

Icahn School of Medicine at Mount Sinai

State of the School

January 2022



Dennis S. Charney, MD

Anne and Joel Ehrenkranz Dean
Icahn School of Medicine at Mount Sinai

President for Academic Affairs
Mount Sinai Health System





Icahn Mount Sinai: Emerging Resilient

Taking pride in Mount Sinai's pandemic response

Faculty, students,
and trainees are
battle-tested

We emerged
stronger
than ever

Our sense
of mission
is reinforced

Research and clinical faculty and staff
collaborated to achieve scientific and medical
breakthroughs to benefit patients and society

Recognized for Research Excellence

14th

**In Total
NIH Funding**

Ranked 14th in total NIH funding among all U.S. medical schools

13

**Top Research
Departments**

13 basic and clinical science departments in top 20 NIH funding

99th

Percentile

99th percentile among U.S. private medical schools in research dollars per investigator

No. 17

Among top research-oriented medical schools

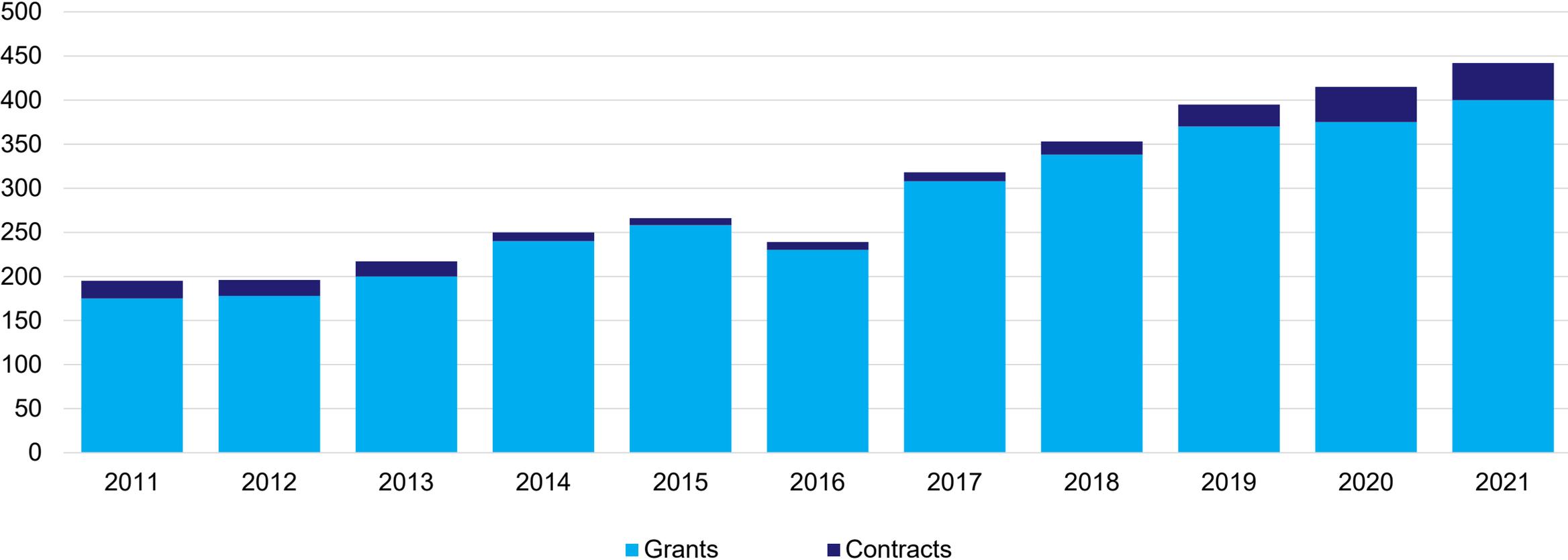
As reported by *U.S. News & World Report*

Selected to Serve as Capacity-Building Center and Center of Excellence as part of the National Cancer Institute's New Serological Sciences Network



Our NIH Funding is Growing: 2011–2021 (in \$M)

Funding Trend



Department Rankings for NIH Funding: Top 20

Basic Sciences

No. 2

Microbiology

\$26.86M

No. 2

Neurosciences

\$37.18M

No. 5

Genetics

\$36.11M

No. 12

Cell Biology

\$12.60M

No. 16

Pharmacology

\$12.4M

Clinical Sciences

No. 5

Emergency
Medicine

\$5.49M

No. 5

Psychiatry

\$43.54M

No. 5

Public
Health

\$21.8M

No. 11

Physical
Medicine

\$1.1M

No. 12

Internal
Medicine

\$121.35M

No. 14

Neurology

\$18.86M

No. 17

Orthopedics

\$2.4M

No. 18

Radiology

\$9.0M

(Source: Blue Ridge 2020 Data)



