Alzheimer Center.
11. Willem de Haan, M.D., Ph.D., cognitive neurologist and postdoctoral researcher at Amsterdam University Medical Center (VUmc).
12. Michael Grundman, M.D., M.P.H., adjunct professor of neuroscience at UC San Diego and president and CEO of Global R&D Partners.
13. Christopher H. van Dyck, M.D., professor of psychiatry, neurology and neuroscience at the Yale School of Medicine, director of the Yale School of Medicine Division of Aging and Geriatric Psychiatry, director of the Alzheimer's Disease Research Unit, and director of the Yale Alzheimer's Disease Research Center.
14. Nicholas J. Izzo, Ph.D., director of pharmacology of Cognition Therapeutics.
15. Susan M. Catalano, Ph.D., chief science officer of Cognition Therapeutics.

About Cognition Therapeutics, Inc.
Cognition Therapeutics is a clinical stage biopharmaceutical company developing small-molecule therapeutics that address the toxic oligomeric proteins that cause synapse degeneration and trigger neurodegenerative conditions such as Alzheimer's disease.

Cognition's lead candidate, CT1812 (Elayta™), is a novel first-in-class, orally available small molecule that has shown the potential in initial clinical studies to normalize protein trafficking and lipid metabolism pathways that are disrupted in Alzheimer's disease and to allow the protection and restoration of synapses. CT1812 is currently being tested for the treatment of mild-to-moderate Alzheimer's disease in four Phase 2 clinical studies: SPARC (Synaptic Protection for Alzheimer's Restoration of Cognition); SNAP (AβO Displacement from Synapses on Neurons in Alzheimer's Patients); SHINE (Synaptic Health and Improvement of Neurological Function with Elayta) and SEQUEL (Study of EEG Quantification with Elayta). These studies are supported by grants from the National Institute on Aging of the NIH. Elayta has been granted Fast Track designation by the U.S. FDA.

The Company maintains corporate and clinical operations in New York, NY and its laboratory and research facilities in Pittsburgh, PA.

CT1812 and Cognition's other pipeline candidates were identified using the company's disease-relevant screening and novel chemistry platforms. Additional information about Cognition and its product candidates may be found online at www.cogrx.com.

Forward-Looking Statements
This press release contains "forward-looking statements" concerning the development and commercialization of Cognition's products, the potential benefits and attributes of such products, and Cognition's expectations regarding its prospects. Forward-looking statements are subject to risks, assumptions and uncertainties that could cause actual future events or results to differ materially from such statements These statements are made as of the date of this press release. Actual results may vary. Cognition undertakes no obligation to update any forward-looking statements for any reason.

CT1812 (Elayta™) is an investigational product and neither its use nor the tradename has been approved by the FDA.