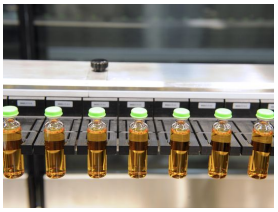
FSU research sheds new light on diabetes treatments

Joseph Marshall, Staff Writer *9:56 p.m. EDT August 26, 2015*



(Photo: AFP/Getty Images)

An FSU study that contains research that could potentially lead to breakthroughs in diabetes treatment is changing the science around diabetes treatment.

The research, done by FSU Associate Professor of Chemistry Brian Miller and post-doctoral researcher Carl Whittington, is centered around the activation of an enzyme called glucokinase.

This enzyme, which can be found in the cells of the liver, pancreas, gastrointestinal tract and brain, acts as a sensor for the sugar glucose. When blood glucose levels are high, glucokinase sends a signal that alerts various parts of the body to regulate it. However, in cases where the glucokinase gene is mutated, the enzyme's efficiency can be greatly inhibited. This can lead individuals to suffer from a variety of metabolic diseases, such as diabetes.

Due to its importance in regulating blood sugar, activation of the glucokinase enzyme is a popular target for pharmaceutical companies to focus on when developing drugs to treat diabetes. In Miller and Whittington's studies, they have discovered that the enzyme can be activated in a way that is usually seen in cases of hyperinsulinemia, a disease that results in the hyperactive production of insulin regardless of glucose levels.

"It is exciting to see our researchers at FSU expanding our understanding of diabetes," Martin Wood, adviser of the FSU chapter of the Students with Diabetes organization said.

"Research of this caliber, student organizations like Students With Diabetes and academic publications like The PLAID (People Living with And Inspired by Diabetes) Journal here at FSU continue to drive progress toward better living with all types of diabetes," Wood said.

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