Recognition for Our Faculty and Students



Eric Nestler
MD, PhD, ACNP

Received recognition for lifetime achievement by the American College of Neuropsychopharmacology



Judy Cho
MD

Honored with the Lori Sherman Prize for her trailblazing genetics research into inflammatory bowel disease



Ian Maze
PhD

Selected as Howard Hughes Medical Institute Investigator



Michael B. Fernando
PhD

Received the prestigious Gilliam Fellowship to support diversity and inclusion in science from the Howard Hughes Medical Institute



Miriam Saffern

Graduate student, one of the five 2021 winners of the Lasker Foundation Essay Contest



Accelerating Translational Research Through New Research and Educational Initiatives

Centers (newly established or re-organized)

- Brain Body Research Center (Scott Russo, PhD)
- Center for Advanced Genomic Technology (Robert Sebra, PhD)
- Center for Computational Psychiatry (Xiaosi Gu, PhD)
- Center for Light and Health Research (Mariana Figueiro, PhD)
- Center for Neural Epigenome Engineering (Ian Maze, PhD)
- Center for Psychedelic Research (Rachel Yehuda, PhD)
- Center for Research on Influenza Pathogenesis and Transmission (Adolfo Garcia-Sastre, PhD)
- Center for Scientific Diversity (Emma Benn, DrPh)
- Mark Lebwohl Center for Neuroinflammation and Sensation (Brian S. Kim, MD)
- Skin Biology and Diseases Resource-based Center (Elena Ezhkova, PhD)

Institutes

- Cardiovascular Research Institute (Filip Swirski, PhD)
- Institute for Transformative Clinical Trials (Annetine Gelijns, PhD, JD; Emilia Bagiella, PhD, Alan J. Moskowitz, MD)

Division of Data Driven and Digital Medicine within the Department of Medicine (Girish Nadkarni, PhD)

Department of Artificial Intelligence and Human Health (Thomas Fuchs, Dr. Sc.)

PhD Concentration in Artificial Intelligence and Emerging Technologies (AIETM)

New Appointments and Promotions

Deans



Judith A. Aberg, MD
System Operations for Clinical Sciences



Angela Diaz, MD, PhD, MPH
Global Health, Social Justice,
and Human Rights



David Feinberg
Marketing and Communications



Thomas Fuchs, Dr. SC.
Artificial Intelligence and Human Health



Patricia Kovatch
Scientific Computing and Data



Shema B. Patel
Faculty Affairs and Administration



Caryn Tiger-Paillex, MSILR
Faculty, Staff, and Trainee Relations

Senior Associate Deans



Bradley Gano, MPS
Graduate School of Biomedical Sciences



Luis Isola, MD
Clinical Affairs



Marc Kaplan
Marketing and Communications



Amy S. Kelley, MD, MSHS
Gender Equity in Science and Medicine



Ann-Gel Palermo, DrPH
Diversity, Equity, and Inclusion



Rainier P. Soriano, MD
Curricular Affairs in Medical Education



Toni A. Stern, MD, MBA
Gender Equity in Science and Medicine

Associate Deans



Clarissa Jones-Winter, MPP, JD
Faculty, Staff & Trainee Relations



Danielle Tyson
Human Resource Operations

New Appointments and Promotions

Chair/Division Chief



Alison M. Goate, Dphil
Chair, Genetics and Genomics Science



Emma Guttman, MD, PhD
Chair, Dermatology



Barbara Sampson, MD, PhD
Vice Chair, Laboratory Strategic Initiatives
and Academic Affairs



Joseph A. Sparano, MD, FACP
Chief, Hematology and Medical Oncology



Joanne L. Stone, MD
Chair, Obstetrics, Gynecology, and
Reproductive Science

Institute Director



Leslee J. Shaw, PhD
The Blavatnik Family Women's Health
Research Institute



Filip Swirski, PhD
Cardiovascular Research Institute

Administration



Kelly Cassano, DO
Chief Executive Officer of the Mount Sinai
Doctors Faculty Practice



