



"Out for Blood: Biochemical Profiling of Human Populations for Cardiovascular Pathway Discovery"

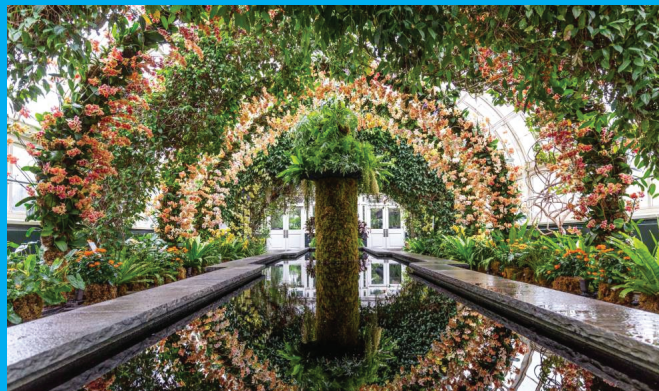
Robert E. Gerszten, MD

Herman Dana Professor of Medicine
Harvard Medical School
Chief of Cardiovascular Medicine
Beth Israel Deaconess Medical Center

Robert E. Gerszten, MD is the Chief of Cardiology at Beth Israel Deaconess Medical Center, the Herman Dana Professor of Medicine at Harvard Medical School, and a Senior Associate Member of the Broad Institute. He graduated from the Johns Hopkins University School of Medicine, completed his residency at the Hospital of the University of Pennsylvania, and a clinical fellowship in cardiology at Massachusetts General Hospital (MGH). He also undertook research fellowships at the Cardiovascular Research Institute at the University of California, San Francisco and the Cardiovascular Research Center at MGH.

Dr. Gerszten's research focus on the intersection of cardiac and metabolic diseases. His translational research program leverages metabolomic and proteomic technologies to discover new biomarkers and pathways linked to cardiovascular disease. This highly collaborative program engages with multiple institutions, including the Broad Institute, the Framingham Heart Study, the Jackson Heart Study, the Diabetes Prevention Program, and the NIH MoTrPAC (Molecular Transducers of Physical Activity) study, the largest exercise intervention study ever conducted.

His work has been funded by the NIH and the American Heart Association, from which he received an Established Investigator Award. Dr. Gerszten is a member of the American Society for Clinical Investigation, the Association of American Physicians, and the Association of University Cardiologists. He has earned numerous honors, including the 2019 Silen Lifetime Mentoring Award from Harvard Medical School and the 2024 Paul Dudley White Award from the American Heart Association.



New York Botanical Garden, Bronx, NY

The Department of Pharmacological Sciences at the Icahn School of Medicine at Mount Sinai is dedicated to uncovering the fundamental mechanisms of complex physiology and pathophysiology and translating these insights into new therapeutics. We explore biological processes at molecular, cellular, tissue, and organismal levels to understand their functions and identify ways to modulate them for therapeutic purposes. Our research involves analyzing interactions between exogenous and endogenous substances with biological systems to develop new treatments. The Department's mission is to foster discovery and innovation in basic and translational biomedical research, provide advanced training for future scientists and physician-scientists, and serve as a hub for interdisciplinary collaborations, addressing the most challenging problems in biomedical science.

Inside Background Image

Winner of "The 2023 Best Poster"
Carisse Lansiquot / The Lazarus Lab

Comittee Organizers

Yi Shi, PhD, Peng Yuan, PhD
Emmanuel Antigua and Yoori Kim
Pamphlet: Oscar K. Chea

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**The Seventeenth
Annual Research
Retreat of the
Department of
Pharmacological
Sciences
Icahn School of
Medicine at
Mount Sinai**

September 12, 2024
New York Botanical Garden,
Bronx, NY



PROGRAM

Thursday, September 12th

- 9:15 am **Welcoming Remarks**
Ming-Ming Zhou, PhD
- 9:30 am **New Faculty Talk** - Chair, Aneel Aggarwal, PhD
Min Xue, PhD
- 9:45 am **Lab Talks 1** - Chair, William Cheung, PhD
“**Computational and Structural Biology**”
- 9:45 am Radhika Malik, PhD [Aggarwal Lab]
- 10:00 am Giacomo Marino [Ma'ayan Lab]
- 10:15 am Haonan Zhang, PhD [Wacker Lab]
- 10:30 am David Stein [Schlessinger Lab]
- 10:45 am **Career Services** - Chair, Avner Schlessinger, PhD
Kevin John
Program Manager
- 11:15 am **Poster Presentations with Lunch**
- 1:00 pm **Lab Talks 2** - Chair, Min Xue, PhD
“**Drug Discovery and Molecular Pharmacology**”
- 1:00 pm Yue Zhong [Jin Lab]
- 1:15 pm Aya Osman, PhD [Devi Lab]
- 1:30 pm Lauren Qiu [Yazawa Lab]
- 1:45 pm Michael Appiah, PhD [Cheung Lab]
- 2:00 pm Yufei Xiang, PhD [Shi Lab]
- 2:30 pm **MSIP Workshop** - Chair, Jian Jin, PhD
Dov Shamir, PhD
Assistant Director
- 3:45 pm **JPG Lecture - Keynote** - Chair, Martin Walsh, PhD
Robert E. Gerszten, MD
*Beth Israel Deaconess Medical Center,
Harvard Medical School*
- 4:45 pm **Closing Remarks**
Lakshmi Devi, PhD

