



DR. SARAH WILLIAMS-BLANGERO

H-E-B Distinguished Chair in Diabetes and Genomics | Director, South Texas Diabetes and Obesity Institute

“The support provided by the H-E-B Distinguished Chair in Diabetes and Genomics has facilitated the development of an innovative diabetes research program that is leveraging a wealth of data and biological sample resources to make new discoveries that ultimately will lead to improved treatment of diabetes .”

DR. SARAH WILLIAMS-BLANGERO

Taking a Team Approach to Combatting Disease in the RGV

Dr. Sarah Williams-Blangero takes a team approach to combatting disease in the Rio Grande Valley (RGV). When she moved here in 2014 to assume the role of founding director of the South Texas Diabetes and Obesity Institute (STDOI), she didn't come alone. She brought with her an esteemed team of 21 researchers and staff – which has grown to over 50 members in the past five years – and she provides the team with her full support and praise. In fact, she provides a weekly update outlining her team's progress and multitude of successes. As the director of STDOI, Dr. Williams-Blangero has endeavored to create a state-of-the-art, collaborative research center to examine and improve the most devastating health issues among the local population – namely, diabetes, obesity, and cardiovascular disease.

Dr. Williams-Blangero received bachelor's, master's, and doctoral degrees in anthropology from Case Western Reserve University in Cleveland, Ohio. Much of her professional career was spent at the Texas Biomedical Research Institute in San Antonio, Texas, where she was Chair of the Department of Genetics prior to joining STDOI and University of Texas Rio Grande Valley (UTRGV) School of Medicine.

Dr. Williams-Blangero's appointment as director allowed her to bring her entire research team from San Antonio to the RGV—including over \$12 million in grant funding, which has since grown to over \$38 million. Given the majority of the team's research centered on diseases among Mexican Americans, the RGV proved to be an ideal location to expand their work.

"The opportunity to be a part of a brand new university, to be a faculty member in a brand new medical school, to lead a new institute, and to conduct research that would be directly relevant to the local population seemed like a once in a lifetime chance to grow scientific research in a way that would rapidly translate to improved health in the region," said Williams-Blangero.



Dr. Sarah Williams-Blangero (center back) pictured with members of the robust genetic research team at the South Texas Diabetes and Obesity Institute and the UTRGV School of Medicine.



The STDIO is the biomedical research arm of the University of Texas Rio Grande Valley School of Medicine. Since inception, the team at STDIO has produced about 50 contributions to the scientific literature each year. In doing so, the institute provides a variety of research opportunities to medical and graduate students, and participants in the studies have improved access to healthcare services.



In recognition of the extensive and locally relevant research she conducts, Dr. Williams-Blangero was named the H-E-B Distinguished Chair in Diabetes and Genomics in 2017. This three-year, \$1 million endowed position promotes cutting-edge research on metabolic disorders that afflict the local community.

One of Dr. Williams-Blangero's principal research projects is the Rio Grande Valley Family Study, which is funded by the Knapp Community Care Foundation. Initiated in 2018, the study will recruit 1,000 members of large Mexican American families in the mid-Valley to examine determinants of the risk for diabetes, obesity, cardiovascular disease, and related disorders.

The STDIO also fosters highly collaborative research projects outside of the United States. For instance, they have a project in Brazil that for over 25 years has focused on large extended families in the rural central part of the country that are at a high risk for contracting Chagas disease, a parasitic infection that can lead to chronic heart disease.



"STDIO scientists have found that both risk for infection with the parasite (*Trypanosomca cruzi*) that causes Chagas disease and the progression of cardiac disease following infection are influenced by genetic factors," said Dr. Williams-Blangero.

Over the past two decades, while studying the families, researchers noted a dramatic increase in the rates of obesity and diabetes. So, a team of scientists led by Dr. Williams-Blangero is now assessing the genetic determinants of the risk for diabetes and obesity among them. The H-E-B Distinguished Chair has supported several field trips to Brazil in order to collect samples and data for the study, which the team is currently preparing for publication.

“The support provided by the H-E-B Distinguished Chair in Diabetes and Genomics has facilitated the development of an innovative diabetes research program that is leveraging a wealth of data and biological sample resources to make new discoveries that ultimately will lead to improved treatment of diabetes,” stated Dr. Williams-Blangero. By improving the treatment of diabetes, the discoveries made by the STD01 team has the potential have a profound effect on the RGV population, which has a staggering 26% prevalence rate of diabetes.

Though the research conducted by Dr. Sarah Williams-Blangero and the team at the South Texas Diabetes and Obesity Institute is as varied as it is vast, the practical applications of their findings are indisputable. The cutting-edge research she conducts is targeted at reducing health disparities within in the Rio Grande Valley. By facilitating research locally, our community is given improved and increased access to health education and treatment. Researchers can identify barriers in public health services that have prevented effective care in the past. And, by studying families, researchers are able to look at the genetic and behavioral components of the disease and its response to treatment, which will lead to improved interventions. Dr. Williams-Blangero is at the forefront of this work, providing the leadership her research team needs to continue making advances in the provision of health care for the community she now calls home.



Dr. Sarah Williams-Blangero (center front) is named the H-E-B Distinguished Chair in Diabetes and Genomics at UTRGV.

Back row, left to right: Dr. Havidan Rodriguez, founding provost and former UTRGV Vice President for Academic Affairs, Winell Herron, H-E-B Group Vice President of Public Affairs, Diversity, and Environmental Affairs, Linda Tovar, H-E-B Senior Manager of Public Affairs, and Dr. Kelly Scrivner, UTRGV Executive Vice President for Institutional Advancement.