Matthew Rosamond, MBA
Chief Finance Officer

Preparing Our Faculty for Success: Office of Faculty Development



Career Advancement

- Strategies/Tactics for NIH K/R Awards
- Workshops to prepare for promotion



Leadership Development

- Resources and training for leaders



Mentorship Enrichment

- Membership for Junior Faculty in National Center for Faculty Development and Diversity
- Creating digital platforms for mentorship



Jonathan Ripp
MD, MPH
Dean



Lauren Peccorale
MD, MPH
Senior Associate
Dean



Emma Benn
DrPH
Associate Dean

Opportunities for Career Growth: Investigator Track Faculty

Icahn Mount Sinai's robust faculty development and mentoring programs make us an attractive institution for early and mid-career stage faculty.

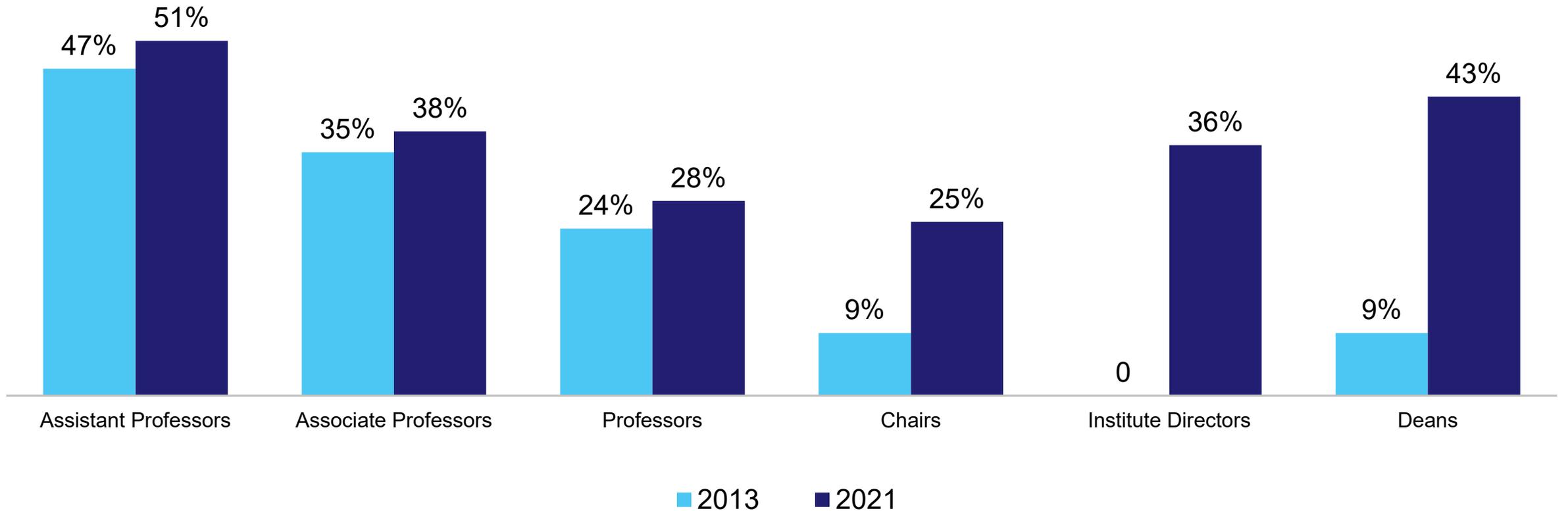
New Investigator Track Faculty in 16 Disciplines

- Population Health Science and Policy
- Pathology, Molecular and Cell-Based Medicine
- Medicine
- Cell, Developmental & Regeneration Biology Medicine
- Dermatology
- Diagnostic, Molecular and Interventional Radiology
- Emergency Medicine
- Environmental Medicine and Public Health
- Genetics and Genomic Sciences
- Microbiology
- Neurology
- Neuroscience
- Oncological Sciences
- Orthopedics
- Psychiatry
- Radiation Oncology



Advancing Women in Leadership Roles at ISMMS

Women at Mount Sinai, 2013–2021



Advancing Women in Leadership Roles at ISMMS

For the Office of Gender Equity in Science and Medicine

- Doris Duke Charitable Foundation COVID-19 Fund to Retain Clinician Scientists
 - Four new Distinguished Scholars Awardees for junior investigators
 - New programs to support, sponsor and retain women as they advance their professional careers
-



