

Dallas biobank close to 10,000 samples

Hitting that milestone could attract dollars for genetic research at the Cooper Institute/UT Southwestern venture

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A research partnership between the Cooper Institute and the University of Texas Southwestern Medical Center seeking insight into the genetic makeup of healthy people has crossed a critical milestone, which could open the door to grant funding for further research.

The Dallas-based Cooper Institute and UT Southwestern are collecting blood and DNA samples from [Cooper Clinic](#) patients and volunteers, then matching them against health information in a database the clinic has kept for 40 years. Researchers look for associations between gene patterns and biological characteristics.

The project, called Cooper Institute-UT Southwestern BioBank, started in 2008. It has collected about 30,000 plasma samples from more than 9,000 people, said **Ben Willis**, staff epidemiologist at the Cooper Institute and operational manager for the biobank.

A 10,000-person sample size will help the biobank attract grant funding for studies of how genes and genetic sequence variations contribute to disease risk, Willis said. The BioBank is the largest repository of unique DNA samples in Texas, and one of the largest in the nation, he said.

“When you do this analysis, it’s statistical, so the larger your sample size, the more sensitive your sample can be to find relationships,” Willis said. “The larger, the better.”

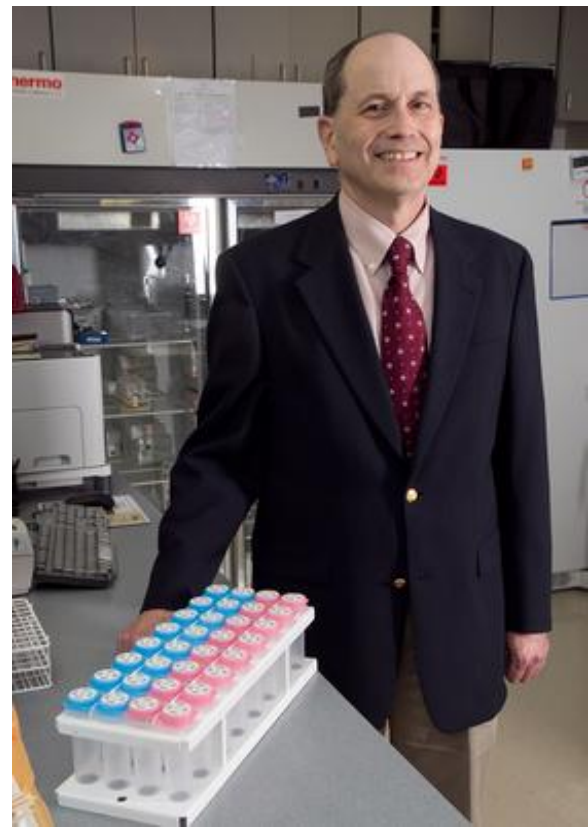


Photo by David Pellerin

Scientific breakthrough: The BioBank is the largest repository of unique DNA samples in Texas, says Ben Willis, operational manager, at the Cooper Institute.

[The Cooper Institute](#)'s goals include having 30,000 people represented in the biobank in the next two years, and increasing the racial and ethnic makeup of the repository, which is currently comprised of about 97 percent non-Hispanic Caucasians, Willis said.

Making discoveries

Discoveries made by the biobank could eventually lead to new medical treatments, said Dr. **Scott Grundy**, director of the UT Southwestern Center for Human Nutrition, which is working with the Cooper Institute to develop the biobank and pursue other research activities.

“This joint research should result in identification of the genetic basis of many chronic diseases,” Grundy wrote in an email. “This information should ultimately be generalizable to individuals at risk for these diseases, and it should be useful for discovery of new drugs for prevention and treatment of these diseases.”

The first genetic discovery from the biobank identified a gene that contributes to the control of blood sugar levels.

One project in the grant-application pipeline will look for genetic explanations of why some people can stay physically fit with less exercise than other individuals require, Willis said. Another will examine the effects of physical fitness versus genetics on the occurrence of diabetes, he said.

“We know that diet, exercise and fitness can impact the instance of diabetes,” Willis said. “But how does that differ among individuals of different genetic makeup? We’re trying to achieve a better understanding of how these things work together.”

The biobank’s goal is to improve health and prevent the development of chronic disease, Willis said. “We’d like to hone in on what type of prevention can yield the most bang for the buck.”

It’s too early to consider the biobank’s potential commercial applications, although pharmaceutical or other medical treatments could eventually result from the improved understanding of the genetic components of diseases the biobank targets, Willis said. The BioBank, a nonprofit venture, is not seeking investment partners, he said. However, the project could use private donors to cover the \$2 million to \$3 million annual operations costs, he said.

The expanded scope of the biobank could result in employment opportunities eventually, but it’s too soon to know how many jobs might be involved, said Dr. **Laura DeFina**, medical director of the Cooper Institute. The institute is the nonprofit research and education arm of the for-profit Cooper Clinic.

“As the questions unfold, that opens room for more researchers and more research staff,” DeFina said.