



STUDY ON PLAXGEN ALZHEIMER'S DISEASE BLOOD DIAGNOSTIC PUBLISHED IN PEER-REVIEWED JOURNAL

Plaque Array Method Shown Effective in Quantifying and Identifying Blood Plaque Components Possibly Implicated in Alzheimer's

Sunnyvale, CA—February 20, 2015, Plaxgen, Inc., developing flow cytometry-based blood diagnostics for plaque-associated diseases, such as atherosclerosis and Alzheimer's, announced that a paper validating its Plaque Array technology for the diagnosis of Alzheimer's disease, was published in the peer-reviewed journal, *Clinica Chimica Acta* (<http://www.sciencedirect.com/science/article/pii/S0009898114005506>). In a study called, "Plaque Array Method and Proteomics-based Identification of Biomarkers from Alzheimer's Disease Serum," researchers concluded that the Plaque Array methodology developed by Plaxgen works well for detecting abeta and other particle formation in the blood serum of subjects clinically-determined to have Alzheimer's disease (AD). The Plaque Array technique, which incorporates particle-targeted proteomics to identify the makeup of the plaques, was also effective in identifying the various components of those particles: abeta 42, tau, cholesterol and synuclein. This could be beneficial in the development of therapeutics targeted to these specific AD pathologies.

Additionally, 35% of AD serum samples produced a significantly higher number of total cholesterol particles, compared to control, supporting the hypothesis that impaired cholesterol metabolism may play a role in vascular dementia in AD patients. There was also an 87% correlation between brain imaging data and abeta-42 particle formation in the serum of subjects with mild cognitive impairment and severe AD.

These results support the notion that the blood serum of patients with AD contains factors that catalyze the formation of particles that may be implicated in disease. The ability to identify these factors could be beneficial in both diagnosis and in matching therapy to disease profile. In the study, researchers also applied mass spectrometry to identify protein markers that may play a part in AD development. Approximately 76% of the proteins thereby identified have been previously identified with AD. Additionally, it is possible that abnormal expression or post-translational modification of these serum proteins in the affected AD subjects may contribute to accelerated plaque particle formation that could be part of the disease. The study showed this approach detected a network of proteins overlapped in abeta, tau, cholesterol and synuclein particles.

AD is being increasingly recognized as a neurovascular disease. Major components of amyloid plaques, such as abeta and tau, are identified in both the brain and blood of AD patients. Once in the blood, they become entangled with serum components, and progressively accumulate in the cerebral regions, thus contributing to AD pathogenesis.

"We are pleased that our pilot study showed the promise of this proprietary technology that uses flow cytometry, a technique more commonly utilized for cell analysis, to both

detect plaques in the blood of Alzheimer's patients, and to identify the components of those plaques, which will aid in diagnostic, patient stratification and drug development," said Shanmugavel Madasamy, PhD, lead study author and Plaxgen CEO. "As reported in the study, the technique identified a meaningful number of both known and potential biomarkers for Alzheimer's in blood serum. We are evaluating the effectiveness of a subset of these markers to diagnose Alzheimer's disease precisely, and will report further data shortly."

"The Plaque Array Test promises to provide insights to the pathophysiology of two plaque-derived disorders: Alzheimer's and coronary artery disease," said study author, Alan Wu, PhD, Professor, Laboratory Medicine, University of California, San Francisco. "This test may prove to be useful in the development of new drugs and the proper selection of existing treatments."

"The simple flow based assay developed by Plaxgen should improve diagnosis of early AD, and could be an important tool in developing effective therapies for the disease," said Marty Bigos, PhD, Flow Cytometry Core Director at Stanford University and a study author.

About Plaxgen

Privately-held Plaxgen is developing diagnostics in atherosclerosis, Alzheimer's disease, and other plaque-related diseases, using its proprietary Plaque Array technology. Plaque Array combines flow cytometry to detect and quantify plaque particles, with mass spectrometry to identify their components, including proteins and biomarkers that could help drug developers better target treatments in multiple indications in which plaque formation plays a role. Plaxgen's AMYLOAD™ Test can discriminate between pathologies in AD patients by identifying the different particle types that play a role in Alzheimer's disease, important for drug development and treatment matching. Plaxgen is a CLIA certified medical diagnostic lab and currently focused on commercializing ATHEROLOAD™ test for atherosclerosis diagnosis, StatRes™ Test using serum to predict a patient's response to selected statins in advance of the first prescription, and AMYLOAD Test for Alzheimer's disease. Plaxgen holds issued and pending patents on Plaque Array technology. For more on Plaxgen, please visit our website at: www.plaxgen.com

###

Company and Investor Contact:

Dr. Shanmugavel Madasamy
Plaxgen
(650) 452-2856

Media Contact:

Deanne Eagle
Planet Communications
(917) 837-5866