Carol R. Horowitz, MD, MPH
Dean



Amy S. Kelley, MD, MSHS
Senior Associate Dean



Toni A. Stern, MD, MBA
Senior Associate Dean



Jenny Lin, MD
Director of Strategic Initiatives



Medical Education: Attracting a Diverse Group of the Best and the Brightest Students

	MD	FlexMed
	Matriculate 2021	Matriculate 2023
Number of Matriculating Students	109	34
Women	50%	59%
Underrepresented in Medicine/Science	28%	26%
Number of Undergraduate Schools	47	21
Median MCAT	517	N/A
Median GPA	3.86	3.97

Successful Early Exposure to Research

2021 Graduates:

80%

published while in
medical training

32%

published in 4 or
more journals

New MedEd Mission Statement

“Our mission is to nurture a visionary community of students, staff, faculty, and leaders who are committed to advancing exceptional clinical care and science that is free of racism and oppression in all its forms.”

Supporting Diversity and Growing External Partnerships: Graduate School of Biomedical Sciences

	PhD	MD-PhD
	Matriculate 2021	Matriculate 2023
Number of Matriculating Students	45	12
Women	67%	58%
Underrepresented in Medicine/Science	29%	42%
Number of Undergraduate Schools	41	9
Median GPA	3.71	3.81

Expanded external partnerships for research and course exchanges

- Cooper Union, Hasso Plattner Institute, and RPI (Life Sciences Entrepreneurship Certificate within RPI's MBA program)

Established or expanded anti-racist and diversity initiatives

- Refocused the Summer Undergraduate Research Program (SURP) on underrepresented students
- Established a Center for Antiracism in Practice, with MedEd
- Launched SINAI4US — Application Assistance and Advisory Program to cultivate diverse and competitive PhD applicant pool

Established new concentration in the PhD Program

- Artificial Intelligence in Emerging Technologies in Medicine

A Leader in Graduate Medical Education

Our graduate medical education program remains the largest in the United States

2,649 residents and clinical fellows in **250** GME programs

Eight new ACGME accredited programs in 2021

- Clinical biochemical genetics
- Child neurology
- Neurotology
- Complex family planning
- Pediatric hematology and oncology
- Surgical critical care (Elmhurst)
- Adult congenital heart disease
- Gastroenterology (MSSN)

11 programs ranked in top 20 in the United States by reputation (Doximity)

- Dermatology (MSH)
- Radiology Nuclear Medicine (MSH)
- Phys Med/Rehab (MSH)
- Obstetrics-Gynecology (MSH)
- Radiology Diagnostic (MSH)
- Otolaryngology (MSH)
- Psychiatry (MSH)
- Emergency Medicine (MSH)
- Internal Medicine (MSH)
- Neurology (MSH)
- Radiology Diagnostic (MSMW)

Three new ACGME fellowship programs under development

- Health Care, Administration, Leadership, and Management (HALM)
- Neurocritical Care
- Pediatric Dermatology



Students and Trainees Respond to the Pandemic

COVID-19 Student Workforce supported our response:

1. **PPE** – tracking, dissemination, and delivery
2. **Pharmacy** – helping manage medical supplies
3. **Morale** – coordinating meal delivery and other supports to students and staff
4. **Telehealth** – relaying test results and triaging the palliative care hotline
5. **Labs** – Supporting serum antibody testing and other research efforts
6. **Operations** – helping assemble and deliver vital equipment and support clinical trials

Medical Corps – Established by NYS Executive Order

- 19 fourth-year Mount Sinai medical students began work at their respective hospitals
- 10 students graduating from other institutions who had matched at Mount Sinai assist our staff



COVID-19 Biobank – Helped establish one of the largest and most important resources for current and future research

- Master's and PhD candidates transitioned to collecting and analyzing samples

Publications:

- Our students published a detailed blueprint in *Academic Medicine* for other students and schools facing their own pandemic or any future crisis

Mental Health: “We Take Care of Our Own”— Office of Well-Being and Resilience (OWBR)

ACGME – Physician Well-Being-Tools and Resources in:

- Identifying and Addressing Burnout
- Promoting Well-Being
- Assessing and Addressing Psychological Distress/Distress/Suicide
- Improving the Learning and Working Environment
- Coping with Tragedy

Center for Stress Resilience and Personal Growth

Leverage cutting-edge science and clinical care to enhance the resilience and emotional well-being of all Mount Sinai faculty, staff, and trainees



