



PLAXGEN PLAQUE ARRAY LIPID-MODIFYING DRUGS STUDY PUBLISHED IN JOURNAL OF VISUALIZED EXPERIMENTS

Provides visualization of lipid-modifying drugs' effect on changing cholesterol particle shape, could be key factor in drug efficacy and drug matching

FREMONT, CA, November 13, 2017 - Plaxgen, Inc., developing flow cytometry-based blood diagnostics for plaque-associated diseases, such as atherosclerosis and Alzheimer's, announced that new research exploring the effect of lipid-lowering drugs, including statins, on the morphology of cholesterol particles in human serum samples was published in the peer-reviewed journal, "Journal of Visualized Experiments" (JOVE). The journal also released a video reviewing the study and adding comments from the investigators. In the paper, "Differential Effects of Lipid-lowering Drugs in Modulating Morphology of Cholesterol Particles," researchers observed the effects of several commercially available lipid-lowering drugs on cholesterol particles in blood serum samples of patients with dyslipidemia (abnormal levels of lipids in the blood). Researchers also studied the effect of these drugs on purified very low-density and low-density lipoproteins. Finally, they examined the differences between serum samples from 50 dyslipidemic patients and age-matched normal people. All analysis was performed on Plaxgen's proprietary Plaque Array platform, which utilizes imaging flow cytometry to visualize the morphology of individual plaque particles.

The researchers concluded that lipid-lowering drugs have an affect on the morphology (shape) of individual cholesterol particles, a new measure that may play a role in whether or not these particles move freely in the blood stream or stick to vessel walls. In serum samples from 50 patients with plaque disease and age-matched normal people, researchers found a higher level of linear-shaped cholesterol particles in the patients with unhealthy cholesterol levels (a mean of 18.3%) than in the normal control group (a mean of 11.1%), which had a higher level of globular-shaped particles in general. The researchers also observed considerable variation in the lipid-lowering drugs' ability to reduce the formation of linear-shaped cholesterol particles in the blood serum samples. While cholesterol is currently measured by numerical blood serum levels, cholesterol particle shape (linear vs. globular) may play a factor in atherosclerosis and how lipid-lowering drugs work, the researchers observed. Overall, they concluded that the Plaque Array platform, which utilizes imaging flow cytometry, could improve accuracy in atherosclerosis diagnosis and improve the predictability of patient response to lipid-lowering drugs.

"The ability to visualize individual particles in blood serum afforded by the Plaque Array platform gives us new insight into the possible role of plaque particle morphology in atherosclerosis and could aid in evaluating personalized lipid-lowering drug therapy," said Shanmugavel Madasamy, PhD, lead study author and Plaxgen CEO. "We are

extending this approach to studying the morphological features of other plaques, such as amyloid plaque, and their role in the pathology of Alzheimer's disease."

To view the paper and video, please go to: <https://www.jove.com/video/56596>

About Plaxgen

Privately-held Plaxgen is developing diagnostics in atherosclerosis, 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 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'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 holds issued and pending patents on Plaque Array technology.

For more on Plaxgen, please visit our website at: www.plaxgen.com

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