

Clinical and Translational Research (T2) Track for PhD+ & Physician-Scientist Residents

In a fast-changing medical landscape, with increasing focus on value-based and personalized medicine, the Icahn School of Medicine at Mount Sinai (ISMMS) offers unique opportunities for applicants interested in pursuing a career in clinical or translational science. In addition to the outstanding basic research that takes place in our Departments of Psychiatry and Neuroscience, ISMMS has a wealth of clinical and translational research programs and mentors.

For those applicants to our PhD+ Residency Program who are primarily interested in pursuing clinical research, we recommend Mount Sinai's

PhD program in Clinical Research

offering tracks in

- Clinical Trials
- Outcomes Implementation
- Bench to Bedside
- Molecular Epidemiology

To learn more about this specialized program, please see <http://icahn.mssm.edu/education/phd/clinical-research/curriculum>

To search the clinical trials currently ongoing at ISMMS, please see <https://icahn.mssm.edu/research-portal/clinical-trials>

The **Centers of Excellence** at ISMMS provide personalized medical care through partnerships between scientists and expert clinicians. Our Centers of Excellence integrate clinical research and services and provide unique opportunities for physician scientists interested in translation, implementation, and dissemination of research findings to the community.

Center of Excellence for Addictive Disorders

In this center, there is a strong interaction between our preclinical and translational scientists, and clinical scientists help translate findings in animal models and in humans into clinical applications. The Mount Sinai Health System works with a committed team of doctors and health care providers to promote the discovery of such new diagnostic and treatment approaches. The center includes state-of-the-art basic and translational studies which are providing novel neuropathophysiological insights to enhance the development of new treatments to prevent and treat addiction disorders.

Scientists involved in **genetics and epigenetics**: Alison Goate, Lakshmi A. Devi, Yasmin L. Hurd, Paul Kenny, Eric J. Nestler, Scott J. Russo, Anne Schaefer, Venetia Zachariou

Scientists involved in **neural circuitry**: Rita Goldstein, Ming-Hu Han, Yasmin L. Hurd, Iliyan Ivanov, Nelly Alia-Klein, Eric J. Nestler, Scott J. Russo, Paul Slesinger

Scientists involved in **novel therapeutics**: Yasmin L. Hurd, Iliyan Ivanov, Don Des Jarlais, Charles Perkel, Richard N. Rosenthal

Center of Excellence for Alzheimer's Disease

The Alzheimer's Disease Research Center (ADRC) is a comprehensive research facility and clinical program dedicated to the study and treatment of normal aging and Alzheimer's disease. With research into the causes of dementia, diagnostic services, and caregiver programs, the ADRC seeks to improve diagnosis, delay disease progression, and enhance the well-being of those affected by Alzheimer's disease. The team of experts in geriatrics, geriatric psychiatry and psychology, neurology, pathology, and radiology diagnoses and provides crucial services for those with memory disorders. Research goals are not only focus on Alzheimer's disease, but also to understand the process of normal aging.

Scientists involved: Patricia A Bloom, Christoph Buettner, Karen Dahlman, Dara L Dickstein, Gregory A Elder, Samuel E Gandy, Anastasios Georgakopoulos, Alison M Goate, Vahram Haroutunian, Patrick R Hof, Deborah B Marin, Jane Martin, Judith A Neugroschl, Giulio M Pasinetti, Dushyant P Purohit, Nikolaos K Robakis, Mary Sano, Corbett A Schimming, Michal Schnaider-Beerli, Jeremy M Silverman, Cheuk Y Tang

Center of Excellence for ADHD and Related Disorders

This center is dedicated to transforming world-class scientific research into the finest quality care for children, adolescents, and adults with ADHD. Strong partnerships between scientists and

expert clinicians bring together science and service in the search for personalized medical care. Through genetic testing, brain imaging, and medication trials, we are expanding knowledge about ADHD, its causes and treatments. Active studies include psychiatric evaluation and testing, medication treatments, brain imaging and genetic testing.

Scientists involved: Jeffrey Newcorn, Ami Norris-Brilliant, Anne-Claude Bedard, Anil Chacko, Jeffrey Halperin, Iliyan Ivanov, Xiaobo Li, Juan Pedraza, Maria Tsepilovan Edman, Kurt Schulz

Seaver Autism Center for Research and Treatment

The Seaver Autism Center for Research and Treatment offers comprehensive assessment and care for individuals and families affected by autism spectrum disorder and related conditions. A multidisciplinary team of expert clinicians and scientists apply genetics, molecular biology, model systems, neuroimaging, and experimental therapeutics to better understand the causes of autism spectrum disorder, to develop novel treatments, and to provide optimal care for our patients. Families have the opportunity to participate in a variety of research studies including behavioral and neuroimaging studies as well as clinical trials.

