

The Friedman Brain Institute

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FALL 2015

Compassionate Care, Pioneering Research

The formation of the Mount Sinai Health System in 2013, creating one of the largest health systems in New York State and the nation, has led to the dramatic expansion of clinical care and research programs in neuroscience under the auspices of The Friedman Brain Institute (FBI).

This fall, we welcome Barbara G. Vickrey, MD, MPH, a world authority on health services research in neurology, as Chair of the Department of Neurology for the Mount Sinai Health System. Dr. Vickrey, who comes to Mount Sinai after serving 25 years on the faculty of UCLA, will integrate clinical, research, and educational activities in all neurology subspecialties,

and lead a department that is No. 14 in the 2015 – 2016 *U.S. News & World Report* rankings, and in the top 20 nationwide for National Institutes of Health funding.

Additionally, we are building upon our considerable research contributions to the neurobiology of drug addiction by creating a Center for Addictive Disorders, which

will coordinate and expand our efforts. Under the direction of Yasmin Hurd, PhD, we expect to advance our understanding of how drugs of abuse, including alcohol, change the brains of vulnerable individuals to cause a state of addiction, and translate those discoveries to fundamentally new diagnostic tests and treatments.



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ADVANCING QUALITY OF CARE AND OUTCOMES

Barbara G. Vickrey, MD, MPH, Joins Mount Sinai as Neurology Chair



Barbara G. Vickrey, MD, MPH, an internationally renowned neurologist and health services researcher, is joining the Mount Sinai Health System this fall as its

Chair for the Department of Neurology. Under Dr. Vickrey's leadership, Mount Sinai anticipates further growth in clinical, research, and educational programs in neurology within the Icahn School of Medicine at Mount Sinai and across the campuses of the Mount Sinai Health System.

Throughout the years, Dr. Vickrey's translational research has resulted in numerous examples of improved patient outcomes. Her interests include not only better quality of care, but also increased efficiencies through information technology,

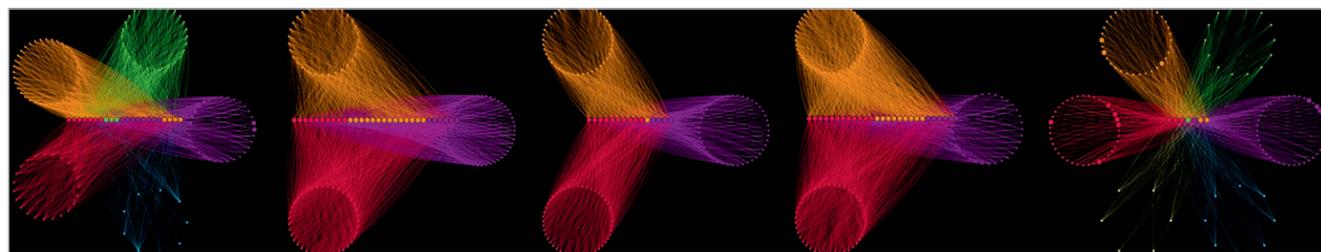
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decision support, and community partnerships. Specifically, Dr. Vickrey's research has demonstrated that both quality of care and outcomes for dementia patients and caregivers can be enhanced through a collaborative approach that engages health care systems, community organizations, patients, and caregivers.

Dr. Vickrey has also created and is testing in randomized controlled trials innovations in health care delivery for control of post-stroke risk factors in underserved populations in Los Angeles County and for improving quality of care for veterans with Parkinson's disease. She leads a cooperative agreement from

continued on page 3 >

PHOTO ESSAY



Fireworks in the Brain

From left to right: How the brain changes its community structure based on task complexity, from the resting state to finger tapping, syllable production, tonal discrimination, and meaningful speech.

Credit: Stefan Fuertinger, PhD, Postdoctoral Fellow in the laboratory of Kristina Simonyan, MD, PhD, Associate Professor of Neurology, and Otolaryngology

Expediting New Evidence-Based Addiction Treatment and Management Approaches

It is estimated that 10 percent of the U.S. population has a substance-use disorder, defined as when drug use impairs social or occupational functioning. Today, drug addiction has become a critical public health problem that imposes a vast financial burden on the U.S. economy—approximately \$500 billion a year—and inflicts enormous emotional hardships on patients, their families, and communities.

