Biochip Test Predicts Risk for Alzheimer’s Disease

Researchers at the 68th American Association for Clinical Chemistry Annual Scientific Meeting & Clinical Lab Expo unveiled results from a new blood test to help identify which patients are at an elevated risk of Alzheimer’s disease. The findings showed that the biochip test, which allows multiple tests to be run on one blood sample, was as accurate as existing molecular tests that analyze DNA.

This test detects the presence of a protein in the blood produced by a specific variation of the apolipoprotein gene (ApoE4), which is associated with increased risk of developing Alzheimer’s disease.

The apolipoprotein gene is inherited from each parent, and when a patient inherits the ApoE4 variant from one parent they have a three times greater risk of developing Alzheimer’s disease, whereas a patient who inherits ApoE4 from both parents is eight to 12 times more likely to develop the disease.

AZD3293 for Early Alzheimer’s Disease Receives Fast Track Designation from U.S. Food and Drug Administration

Eli Lilly and Company and AstraZeneca announced they have received U.S. Food and Drug Administration Fast Track designation for the development program in Alzheimer’s disease for AZD3293, an oral beta secretase cleaving enzyme (BACE) inhibitor currently in Phase 3 clinical trials. The trial, called DAYBREAK-ALZ, studies the safety and efficacy of AZD3293 in individuals with mild Alzheimer’s dementia and began enrolling participants in the third quarter of 2016.

AZD3293 has been shown to reduce levels of amyloid beta in the cerebrospinal fluid of individuals with Alzheimer’s disease and healthy volunteers. The progression of Alzheimer’s disease is characterized by the accumulation of amyloid plaque in the brain. BACE is an enzyme associated with the development of amyloid beta. Inhibiting BACE is expected to prevent the formation and buildup of amyloid plaque, which in turn may help slow the progression of the disease.

To verify the accuracy of the biochip test, 384 samples were analyzed and results were compared to those from a standard molecular diagnostic test. Researchers found that results from the two tests were in 100% agreement. As biochip tests allow clinicians and researchers to quickly run multiple tests on one sample of blood, this new test is also faster and more affordable than the standard DNA test, producing results in only 3 hours, enabling physicians to predict an individual’s risk of developing Alzheimer’s disease.


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