At 50th Commencement, a Call to Engage in Health Issues

A former chief of the U.S. Food and Drug Administration (FDA), a leader in the study of cardiovascular and liver disease, a football player turned philanthropist, and an educator who is advancing the teaching of science and medicine were honored as the Icahn School of Medicine at Mount Sinai celebrated its 50th Commencement.

The Icahn School of Medicine granted 101 MDs, 34 PhDs, and 22 dual degrees at the ceremony held on Thursday, May 9, at David Geffen Hall, Lincoln Center. Scott Gottlieb, MD, the 23rd commissioner of the FDA and a 1999 graduate of the Icahn School of Medicine, delivered the commencement address to the 3,000 faculty, staff, graduates, family, and friends who filled the hall.

In his welcoming speech, Kenneth L. Davis, MD, President and Chief Executive Officer, Mount Sinai Health System, described the School of Medicine decades ago, when he joined its second class. “Fifty years ago, our political dialogue was consumed by the war in Vietnam. Today, health care is the center of our political debate,” he said. Health care makes up one-fifth of the nation’s economy, and its rising cost is forcing hard decisions on a critical question: “How do we ensure that we provide health care to everyone in this country?” Dr. Davis asked. “It is our job to bring to this debate the nuances and facts that we as physicians, academicians, and researchers see every day. I implore you to make sure the conversations we are having in our hospitals, in our communities, continued on page 2

Mount Sinai Renames Department of Neuroscience

It has been a time of outstanding achievement for the Icahn School of Medicine at Mount Sinai’s Department of Neuroscience—worthy of a celebration. On Wednesday, May 8, Mount Sinai leadership, benefactors, faculty, and staff attended a reception at the Hess Center for Science and Medicine to unveil the Department’s renaming to the Nash Family Department of Neuroscience, an event held to honor the Nash family for their philanthropic generosity and extraordinary commitment to brain research.

“The Nash family has been supporting critical initiatives at Mount Sinai for more than 40 years and began a focused commitment to advance our neuroscience community more than a decade ago,” says continued on page 3
and across the country are honest and factual. Please help others recognize there are no simple solutions.”

Dr. Gottlieb made a similar call to action. He has long been engaged in public policy—as a student and resident at Mount Sinai, he wrote articles on health care that appeared in journals and in newspapers, including The Wall Street Journal. He thanked the school’s leadership for giving him support and freedom in those days, and he challenged the Class of 2019 to take a stand on issues they believe in.

“I am proud of the foundation of service that this institution inspired me with,” Dr. Gottlieb told the graduates. “You all share those same traditions and will go on to do many more great things.” Dr. Gottlieb received an honorary Doctor of Science degree for his commitment to improving the nation’s health and for his work at the FDA, expediting the approval of treatments and drugs, and battling opioid addiction and the use of e-cigarettes by youth. Honorary degrees were also awarded to:

Curtis Martin, a former New York Jets running back and a member of the National Football League Hall of Fame, who received an honorary Doctor of Humane Letters degree for creating the Curtis Martin Job Foundation to support causes such as low-income housing, scholarships for disadvantaged children, aid to people with disabilities, and surgical care in developing nations.

Helen H. Hobbs, MD, Investigator, Howard Hughes Medical Institute, and Professor of Internal Medicine, and Molecular Genetics, University of Texas Southwestern Medical Center, who received an honorary Doctor of Science degree for her influential research into the genetic determinants of cardiovascular disease and fatty liver disease, which has led to a highly effective therapy for reducing blood cholesterol levels.

C. Reynold Verret, PhD, President of Xavier University of Louisiana, who received an honorary Doctor of Science degree for developing innovative programs that are shaping the next generation of science, technology, engineering, and math (STEM) teachers for kindergarten through 12th grade, and mitigating a shortage of STEM educators, especially in underserved communities.

The graduates were congratulated by Richard A. Friedman, Co-Chairman of the Mount Sinai Health System Boards of Trustees, who said he was honored to take part in his first commencement in his new role. “You are beginning your medical careers during a time of transformation in how we leverage technology, investment, and biology to better understand human diseases and find new ways to conquer them,” Mr. Friedman said. “We look to all of you to take what you have learned at Mount Sinai and use it to help improve health care. We are in awe of you for having made the choice to dedicate your lives to this mission.”

The graduates were encouraged to “dare greatly” in their future careers by Dennis S. Charney, MD, Anne and Joel Ehrenkranz Dean, Icahn School of Medicine at Mount Sinai, and President for Academic Affairs, Mount Sinai Health System. He noted that they were already an accomplished group. They have published hundreds of peer-reviewed articles, and contributed to the study of immune deficiency and Alzheimer’s disease, and 38 took an extra “scholarly year” to enhance their training as physician-scientists. Dr. Charney said some graduates have shown great promise as entrepreneurs and have been strong advocates on issues including HIV/AIDS, global health, and racism and bias.