In a significant step to confront this medical and societal challenge, Mount Sinai recently established a Center for Addictive Disorders within the Icahn School of Medicine at Mount Sinai, which serves as the research and clinical care hub for the Mount Sinai Health System's seven hospital campuses in New York City.

Yasmin Hurd, PhD, a world leader in drug addiction translational research, has been named inaugural director and will oversee basic, clinical, and translational addiction

research and transform the hospitals' clinical care services.

The Center, which serves one of the most diverse patient populations in the nation, and maintains programs across a wide geography of the New York City area, provides comprehensive and personalized care with advanced psychosocial and psychopharmacological interventions. The programs include inpatient and outpatient detoxification and stabilization, inpatient and outpatient drug rehabilitation, intensive outpatient treatments, opioid treatment programs, addiction psychopharmacology services, and inpatient and outpatient addiction psychiatry services for patients with severe mental disorders concurrent with their substance-use disorders.

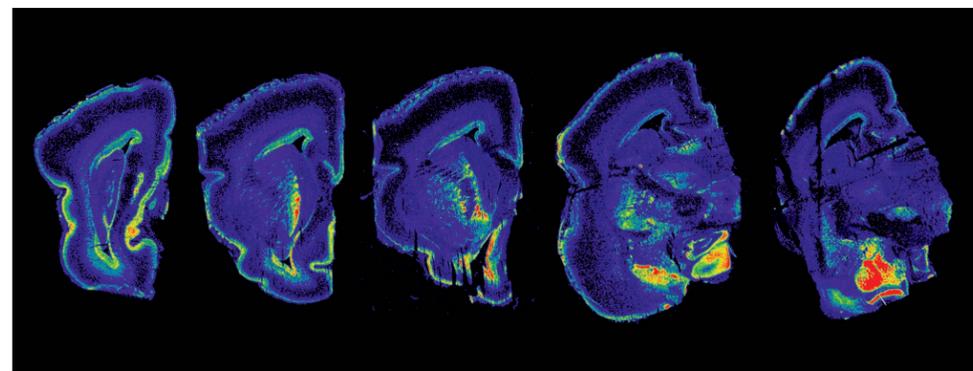
A primary goal is to establish a large integrative clinical research infrastructure—built upon Mount Sinai's considerable strengths in basic and

translational neuroscience addiction research, including genetics, epigenetics, optogenetics, and neuroimaging—to expedite the development of evidence-based addiction treatment and management approaches.

The chronic nature of addiction affects many other medical conditions, such as infectious diseases, cardiovascular disorders, cancer, and metabolic diseases, and the Center additionally plans to collaborate with key clinical areas, including primary care, to significantly maximize the potential of the Mount Sinai Health System to advance the overall clinical care of individuals with substance-use disorders.



Yasmin Hurd, PhD
Director, Center for Addictive Disorders; Professor of Psychiatry, Neuroscience, and Pharmacology and Systems Therapeutics; and Ward-Coleman Chair of Translational Neuroscience



Cannabinoid receptor (CB1) mRNA expression in the human fetal brain.

Active ingredients of marijuana (cannabinoids) bind to the CB1 receptor, which at different stages of human fetal brain development, left, is expressed in regions that will become important for emotion, memory, and goal-directed behavior. Colors represent range of CB1 expression from low (black/dark purple), mid (green to yellow), to high (red) levels.

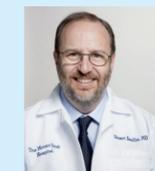
Courtesy of Yasmin Hurd, PhD

New Center for Advanced Research on Diagnostic Assays

The Icahn School of Medicine at Mount Sinai has created the Center for Advanced Research on Diagnostic Assays (CARDA), an effort to considerably advance research into brain biomarkers. Stuart C. Sealfon, MD, a widely funded researcher who oversaw a 50 percent increase in federal grant awards over the last six years as Chair of the Department of Neurology, has been named the Center's director.

Research into brain biomarkers—which have transformative potential for improving diagnostic accuracy and individualized drug treatment, identifying new disease subtypes, and advancing the success of therapeutic drug trials—continues to be challenged by poor reproducibility, with minimal translation to the clinic. Dr. Sealfon envisions that CARDA will create a collaborative research structure across Mount Sinai

that will greatly accelerate high-impact translational research and ultimately facilitate valuable diagnostic intellectual property developments.