Jonathan Ripp, MD, MPH
Dean



Lauren Peccoralo, MD, MPH
Senior Associate Dean



Saadia Akhtar, MD
Associate Dean



Basil Hanss, PhD
Associate Dean



Alicia Hurtado, MD
Associate Dean



Deborah B. Marin, MD
Director, Center for Stress,
Resilience and Personal Growth



Jonathan M. DePierro, PhD
Clinical Director, Center for Stress,
Resilience and Personal Growth

JAMA CHARM initiative

Provided expertise to develop Charter on Physician Well-Being

- Advancing awareness of individual and system-level interventions designed to mitigate trainee as well as provider burnout and promote well-being

National Academy of Medicine

Participates on Academy’s Action Collaborative on Physician Well-Being and Resilience working group

- Raise the visibility of clinician anxiety, burnout, depression, stress, and suicide
- Improve baseline understanding of challenges to clinician well-being
- Advance evidence-based, multidisciplinary solutions to improve patient care by caring for the caregiver

Well-Being Toolkit

Created toolkit to share our approach to addressing the basic, psychosocial, and mental health needs of our workforce.

Making Icahn Mount Sinai a More Equitable and Anti-Racist Institution: Road Map for Action



**We Stand in Solidarity Against Racism.
And We Are Committed to Equity in Health Care.**



Making ISMMS a More Equitable and Anti-Racist Institution: Road Map Initiative to Address Racism and Bias

1. Develop an equity scorecard
2. Unify and integrate clinical practices
3. Enhance community partnerships and accountability.
4. Build connection and community within the MSHS to adopt a racial equity culture.
5. Forge new and leverage existing partnerships and networks within the MSHS to accelerate anti-racism and equity efforts.
6. Develop a sustained financial investment in racial equity and anti-racism.
7. Examine and redesign business structures with an anti-racist and equity lens.
8. Increase recruitment, hiring, and retention of Black and other underrepresented minority (URM) staff and faculty at all levels of leadership.
9. Promote equity in mentorship.
10. Enhance leadership learning, capacity, knowledge, engagement, and accountability enabling all leaders to participate in anti-racism efforts.
11. Provide anti-racism education and resources throughout the MSHS.



Gary Butts, MD

Executive Vice President, Chief Diversity Officer, Dean for Diversity Policy, Programs, and Community Affairs



**Ann-Gel Palermo
DrPH, MPH**

Senior Associate Dean



Pamela Abner, MPA

Vice President and Chief of Diversity, Equity, and Inclusion (MSHS)



Leona Hess, PhD

Senior Director, Strategy and Equity Education Programs

Making Our School a More Anti-Racist Care and Learning Institution

Addressing Racism in Medical and Graduate Education

- Center for Anti-Racism in Practice (CAP)
- Anti-Racist Transformation (ART) in Medical Education

Committee to Address Anti-Asian Bias and Racism (CAABR)

- Established to address racism experienced by our Asian and Asian American Colleagues

Black Executive Acceleration Program

- One-year program for high potential
- Black-identified leaders aspiring to more senior leadership roles

Fellowship Program to Address Disparities in LGBTQ Health Care

- AMA Foundation funded

Chats for Change

- Goes National
- Sessions are becoming available to all medical education communities



Making Our School a More Anti-Racist Care and Learning Institution

Initiative to Decrease Disparities in Cancer Clinical Trials

- Stand Up 2 Cancer

LINC Mentorship Program

- Learning, Investing, Networking and Connecting through Mentorship

Mount Sinai Biomedical Laureate Program

- First cohort recruited
- Designed to increase diversity among basic and clinical research faculty

NIH FIRST Grant

- Hire underrepresented early career faculty
- Implement a program to mentor career development for research success

Partnerships with Historically Black Colleges and Universities

- Affiliation agreement signed with Meharry Medical College
- HCBU/MSI Working Groups



Making ISMMS a More Equitable and Anti-Racist Institution: Office of Diversity and Inclusion (ODI)

- Co-direct the Center for Antiracism in Practice
- All seven participating Mount Sinai hospitals in the annual national LGBT Health Equality Index have sustained full Leadership Status through 2021
- The Faculty Diversity Council and GME Diversity Council continue to advance efforts on recruitment, retention, and advancement of women and URIM faculty and house-staff
- Summer Programs for Underrepresented in Schools of Medicine and Disadvantaged College Students
- ODI Corporate Health Services Affairs (CHSA) Contributes to the Road Map's health quality dashboards by developing best practices in data collection methodology on various patient-related sociodemographic variables