Still, Dr. Charney said, “There is much left to solve in medicine. You have studied all the diseases, memorized all the drugs, but how many of our treatments are truly curative? Very few.” Most surgical procedures are decades old, so innovation is badly needed, he said, and the digital age calls for new ways to prevent, monitor, and treat diseases. He also challenged the graduates to be in the forefront of the movement seeking equal health care for all. “What will it take for you, the Class of 2019, to accomplish these goals?” Dr. Charney asked. “You need to be heroes. You need to be not merely good, but great. And you need to change our world.”
Mount Sinai Renames Department of Neuroscience (continued from page 1)

Eric J. Nestler, MD, PhD, Nash Family Professor of Neuroscience, Director of The Friedman Brain Institute, and Dean for Academic and Scientific Affairs at the Icahn School of Medicine at Mount Sinai. “The research that has been made possible through the family’s generosity is being translated into fundamentally new and improved treatments for some of the world’s most devastating brain disorders. We are forever grateful for their commitment to this important work.”

As a direct result of the Nash family’s support, Mount Sinai’s neuroscience program has seen unprecedented growth. Over the past decade, more than 40 basic neuroscience faculty have been recruited to Mount Sinai. Today, the Neuroscience department is ranked No.1 in the nation among U.S. medical schools in National Institutes of Health (NIH) funding.

“This is testament to the incredible research environment we have created at Mount Sinai with the support of the Nash family,” says Paul J. Kenny, PhD, the Ward-Coleman Professor and Chair of the Department, and Director of Mount Sinai’s Drug Discovery Institute, who has made significant contributions to furthering the understanding of the neurobiological mechanisms of drug addiction and obesity. “With their tremendous support, we have built the depth and breadth of scientific expertise that is required for us to have a real impact in many key areas of brain research. We are translationally focused, so our work is highly relevant to human health and central nervous

Research Uncovers How Serotonin in the Nucleus Can

Serotonin, a powerful chemical that sends signals between nerve cells in the brain, has long been thought to play a key role in processes such as appetite, mood, and sleep. Now, research by neuroscientists at the Icahn School of Medicine at Mount Sinai suggests that the molecule can also enter the nucleus of these cells and help turn genes on. It is a surprising discovery that has the promise to yield fundamental new knowledge about addiction, mood disorders, and neurodegenerative diseases such as Parkinson’s disease.

The findings, which were recently published in the journal Nature, are a divergence from conventional thinking that neurotransmitters have one role—which is to bind to nerve cells and send signals that change these cells’ activity. “We have shown that there is a novel role for neurotransmitters in the brain that is independent of neurotransmission, but critically important to their overall signaling,” says Ian Maze, PhD, Assistant Professor of Neuroscience, and Pharmacological Sciences, and senior author of the multicenter study. “It suggests that our current understanding of these molecules is incomplete and requires further investigation.” Study authors also included postdoctoral fellow Lorna Farrelly, PhD.

The study involved DNA, the blueprint for all cell functions in the body. Each cell contains two strands of DNA that are packaged by histone proteins and arranged in spools known as nucleosomes. The tighter the DNA is wound into nucleosomes, the less likely that genes being encoded will be turned on, or expressed; when it is not
Regulate Gene Expression Within Brain Cells

“While much more study is needed, this is a potentially groundbreaking discovery. Not only could it have implications for managing depression and other mood disorders, it may also open new avenues for treating substance abuse and neurodegenerative diseases.”

—Francis S. Collins, MD, PhD

system disorders. We are also a very close community and we support all of our colleagues, particularly our junior scientists. We foster an environment of research excellence but also one of collaboration and support. As a result, we are second to none when it comes to research funding and scientific impact.”

Groundbreaking work in deep brain stimulation is being conducted in the newly established Nash Family Center for Advanced Circuit Therapeutics, whose founding Director, Helen S. Mayberg, MD, Mount Sinai Professor in Neurotherapeutics, and Professor of Neuroscience, Neurology, Psychiatry, and Neurosurgery, is a pioneer in using brain circuit information to treat neuropsychiatric disorders. She is leading a team to harness the potential of deep brain stimulation—an innovative surgical procedure that has proven successful in treating movement disorders—to address a range of conditions that include depression, addiction, and schizophrenia.

“Additionally, we have researchers who have deep expertise in the mechanisms of gene regulation, and those with demonstrated ability to functionally dissect, manipulate, and understand brain circuitry in the context of complex behaviors,” Dr. Kenny says. “That is where research funding is increasingly directed, and we are on the cutting edge of neurocircuitry research.”

The goal now, Dr. Kenny adds, is to bring together the Department’s key strengths in brain circuitries and mechanisms of gene expression to drive new discoveries related to brain function and its role in disease. “Given the outstanding quality of research in our Department, and the level of NIH funding we have successfully competed for, I believe Mount Sinai is positioned to have a profound impact on human brain health.”

wound as tightly, genes are more likely to be expressed.