Stuart C. Sealfon, MD
Glickenhaus Professor of Neurology, and Director, Center for Advanced Research on Diagnostic Assays

Barbara G. Vickrey, MD, MPH, Joins Mount Sinai as Neurology Chair *(continued from page 1)*

the National Institute of Neurological Disorders and Stroke (NINDS) for a five-year, stroke prevention/intervention research program in health disparities. Her outcomes research complements similar efforts throughout the Mount Sinai Health System and presents exciting opportunities for collaborative research with several other academic departments, including Population Health Science and Policy, and Geriatrics and Palliative Medicine, as well as with the Mount Sinai Institute of Technology and the Institute for Health Care Delivery Science, among others.

For the past 25 years, Dr. Vickrey has served on the faculty of the University of

California, Los Angeles (UCLA) Geffen School of Medicine, where she was a Professor of Neurology and directed the Health Services Research Program in Neurology. She was also Associate Director for Research at the Greater Los Angeles VA Parkinson's Disease Research, Education, and Clinical Center, and an affiliated investigator at the RAND Corporation. She has mentored many neurology investigators in health services research.

In 2011, Dr. Vickrey was elected to the Institute of Medicine of the National Academies, now the National Academy of Medicine, one of the highest honors in academic medicine. Dr. Vickrey earned

her MD degree at Duke University School of Medicine and her MPH at the UCLA Fielding School of Public Health. She completed postgraduate clinical training in medicine and neurology at the University of Washington in Seattle, and then research fellowships in the Robert Wood Johnson Foundation Clinical Scholars Program at UCLA and the RAND/UCLA Center for Health Policy Study.

Dr. Vickrey has served on multiple strategic planning panels and was a member of the National Advisory Council to the NINDS. She serves on the Science Committee of the American Academy of Neurology and is Vice President of the American Neurological Association.

The Friedman Brain Institute Research Scholars Partnership

The Philanthropic Leadership Council of The Friedman Brain Institute has announced the FBI Research Scholars Partnership, a pilot funding award program for innovative and collaborative brain research. Priority will be

given to early and mid-career faculty who seek collaborations in other disciplines, and to senior scientists undertaking projects outside of their usual investigation area. Projects should be designed to generate

preliminary data needed to secure external funding. Recipients will be named "FBI Research Scholars" and receive a one-time grant of up to \$50,000. To learn more, email FBI Scholars@mssm.edu.

APPOINTMENT

Eric J. Nestler, MD, PhD, Named President-Elect of the Society for Neuroscience

Eric J. Nestler, MD, PhD, has been named President-Elect of the Society for Neuroscience (SfN), the world's largest organization of brain and nervous system scientists and physicians, effective at the 2015 annual meeting to be held this fall in Chicago. The nonprofit organization, founded in 1969, now has nearly 40,000 members in more than 90 countries around the world.

"Since Dr. Nestler assumed his current position at Mount Sinai in 2008, he has overseen transformational growth of the neuroscience community under the auspices of The Friedman Brain Institute," says Kenneth L. Davis, MD, President and Chief Executive Officer of the Mount Sinai

Health System. "We are so pleased that the Society for Neuroscience has recognized his leadership excellence. I have no doubt that his vision for and commitment to a better understanding of the nervous system will benefit the SfN, as it has for the neurosciences here at Mount Sinai."

Uniquely, The Friedman Brain Institute (FBI) integrates all neuroscience efforts throughout Mount Sinai, from basic research in animal and cell models in the Icahn School of Medicine at Mount Sinai to the delivery of clinical care across the Mount Sinai Health System. Under Dr. Nestler's leadership, the neuroscience program has seen an unprecedented scope of growth. In the past

seven years, more than 50 basic neuroscience faculty have been recruited to Mount Sinai, with clinical research and treatment programs experiencing similar expansion. The FBI's research and clinical faculty members are national and international leaders, committed to an improved understanding of the nervous system and to real clinical advances in diagnosis and treatment across a broad range of brain and spinal cord disorders. The Fishberg Department of Neuroscience at Mount Sinai is ranked No. 5 in the nation for funding from the National Institutes of Health.

Dr. Nestler will assume the SfN presidency at the 2016 annual meeting.