

DECADE-OLD BIOREPOSITORY KEY TO NEW RESEARCH

Cardiovascular incidents are the leading cause of death in people with type 2 diabetes. But IBRI Research Fellow Mike Pugia, PhD, wants to change that.

Using samples from the Fairbanks Institute Tissue Core, Pugia is testing the accuracy of new diagnostic assays designed to detect acute inflammation, auto-immunity and insulin resistance in diabetics and determine their impact on disease progression. These changes in the immune system lead to tissue damage, which serve as an early indicator of cardiovascular disease.

Because the Fairbanks samples are linked to individuals' electronic medical records, Pugia is able to test the blood samples given more than 10 years ago and then review the current records to determine how accurate his test is in predicting which patients would develop cardiovascular disease over time.

Pugia hopes to provide a simple blood test that can accurately predict a person's likelihood of developing cardiovascular disease so doctors can offer early intervention and improve long-term outcomes for those patients. His research is also leading to an antibody that might be used to prevent cardiovascular incidents from happening in these patients.

About the Fairbanks Tissue Core

Originally funded with a \$10 million gift from the Indianapolis-based Richard M. Fairbanks Foundation in 2006, the Fairbanks Institute created a next generation biorepository as a resource for research on chronic diseases of aging focused on diabetes and cardiovascular disease. The Fairbanks Institute, in collaboration with the Regenstrief Institute and the Indiana University School of Medicine, enrolled participants in what was, at the time, a unique long-term health study that linked biological samples over multiple time points with participants' real-time medical histories, allowing tracking of the progression and complications of the disease over time.

The IBRI now houses a replica of that biorepository of roughly 17,000 samples with the ability to connect those samples to longitudinal medical data for purposes of research.



DISCOVERY WITH PURPOSE

**INDIANA
BIOSCIENCES
RESEARCH
INSTITUTE**

1345 W. 16th St. Suite 300
Indianapolis, IN 46202
317-983-3350
www.indianabiosciences.org