Based on previous research that had found large pools of neurotransmitters in the nucleus of neurons and suspecting that this could result in additional, neurotransmission-independent functions for these chemicals, Dr. Maze and his team hypothesized that certain nuclear proteins may be modified by these molecules to affect their functions. They discovered that a protein, tissue Transglutaminase 2, can directly attach serotonin molecules to histone proteins, a process called histone serotonylation. Once the serotonin is attached, stronger expression of genes associated with these modified histones is observed. They also demonstrated that these serotonyl marks on the histone protein help draw other proteins that play a key role in increasing gene expression. “We found that these marks hyper-recruit one particular factor, Transcription factor II D, that enables the genes to turn on,” Dr. Maze says. “That provides some mechanistic insight into how these marks may be influencing gene expression.”

In a blog entry summarizing these findings, Francis S. Collins, MD, PhD, the Director of the National Institutes of Health, wrote, “While much more study is needed, this is a potentially groundbreaking discovery. Not only could it have implications for managing depression and other mood disorders, it may also open new avenues for treating substance abuse and neurodegenerative diseases.”
Mount Sinai Heart Holds Annual Fitness Event

Mount Sinai Heart staff put their heart-healthy advice into action on Saturday, May 4, by taking part in the Sixth Annual 5k Run for Fun & Yoga. About 80 people, including family and friends, ran twice around the Central Park Reservoir, then participated in a 45-minute yoga session on the East Meadow Lawn. The event was led by Annapoorna S. Kini, MD, Director of the Cardiac Catheterization Laboratory at The Mount Sinai Hospital, and the Zena and Michael A. Wiener Professor of Medicine.

“There is compelling evidence that heart health can be improved by mindful activities, like yoga, combined with cardiovascular exercise,” Dr. Kini says. “And I encourage my team to practice what we preach.”

Promoting Laboratory Safety

To promote a culture of safety at the Icahn School of Medicine at Mount Sinai, the School’s Lab Safety Committee and the office of Environmental Health and Safety held an inaugural Lab Safety Fair on Wednesday, April 24, in the Annenberg Building.

Lab Safety Committee members and staff from Environmental Health and Safety, and other Mount Sinai employee-related programs in Biosafety, Radiation Safety, and Fire Safety, were on hand to answer questions from researchers and provide them with literature on maintaining a safe work environment within Mount Sinai’s laboratories.

Fire Safety Supervisor Frank Malloy, far left, explained the importance of knowing how to operate different types of fire extinguishers and where they are located in the laboratory, so they can be used effectively in an emergency.

Prom Dress Drive Is a “Wonderful Thing”

A donation drive led by the Heritage of Latino Alliance (HOLA) employee resource group at Mount Sinai’s Corporate Services Center helped make prom dreams come true for about 50 girls from Esperanza Preparatory Academy in East Harlem. The group collected more than 150 dresses and a large selection of accessories from staff throughout the Mount Sinai Health System and delivered them to the school in April. The event was coordinated by three HOLA members who are supervisors in Mount Sinai’s Central Billing Office, (from left in photo) Karen Rivera, Sherrine Gonzalez, and Katari Lebron. The parent coordinator of the school, Nahelis Polanco, said in a thank-you note that the donations brought smiles to the girls’ faces, adding, “You truly did a wonderful thing.”
The Phillips School of Nursing at Mount Sinai Beth Israel celebrated 87 new graduates at its 115th Commencement on Thursday, May 16. During the ceremony, which was held at Stern Auditorium, three types of degrees were conferred: 41 Associate in Applied Science (AAS); 37 Accelerated Bachelor of Science in Nursing (ABSN); and 9 Bachelor of Science in Nursing for registered nurses (RN-BSN).

Todd F. Ambrosia, DNP, MSN, FNAP, Dean of the Phillips School of Nursing, began the joyous ceremony by welcoming the graduates, guests, faculty, and staff. Fifteen graduates were inducted into the Honor Society for achieving a grade point average of 3.7 or higher. Sara Kohn and Julie Pearson were valedictorians for the ABSN program; Simeon Gayle was valedictorian for the AAS program; and Christina Kim, RN, was valedictorian of the RN-BSN program—an honor she also earned 15 months ago when she received her AAS degree. Two students received the Dr. Eileen Melnick Award for Team Spirit: Carl Javier for the ABSN program and Kelli Morse for the AAS Program. Mr. Javier, whose parents graduated from the Phillips School of Nursing, also received the Annette Stauber Cohn Award for Continuing a Family Tradition of Outstanding Nursing.

"Nursing is a profession where your scientific knowledge, critical thinking, leadership skills, and especially your attitudes and values will be challenged every day," said the commencement speaker, Aliza Ben-Zacharia, DNP, ANP-BC, Assistant Professor of Neurology, Icahn School of Medicine at Mount Sinai, and Associate Director, Center for Nursing Research and Innovation, The Mount Sinai Hospital. "Demonstrate leadership in your own area of practice," she told the graduates. "And always remember your days as students when it is your turn to mentor others."

The graduates gathered in Guggenheim Pavilion.