

# SOUTHWESTERN NEWS

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## NIH FUNDS CENTER TO STUDY HEART DISEASE IN AFRICAN-AMERICANS

DALLAS — January 5, 1996 — Heart disease continues to be the No. 1 killer of Americans, and it's disproportionately lethal for African-Americans.

Researchers at UT Southwestern Medical Center at Dallas have won a \$2.9 million grant from the National Institutes of Health to form a Specialized Center of Research (SCOR) on Ischemic Heart Disease in Blacks.

"Despite having the same amount or even less blockage in coronary arteries, the incidence of, and deaths from, coronary heart disease seems to be much worse in African-Americans," said Dr. Ronald Victor, associate professor of internal medicine and the center's acting director. "We will investigate the effect of obesity-related diabetes as a cause of this excessive morbidity and mortality."

Obesity and diabetes are among risk factors for developing heart disease. Obesity can lead to diabetes, which then compounds the problem of heart disease.

"There is a clustering of risk factors that lead to the development of heart disease," Victor said. "When you have more than one risk factor, the risks don't add — they multiply, maybe tenfold."

With the molecular research strengths of UT Southwestern's diabetes and cardiology faculty, the university was one of only two institutions nationwide to receive funding for the five-year, multidisciplinary project, which will focus on the problem from "molecules to men and women," Victor said.

Another SCOR investigator, Dr. Christopher Newgard, professor of biochemistry and internal medicine, said, "Diabetes and heart disease are both major problems. Bringing the specialties of cardiology and diabetes together offers us a unique pairing."

The center will unite UT Southwestern researchers from the Frank M. Ryburn Jr. Cardiac Center, the Gifford Laboratories for Diabetes Research, the Center for Human Nutrition and the Mary Nell and Ralph B. Rogers Magnetic Resonance Center. It will consist of four research units and three core units.

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Victor will lead the only clinical portion of the study, examining whether obesity causes overactivity of the nervous system, leading to hypertension.

As SCOR director and principal investigator, Dr. R. Sanders Williams, chief of cardiology and director of the Ryburn Center, will study how the gene that makes heat-shock proteins can provide protection from ischemic injury in nondiabetic and diabetic mice. Williams, holder of the James T. Willerson, M.D., Distinguished Chair in Cardiovascular Diseases, is currently on sabbatical conducting research at Cold Spring Harbor Laboratory in New York.

SCOR investigator Dr. Ivor Benjamin, assistant professor of internal medicine, will research evidence that fatty acids trigger a heat-shock response — an effective countermeasure for cellular survival.

"Ultimately, we wish to determine whether fatty-acid toxicity can alter heat-shock gene expression and the function of cardiac cells in transgenic diabetic mice," he said. "This work has the potential to address a major clinical problem called diabetic cardiomyopathy in humans."

Newgard, holder of the Gifford O. Touchstone Jr. and Randolph G. Touchstone Distinguished Chair in Diabetes Research, will use gene therapy in animal models to control glucose production.

"There is good evidence that hyperlipidemia — an imbalance in fat metabolism — is a risk factor in the development of heart disease," Newgard explained. "We hope to attack it by bringing the elevated glucose and lipids characteristic of diabetes under control."

The core units within SCOR will be directed by Williams; Dr. Stephen Johnston, professor of internal medicine and biochemistry and holder of the Dr. Eugene Tragus Chair in Molecular Cardiology; and Dr. James Richardson, associate professor of pathology.

"It's really exciting," said Victor. "This really has the potential for making a significant impact on heart disease in African-Americans."

UT Southwestern is also the site of two other SCORS — one for training in physiology and one for rheumatoid arthritis.

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