Reducing Health Disparities and Supporting Health Equity: Institute for Health Equity Research

COVID-19 community-engaged work

- Community-based survey in 11 languages
- New York city Community Engagement Alliance to End COVID-19 Disparities (NYCEAL)
- Community engagement and research during NYC's pandemic

Worked across ISMMS departments helping researchers to include equity lens

Developed disparities dashboard to identify and eliminate inequalities in health care quality and access

Trained a diverse, culturally competent research workforce
Center for Scientific Diversity (CSD)

Exceptional Scholars Program



Selected Studies

- Interaction of race, ancestry, genomics, and air pollution on chronic kidney disease
- Studying diabetes-related disparities interventions among underserved populations
- Longitudinal cohort study of association between SARS-CoV-2 seropositivity and social determinants



Carol R. Horowitz, MD, MPH
Director



Lynne Richardson, MD
Co-Director

Accelerating Innovation and Entrepreneurship: Mount Sinai Innovation Partners (MSIP)

846

Faculty
Engagements

93

Licenses
and Options

216

Research
Contracts

(Providing \$15.2M in funding)

152

Technology
Disclosures

378

New Patent
Applications

(Includes filed provisional, PCT, US,
European, and other foreign national
phase applications and filings)

1,184

Material Transfer
Agreements

358

Confidentiality
Disclosures

1/1/2020 – 12/31/2020

Mount Sinai Doctors Faculty Practice: Highlights

Visit Impact and Revenue Growth

Return to 90%—100% practice levels between in-person and telehealth visits

Positive to revised budget on all campuses and in almost every clinical department

Continued deployment of vaccines to patients and employees in accordance with NYS guidelines

140% increase in digital bookings through enhanced online scheduling

Revenue—
Annualized 2020 at \$900 million

Developed processes for online scheduling for texting patients and employees

New Practice Locations

Mount Sinai Doctors—
Delancey



Mount Sinai Doctors
at HealthQuarters

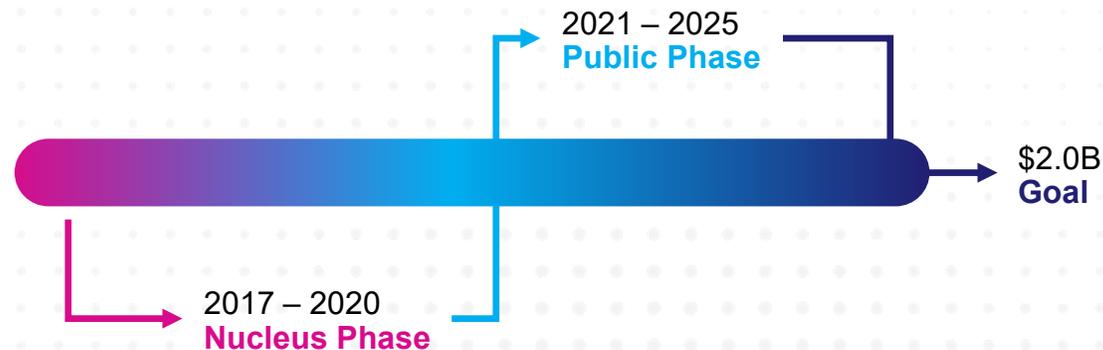


Institutional Advancement: MSHS “Limitless” Capital Campaign Public Phase

Press Release

Mount Sinai Health System Launches Bold \$2 Billion Capital Campaign

“Limitless” Campaign has raised \$1 billion ahead of schedule for critical clinicals and research institutes in the wake of pandemic



First Comprehensive
Capital Campaign for
Health System

\$2.0B
2017 – 2025

Raised to Date
(as of 1/5/22)

\$1.28B
64% Goal Achieved

2021 Raised to Date

\$273.6M

Growth Needs New Space

Mount Sinai Discovery and Innovation Center

- West Campus—787 11th Avenue
 - Occupying sixth, seventh, and eighth floors
 - Housing major research programs and MSW clinical programs
 - Occupancy: January 2023



Center for Artificial Intelligence

- Renovation of 3 East 101 Street
- Housing new Department of AI/Human Health and Institute for Genomic Health and Division of Genomic Medicine



Thank you

Icahn School of Medicine at Mount Sinai

State of the School



Icahn School
of Medicine at
**Mount
Sinai**