"*Towards a Molecular Microscope*"

Brian T. Chait, D.Phil.
Camille and Henry Dreyfus Professor
Laboratory for Mass Spectrometry
and Gaseous Ion Chemistry
The Rockefeller University

Brian T. Chait was born in Cape Town, South Africa. He received his B. Sc. (1969) and B. Sc. (Hons) (1970) from the University of Cape Town and D.Phil. (1977) in experimental nuclear physics from the University of Oxford. He is currently Camille and Henry Dreyfus Professor at The Rockefeller University in New York City, where he is Head of the Laboratory for Mass Spectrometry and Gaseous Ion Chemistry. An internationally renowned leader in developing novel tools for mass spectrometric investigation of biological systems, his work is documented in 456 research publications and 33 U.S. patents. His laboratory applies mass spectrometry and other analytical techniques to advance understanding the molecular machinery within cells.

Inside Background Image
A Winner of "The 2024 Best Poster"
Leah Yim / The Jin Lab

Icahn School of Medicine at Mount Sinai

Organization Committee
Martin Walsh, PhD, Peng Yuan, PhD
Emmanuel Antigua and Yoori Kim
Pamphlet: Oscar K. Chea

Department of Pharmacological Sciences
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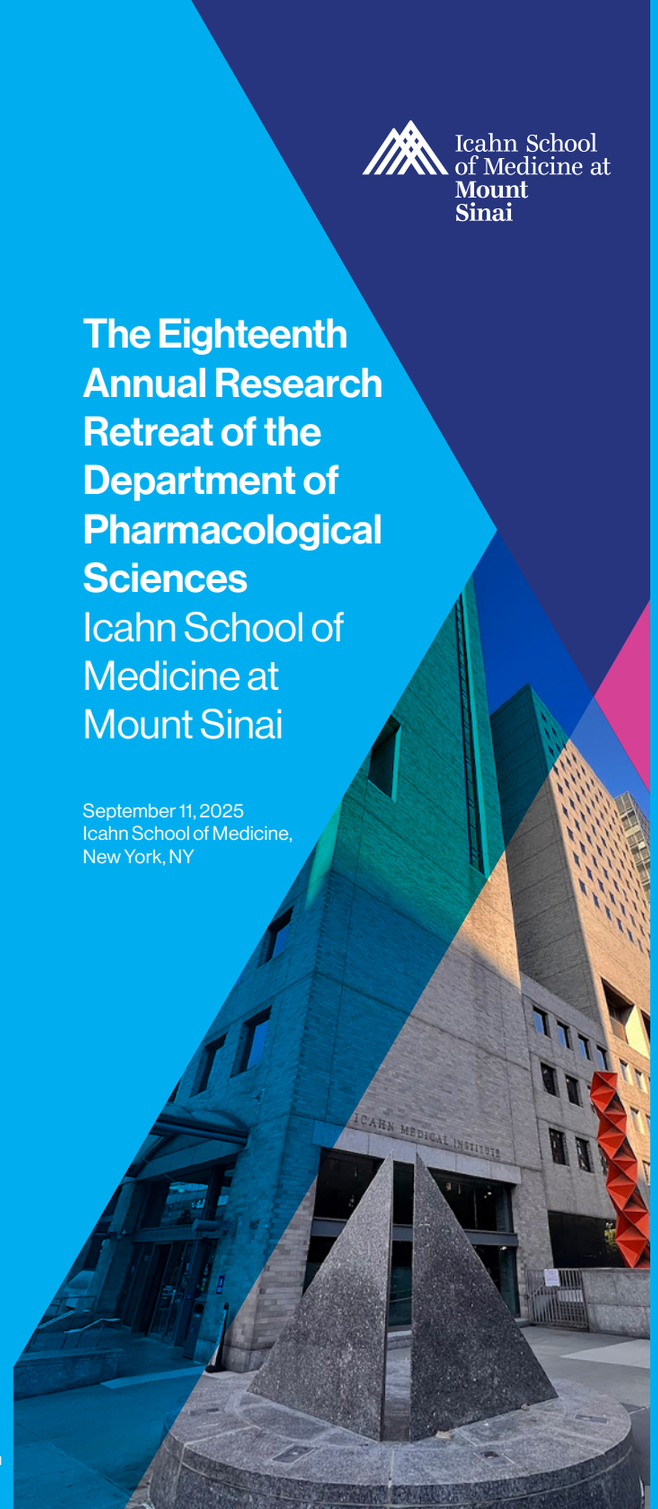
Icahn School of Medicine at Mount Sinai

The Eighteenth Annual Research Retreat of the Department of Pharmacological Sciences

Icahn School of Medicine at Mount Sinai

September 11, 2025
Icahn School of Medicine,
New York, NY



Icahn School of Medicine at Mount Sinai

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 investigate biological processes at the molecular, cellular, tissue, and organismal levels to understand their functions and identify ways to modulate them for therapeutic benefit. Our research examines interactions between exogenous and endogenous substances with biological systems to inform the development of 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 to address the most pressing challenges in biomedical science.

