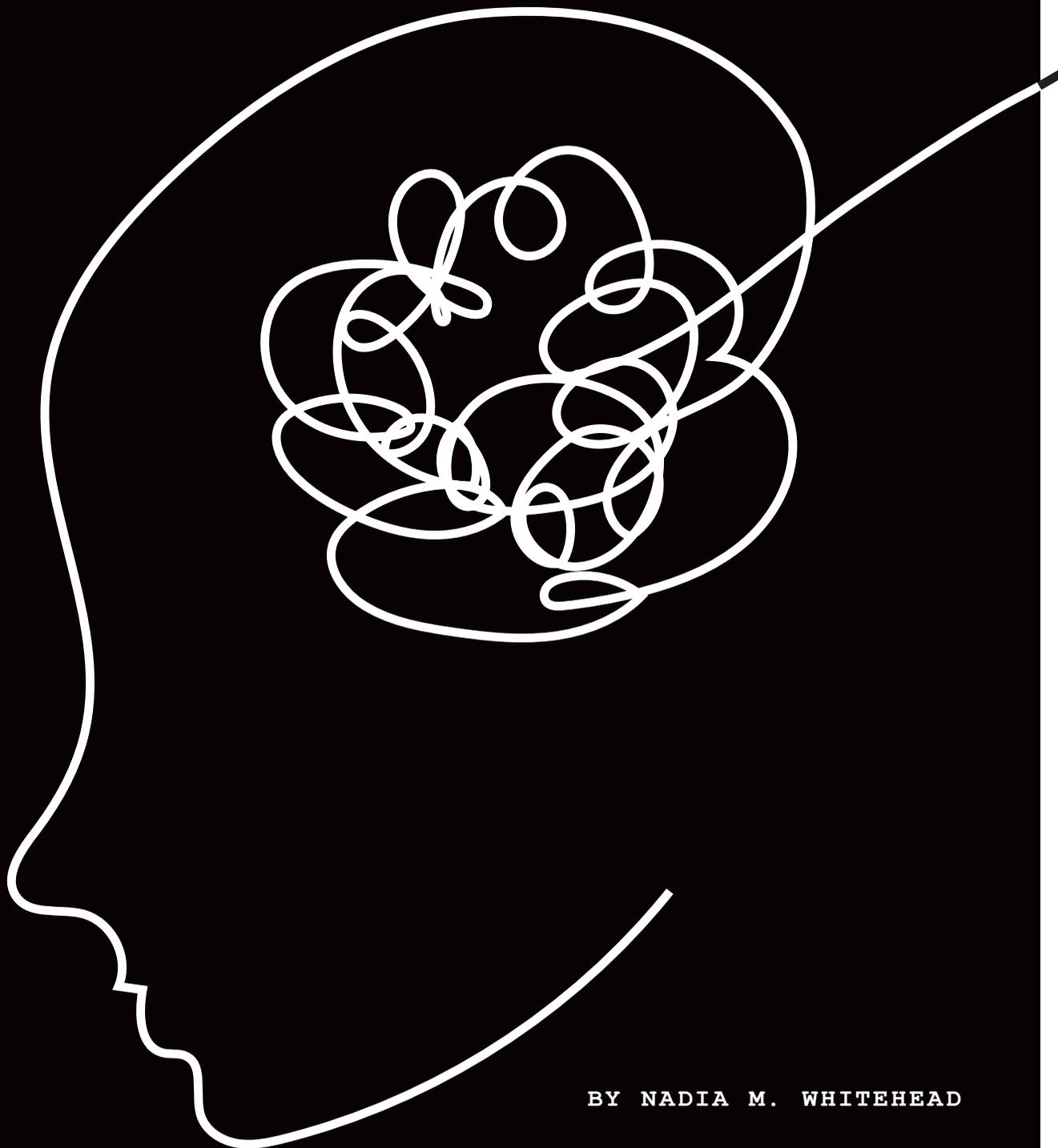


Brain Bank Seeks to *change*



BY NADIA M. WHITEHEAD

# the Face of *Mental Health*



**You've probably heard this stigma before:  
People with mental illness aren't really  
sick; if they just tried harder, they could  
snap out of it.**

But Peter Thompson, MD, who works with the mentally ill on a day-to-day basis, knows better.