Scientists involved: Joseph Buxbaum, Alexander Kolevzon, Cristina Farrell, Ozlem B. Gunal, Reymundo Lozano, Dalila C. Pinto, Avraham Reichenberg, Sven Sandin, Eva Velthorst, A. Ting Wang

Center of Excellence for Eating and Weight Disorders

Unlike many clinical programs for feeding and eating disorders, the Eating and Weight Disorders Program includes both a research component as well as a clinical program. The research program involves the study of all types of eating disorder pathology and weight among a diverse group of individuals from the NY Metro area. These research studies are vital to the operation of the program, as they provide treatment to individuals who might not be able to afford treatment. Additionally, results from these studies help clinicians to employ the most effective courses of therapy for their patients.

Scientists involved: Tom Hildebrandt, Nadia Micali, Robyn Sysko, Rebecca Greif, Stephanie Jacobs

Center of Excellence for Mood and Anxiety Disorders

The Mood and Anxiety Disorders Program (MAP) 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. The center seeks to understand the causes of these illnesses and create treatments to improve the lives of patients and their families. Ongoing research aims to develop cutting-edge antidepressants, psychotherapy strategies, and device-based therapies (e.g., transcranial magnetic stimulation). Experimental work aims to identify 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.

Scientists involved: James Murrough, Adriana Feder, Brian Iacoviello, Dan V. Iosifescu

Center of Excellence for Pediatric Mood and Anxiety Disorders

The Pediatric Mood and Anxiety Disorders Program is committed to advancing the understanding, evaluation, and treatment of young patients struggling with a major depressive disorder, bipolar disorder, post-traumatic stress disorder, panic disorder or generalized anxiety disorder. The Program offers children and adolescents comprehensive evaluations and evidence-based treatments, as well as opportunities to benefit from emerging therapies through participation in clinical trials. The team provides integrated care including neuropsychiatric testing, pharmacotherapy, and psychosocial interventions. Research activities include functional magnetic resonance imaging, MR spectroscopy, and immunological and genetic assays to explore the neurological and immunological mechanisms contributing to the development and maintenance of pediatric mood disorders.

Scientists involved: Vilma Gabbay, Carmen Alonso, Barbara Coffey

Center of Excellence for Psychosis

The Psychosis Research Integrating Science and Medicine (PRISM) program is a cutting-edge research program with a multimodal focus on investigating and treating patients with severe mental illness. PRISM integrates clinical expertise with research findings from genetics, neuroimaging and neurocognition, to offer patients the opportunity to participate in state-of-the-art clinical trials.

Primary components of the program focus on cognitive strength, wellness and prevention, as well as the incorporation of genetics into the evaluation and treatment of patients.

Scientists involved: Katherine Burdick, Pamela Sklar, Mercedes Perez-Rodriguez

Center of Excellence for Tics, OCD, and Related Disorders

The Center of Excellence for Tics, OCD, and Related Disorders and its subprograms provide opportunities for patients to participate in research and clinical trials, which include studies in the neurobiology, genetics, and treatment of tics, OCD, and related conditions in order to discover the causes of these disorders and develop more effective therapies.

By weaving these research insights together with our existing treatment offerings, the Center of Excellence for Tics, OCD, and Related Disorders seeks to help our patients achieve their highest level of functioning, and to advance the science of understanding and managing these challenging disorders.

Scientists involved: Barbara Coffey, Dorothy Grice, Vilma Gabbay, Ariz Rojas, Avraham Reichenberg, Emily Stern

Other Resources for Clinical and Translational Research

ISMMS offers unique resources such as:

- Conduits - the Institutes for Translational Science, including the Biostatistics, Epidemiology, and Research Design (BERD) Program, providing support for researchers in statistical methodology
- Mount Sinai Innovation Partners, which facilitates the real-world application and commercialization of Mount Sinai Health System discoveries and the development of research partnerships
- The Office for Research Services, including research subject recruitment tools integrated with the electronic medical record
- The Sinai AppLab, which brings together a multidisciplinary team including health care, IT, project management, data science and computer science professionals to develop Apps for clinical research and services