Lab Presentation
Voting QR Code

Poster Presentation
Voting QR Code

PROGRAM

Welcoming Remarks
9:15 am Ming-Ming Zhou, PhD

"Translational Medicine & Therapeutics Discovery"
Chairs, Drs. Zaidi & Jin
9:30 am Huihui Li, PhD [Zaidi Lab]
9:42 am Francisco Fueyo-Gonzalez, PhD [Yuen Lab]
9:54 am Jens Hansen, MD [Iyengar Lab]
10:06 am Leah Yim [Jin Lab]
10:18 am Prabhjot Kaur, PhD [Hadri Lab]

10:30 am Coffee Break

"RNA Biology, Systems & Informatics"
Chairs, Drs. Jin, Walsh, Ma'ayan, Wacker
10:45 am Lucia Wang, PhD [DeVita Lab]
10:57 am Wan Yee Lam [Walsh Lab]
11:09 am Jyoti Singh, PhD [Zhou & Cheung Labs]
11:21 am Anna Byrd [Ma'ayan Lab]
11:33 am Yihan Zhao [Schlessinger Lab]

Poster Presentations with **Lunch**
11:45 am Posters & QR Code Voting
12:30 pm Lunch

"Structural Biology & Biophysics"
Chair, Dr. Aneel Aggarwal
1:30 pm Shifan Yang, PhD [Wacker Lab]
1:42 pm Olga Rechkoblit, PhD [Aggarwal Lab]
1:54 pm Frank Feng [Shi Lab]
2:06 pm Takahiro Sasaki, PhD [Yazawa Lab]

2:30 pm QR Code Voting & Coffee Break

Career Panel & Career Services
Chairs, DPS-SPA, Leah Yim & Yihan Zhao
2:45 pm Rachel-Ann Garibsingh, PhD
Zichen Wang, PhD
Nilesh Zaware, PhD
3:30 pm Kevin John, MA

Jack Peter Green Lecture - Keynote
Chair, Dr. Yi Shi
3:45 pm Brian T. Chait, DPhil
The Rockefeller University

Closing Remarks
4:45 pm Aneel Aggarwal, PhD

Reception to follow

PRESENTING RESEARCH LABS

Ming-Ming Zhou, PhD
Professor & Chair
Structural and chemical biology of gene transcription, and structural mechanism-guided drug discovery.

Aneel Aggarwal, PhD
Professor & Vice Chair
Protein-nucleic acid interactions in DNA and RNA metabolism.

KaLung (William) Cheung, PhD
Assistant Professor
Transcriptional regulation of cell development in immunity, and epigenetic drug discovery.

Robert DeVita, PhD
Professor
Small-molecule drug discovery, chemical biology, target validation, organic chemistry and synthesis.

Lahouaria Hadri, PhD
Associate Professor
Cellular, molecular, and epigenetic mechanisms in cardiovascular and lung diseases and drug discovery.

Ravi Iyengar, PhD
Professor
Systems biology and pharmacology, cell signaling networks of G protein-coupled receptor pathways.

Jian Jin, PhD
Professor
Medicinal chemistry and drug discovery; Novel 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.

PRESENTING RESEARCH LABS

Daniel Wacker, PhD
Associate Professor
Structural biology and drug discovery of serotonin receptors and transporters.

Martin Walsh, PhD
Professor
Mechanisms of chromatin remodeling and epigenetic gene transcription in biology and diseases.

Masayuki Yazawa, PhD
Associate Professor
Novel imaging and genetic technologies, mechanism of cardiovascular and infectious diseases, and drug discovery.

Tony Yuen, PhD
Associate Professor
Mechanism and pharmacology of follicle-stimulating hormone (FSH) in diseases and drug discovery.

Mone Zaidi, PhD
Professor
Endocrinology of bone, and drug discovery for osteoporosis, obesity and Alzheimer's disease.

CAREER PANEL

Rachel-Ann Garibsingh, PhD
Computational Chemist
Alexion Pharmaceuticals
[Schlessinger Lab Alum]

Zichen Wang, PhD
Senior Principal Applied Scientist
Oracle
[Ma'ayan Lab Alum]

Nilesh Zaware, PhD
Associate Director
Halda Therapeutics
[Zhou Lab Alum]

Kevin John, MA
Program Manager
Career Services & Alumni Relations
Icahn School of Medicine at Mount Sinai

THE JACK PETER GREEN LECTURESHIP
IN PHARMACOLOGICAL SCIENCES

Jack Peter Green, MD, PhD (1925-2007), founding Chair of the Department of Pharmacology at the Icahn School of Medicine at Mount Sinai, elevated the Department to international prominence during his leadership (1968-1999). A pioneer in pharmacology, he established histamine's role as a central nervous system neurotransmitter and neuromodulator and advanced the use of quantum mechanical methods in drug action research. His achievements earned him the highest honor of the European Histamine Research Society.

The Green Lecturers

2002 **Barry S. Coller, MD**
The Rockefeller University

2003 **Leroy Hood, MD**
Institute for Systems Biology

2004 **Anthony James Pawson, MD**
University of Toronto

2005 **C. Ronald Kahn, MD**
Harvard Medical School

2007 **Bert W. O'Malley, MD**
Baylor College of Medicine

2008 **Susan Band Horwitz, PhD**
Albert Einstein College of Medicine

2010 **Mary V. Relling, PharmD**
St. Jude Children's Research Hospital

2011 **Harry C. Dietz, MD**
Johns Hopkins University School of Medicine

2012 **Garret Fitzgerald, MD**
University of Pennsylvania School of Medicine

2013 **Susan Amara, PhD**
National Institute of Mental Health

2017 **David Julius, PhD***
University of California, San Francisco
** The Nobel Prize in Physiology or Medicine (2021)*

2018 **George D. Yancopoulos, MD, PhD**
Regeneron Pharmaceuticals, Inc.

2019 **Richard Tsien, DPhil**
NYU School of Medicine

2021 **Bryan L. Roth, MD, PhD**
University of North Carolina, Chapel Hill

2022 **Brian K. Shoichet, PhD**
University of California, San Francisco

2023 **Andrej Sali, PhD**
University of California, San Francisco

2024 **Robert E. Gerszten, MD**
Harvard Medical School