INTRODUCING THE CENTER

The Depression and Anxiety Center for Discovery and Treatment (DAC) evolved from the Mood and Anxiety Disorders Program at Mount Sinai, founded by Dr. Dennis Charney in 2006. The Program quickly became one of the major research programs in the Department, with continuous funding from the National Institutes of Health over the past decade.

As part of the Department of Psychiatry at the Icahn School of Medicine at Mount Sinai, DAC is one of the leading centers for the study of mood and anxiety disorders, including depression, bipolar disorder, generalized anxiety disorder, panic disorder, and post-traumatic stress disorder (PTSD). We work to understand the causes of these illnesses and create treatments to improve the lives of patients and their families.

Our ongoing research aims to develop cutting-edge antidepressants, psychotherapy strategies, and device-based therapies (e.g., transcranial magnetic stimulation). We also conduct experimental work, both within and independent of clinical treatment studies, aimed at identifying the biological (e.g., genetic, epigenetic, immunological), neurobiological (e.g., functional and structural brain), and psychological factors that contribute to the onset, progression, and course of mood and anxiety disorders. Given the interdisciplinary nature of our research, we work closely with our colleagues in The Friedman Brain Institute, the Translational and Molecular Imaging Institute, the Immunology Institute, and many departments and divisions across the School of Medicine and within the Mount Sinai Health System.
RECENT AWARDS

Charles A. Dana Foundation Grant

Building on recent preclinical work conducted by collaborators in the Russo Lab, this grant will fund a 3-year translational study using advanced neuroimaging techniques on a 7T scanner to characterize the relationship between peripheral immune profiles, neural circuits, and integrity of the stress-sensitive BBB across Major Depressive Disorder (MDD) patients with varying severity of anhedonia, and healthy non-depressed volunteers.

National Institute of Health R01 Grant

This R01 will be the first study to localize and characterize the locus coeruleus, a very small brainstem nucleus, in humans with a variety of anxiety disorders. The locus coeruleus has long been implicated in fear circuitry from both pre-clinical and post-mortem models, and is the primary source of norepinephrine in the central nervous system, although it remains largely unstudied due to its extremely small size. With advances in MRI technology and a unique MRI sequence developed by Mount Sinai researchers, we are hoping to better understand the locus coeruleus’ role in stress circuitry.

Nash Family Research Scholar Award

With this award, we intend to conduct the first non-invasive protocol for direct and individualized VTA activity self-regulation in humans with MDD using brain-machine interface technology with ultra-high field 7-Tesla MRI. As the ventral tegmental area (VTA) is a major source of dopamine in the brain and its activity mediates reward-learning, motivation, volition and affective tone, we expect that successful VTA self-regulation will lead to improved symptoms in MDD.

RECENT PUBLICATIONS


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