"When the brain's chemicals aren't firing at the right place at the right time, you can't snap out of it," Thompson said. "These people aren't exaggerating or 'making believe.'"

Dispelling this negative stereotype about mental illness is what drives Thompson, a psychiatrist, professor and chief of the Mood Disorders Division in the TTUHSC El Paso Paul L. Foster School of Medicine Department of Psychiatry. He treats and studies patients with mental disorders – their behaviors, their characters and their brains.

"Mental illnesses stem in the brain," said Thompson, who specializes in molecular psychiatry. "I'm trying to understand how the brain changes when someone has a mental disorder."

To carry out this research, Thompson founded the Southwest Brain Bank at the University of Texas Health Sciences Center at San Antonio in 2002. But when he accepted a position at TTUHSC El Paso this past fall, leaving the brains behind – all 250 of them – was unthinkable.

When considering the job, he said, jokingly, "It's me and the brain donations; not just one or the other."

As the new home of the Southwest Brain Bank, TTUHSC El Paso can offer faculty and students new opportunities to conduct impactful research, said Vice President of Research Peter Rotwein, MD.

"The Southwest Brain Bank is a potential resource for investigators at TTUHSC El Paso and elsewhere who study neurological and psychiatric disorders," Rotwein said. "It could be particularly valuable for scientists interested in the genetic underpinnings of such complex diseases as autism, depression or schizophrenia."

University researchers now have the chance to collect and study donated brain tissue from individuals who had bipolar disorder, schizophrenia or major depression, or who committed suicide. The bank recently expanded to include studies on alcoholism, and future expansion looks to include brains with Parkinson's and Alzheimer's.



Peter Thompson, MD, studies the brain to understand the biology behind mental illness.

Opportunities to study the brain at such an intimate level are rare. According to Thompson, there are only about 10 brain banks in the U.S. that focus on studying mental illness. Thomas adds that while the research might sound gruesome to some, it's necessary to find new cures for mental disorders and other diseases of the brain.

Reaching out to families just hours after their loved one has passed away is one of the first steps in conducting this crucial research. It may seem inappropriate, but families are typically very responsive and willing to donate their loved one's brain to the bank, said Thompson.

"If you've had a family member who is bipolar, schizophrenic or an alcoholic, you've probably been through a lot, so much so that you'll do anything to help others that are going through the same thing," he said.

Each donated brain receives delicate treatment. After an individual passes, the brain must be preserved quickly, or risk decay. Medical examiners rush to protect the organ in ice before shipping it to the bank. Once on campus, the brain is preserved in formaldehyde or stored in a minus 79-degrees Fahrenheit freezer.

A full medical record detailing who the individual was and what he or she suffered from accompanies the brain. Thompson also conducts in-depth interviews with family members of the deceased to identify any psychiatric disorders that may have been left undiagnosed, or that were diagnosed incorrectly.

Once the brain is properly preserved and the medical records are finalized, researchers can access it for various studies. Thompson's own analyses of the brain have been insightful.

One of his studies revealed that there are abnormalities in the schizophrenic brain. His research was one of the first to identify that the protein SNAP-25

is reduced in the frontal lobe of schizophrenia patients compared to healthy brains. Scientists around the world are still unsure about the significance of SNAP-25, but some, including Thompson, suspect its reduction in the brain may impede how well neurons talk to each other, subsequently affecting an individual's cognitive functioning abilities.

Mental illness is very complex, and as a result, most psychiatric studies do not lead to an immediate cure. However, Thompson says that each step in research gets us closer to understanding the biology of schizophrenia, bipolar disorder and other destructive mental disorders. And centers such as the Southwest Brain Bank help shed light on the fact that mental illness is not a character flaw, but a disease of the brain. 

If you're interested in learning more about brain donation, contact Peter Thompson, MD, at [pm.thompson@ttuhsc.edu](mailto:pm.thompson@ttuhsc.edu).