Reception to follow

MSIP Entrepreneurship Workshop

“Technology Commercialization and Funding Paths at Mount Sinai”

This workshop by Mount Sinai Innovation Partners (MSIP) guides scientists through the commercialization process by providing resources, advocacy, and network access. It also covers MSIP's technology commercialization process, educational programs, and tools to help participants evaluate and develop their innovations.

NEW FACULTY PRESENTATION



Min Xue, PhD

Associate Professor

Peptide chemistry, structure-based drug design and drug delivery.

PRESENTING RESEARCH LABS



Ming-Ming Zhou, PhD

Professor & Chair

Structural and chemical biology of gene transcription, and structural mechanism-based drug discovery.



Aneel Aggarwal, PhD

Professor & Vice Chair

Protein-nucleic acid interactions in DNA and RNA metabolism.



KaLung (William) Cheung, PhD

Assistant Professor

Mechanism of transcriptional regulation of cell development in immunity, and epigenetic drug discovery.



Lakshmi Devi, PhD

Professor & Vice Chair

Mechanism and pharmacology of opiate and cannabinoid receptor activation and morphine action.



Marta Filizola, PhD

Professor

Computer-aided structural biology and drug discovery.



Jian Jin, PhD

Professor

Medicinal chemistry and drug discovery; Noval degraders targeting oncogenic proteins.



Avi Ma'ayan, PhD

Professor

Bioinformatics, data science, and software development for biomedical and biological research.



Avner Schlessinger, PhD

Professor

Structural bioinformatics and structure-based drug design for membrane transporters.



Yi Shi, PhD

Associate Professor

Mass spectrometry method development, protein engineering and nanobody drug discovery.



Daniel Wacker, PhD

Assistant Professor

Structural biology and drug discovery of serotonin receptors and transporters.



Masayuki Yazawa, PhD

Associate Professor

Novel imaging and genetic technologies, mechanism of cardiovascular and infectious diseases, and drug discovery.

THE JACK PETER GREEN LECTURESHIP IN PHARMACOLOGICAL SCIENCES

Jack Peter Green, MD, PhD (1925-2007), earned his PhD and MD from Yale University, where he began his career as an Assistant Professor of Pharmacology. He later founded and chaired the Department of Pharmacology at the Icahn School of Medicine at Mount Sinai (1968-1999), elevating it to international renown. Dr. Green's research highlighted histamine's role as a central nervous system neurotransmitter and neuromodulator. He also pioneered quantum mechanical techniques in drug action studies and received the European Histamine Research Society's highest award.

The Green Lecturers

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|------|--|
| 2002 | Barry S. Collier, MD
<i>The Rockefeller University</i> |
| 2003 | Leroy Hood, MD
<i>Institute for Systems Biology</i> |
| 2004 | Anthony James Pawson, MD
<i>University of Toronto</i> |
| 2005 | C. Ronal Kahn, MD
<i>Harvard Medical School</i> |
| 2007 | Bert W. O'Malley, MD
<i>Baylor College of Medicine</i> |
| 2008 | Susan Band Horwitz, PhD
<i>Institute for Systems Biology</i> |
| 2010 | Mary V. Relling, PharmD
<i>St. Jude Children's Research Hospital</i> |
| 2011 | Harry C. Dietz, MD
<i>Johns Hopkins University School of Medicine</i> |
| 2012 | Garret Fitzgerald, MD
<i>University of Pennsylvania School of Medicine</i> |
| 2013 | Susan Amara, PhD
<i>National Institute of Mental Health</i> |
| 2017 | David Julius, PhD*
<i>University of California, San Francisco</i>
<small>* The Nobel Prize in Physiology or Medicine (2021)</small> |
| 2018 | George D. Yancopoulos, MD, PhD
<i>Regeneron Pharmaceuticals, Inc.</i> |
| 2019 | Richard Tsien, DPhil
<i>NYU School of Medicine</i> |
| 2021 | Bryan L. Roth, MD, PhD
<i>Uni. of North Carolina, Chapel Hill</i> |
| 2022 | Brian K. Shoichet, PhD
<i>University of California, San Francisco</i> |
| 2023 | Andrej Sali, PhD
<i>University of California, San Francisco</i> |