

Study of Genetic Causes for Mental Illness

Largest RO1 Grant Funded this year by the National Institute of Mental Health

New Brunswick, NJ -- The “Paisa” population, native to northwest Colombia in the middle of the “coffee region” of the country, has far greater rates of suicide than average, leading researchers to believe they have higher rates of mental illness. A consortium of investigators that includes Javier I. Escobar, MD, who grew up in this region of Columbia and will serve as a key link between the U.S. and Columbian researchers, was recently awarded a \$5.5 million research grant to study the relationship between genetics and behavioral disorders in the “Paisa” population. Dr. Escobar, associate dean for global health and professor of psychiatry and family medicine at Rutgers Robert Wood Johnson Medical School, believes a better understanding of the origins of mental illness, which his research seeks to determine, will lead to enhanced and more personalized treatment for patients across the globe.

The “Paisa” population is considered a ‘genetic isolate’ because they have been living in the same area for generations, have a high frequency of marrying within the extended family and show unique genetic characteristics that facilitate studies thanks to large, family systems that can be readily studied. Large genetic studies like this are limited in the United States because we do not have special populations of people who remain in the same location over long periods of time that would help determine which factors are environmental or genetic. Population isolates such as the Amish have been studied in the United States, but this population is quite small and family systems are limited in number, which limits studies of mental disorders. “The theory is that our study will illustrate a strong correlation between specific genes and symptoms of mental disease in the “Paisa” population, with the goal of applying what we learn to other populations,” says Dr. Escobar.

The grant, titled “Colombia-US Cross Disorder Collaboration in Psychiatric Genetics” will study 8,000 members of the “Paisa” population who suffer from severe mental disorders, with also a group of 2,000 “Paisa” individuals without mental illness used for comparison. In this region, those suffering from significant mood disorders or psychosis are treated at a single hospital located in the city of Manizales, which will facilitate the study. Researchers will work with physicians at the hospital to carefully assess symptoms, traits and markers of major severe mental disorders such as bipolar disorder, schizophrenia and severe depression with psychosis. Such symptoms or traits will then be traced to specific genetic markers. Researchers will then be able to determine how these genetic components relate to a patient’s symptoms.

“Mental illness diagnoses are too broad for effective treatment,” says Dr. Escobar. “Our study will help determine symptoms that are more predictable, measurable and may relate to a certain genetic influence. This eventually may lead to a better way to classify patients with mental disorders and adapt treatments there in Colombia, and throughout the world.”

Funded by the National Institute of Mental Health (NIMH), part of the National Institutes of Health (NIH) Dr. Escobar’s five-year grant is part of a consortium that includes Rutgers University; the University of California, Los Angeles; the University of California, San Francisco;

and the Universidad de Antioquia in Colombia. Dr. Escobar is the principal investigator at Rutgers. This grant is the largest RO1 award given by the NIMH this year.

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