

# THE ROCKEFELLER UNIVERSITY

*Science for the benefit of humanity*

## **Convocation for Conferring Degrees**

### **Virtual Ceremony**

**Thursday, June 10, 2021**

### **Academic Procession**

New Castle Brass Quintet

### **Welcoming Remarks**

Richard P. Lifton, M.D., Ph.D.

President and Carson Family Professor

### **Introduction**

Sidney Strickland, Ph.D.

Zachary and Elizabeth M. Fisher Professor in Alzheimer's and Neurodegenerative Disease

Dean of Graduate and Postgraduate Studies

Vice President for Educational Affairs

### **2021 Graduate Convocation Speaker**

Vikram Chandra

### **Conferring of the Degree of Doctor of Philosophy**

Dr. Lifton

### **Conferring of the Degree of Doctor of Science, Honoris Causa**

Dr. Lifton

Marie-Josée Kravis

Henry R. Kravis

Philippa Marrack, Ph.D., F.R.S., FMedSci

Thomas Maniatis, Ph.D.

### **Academic Recession**

New Castle Brass Quintet

## 2021 Graduates

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### Sanjeethan Baksh \*

B.A., University of Pennsylvania

*Metabolic Coordination of Stem Cell Fate Controls Tumor Initiation and Tissue Repair*

Elaine Fuchs

*In absentia*

### Caner Çağlar

B.S., Bilkent University

*Restriction of Food Intake by Dorsomedial Hypothalamus*

Jeffrey M. Friedman

### Steven Cajamarca \*

B.A., Hunter College of the City University of New York

*Cerebral Amyloid Angiopathy-causing Beta-amyloid Variants Have Altered Effects on the Clotting System*

Sidney Strickland

### Vikram Chandra

B.A., University of Oxford

*Mechanisms for the Evolution of Superorganismality in Ants*

Daniel Kronauer

### Du Cheng \*

B.S., Henan University

B.S., Humboldt State University

*Non-canonical Axonal Insulin Receptor Signaling Drives Aversive Olfactory Learning*

Cori Bargmann

**Jingyi Chi**

B.S., University of Wisconsin-Madison

*Unraveling the Interaction Between Beige Adipocytes and the Sympathetic Nervous System*

Paul Cohen

**Pavan Choppakatla**

B.Tech., M.Eng., Indian Institute of Technology Delhi

*Linker Histone Mediated Regulation of Mitotic Chromosome Compaction and Individualization*

Hironori Funabiki

**Juliel Espinosa**

B.A., Hunter College of the City University of New York

*Biochemical Studies of Peptidoglycan Hydrolases from Commensal and Pathogenic Bacteria*

Howard C. Hang

**Margaret Fabiszak \***

B.S., New York University

*Finding Common Ground: The Common Marmoset as a Model to Accessing and Providing Insight into the Social Brain*

Winrich Freiwald

**Daniel Firester**

B.S., Johns Hopkins University

*Tension Propagation Along Tip-link Cadherins: Regulation and Implications for the Auditory System*

A. James Hudspeth

**Caitlin Sun Gilbert**

B.S., Georgetown University

*The Role of DNA Methylation in Defining the Vocal Learning Transcriptome of the Zebra Finch*

Erich D. Jarvis

**Rohiverth Guarecuco Jr.\***

B.S., Cornell University

*The Role of Nutrient Availability in Therapeutic Response of Leukemia*

Kivanç Birsoy

**Nicole Rai Infarinato**

B.S., Georgia Southern University

*Not Black and White: BMP Signaling Drives Melanocyte Differentiation Downstream of Stem Cell Activation*

Elaine Fuchs

**Veronica Jové**

B.A., Columbia University

*The Taste of Blood*

Leslie B. Vosshall

**Rachel Leicher**

B.A., Wesleyan University

*Single-molecule Investigation of Chromatin-associated Factors in Genome Organization and Epigenetic Maintenance*

Shixin Liu

**Solomon N Levin \***

B.S., Towson University

*Pathogenic Characterization and Therapeutic Development for Fibrolamellar Hepatocellular Carcinoma*

Sanford M. Simon

**Fangyu Liu**

B.Sc., McGill University

*Structural Study of Disease Relevant ABC Transporters – Cystic Fibrosis  
Transmembrane Conductance Regulator and ABCA4*

Jue Chen

**Olivia Maguire \***

B.A., New York University

*A Role for Acsbg1 in Obesity-accelerated Breast Cancer*

Paul Cohen

**Fanny Matheis**

M.D., Technical University of Munich

*Interactions Between Microbial, Neuronal, and Immune Cells in the Digestive System*

Daniel Mucida

**Elisabeth Murphy**

B.S., Northeastern University

*Genome-wide Human-specific RNA Regulatory Elements in the Brain*

Robert B. Darnell

**Kristina Navrazhina \***

B.A., Hunter College of the City University of New York

*Characterizing Inflammatory Mechanisms in Hidradenitis Suppurativa*

James G. Krueger

**Tiên Minh Thủy Phan-Everson**

B.S., University of California, Los Angeles

*NOGGIN Transport in a Model Human Epiblast*

Ali H. Brivanlou and Eric D. Siggia

Presented by Ali H. Brivanlou

**Jakob Træland Rostøl**

M.Bioch., University of Oxford

*Accessory Nucleases Provide Robust Anti-parasite Immunity for Type III CRISPR-Cas Systems*

Luciano Marraffini

**Artem Serganov**

B.S., State University of New York at Stony Brook

*A Proteomic Approach to Elucidating the Function of Picornavirus 2A Protease*

Michael P. Rout

**Rohan R. Soman \***

B.S., M.S., Johns Hopkins University

*A Translational Approach to Modeling Unique Aspects of Germ Cell Development During Self-organization of the Primate Embryo*

Ali H. Brivanlou

**Elitsa Stoyanova**

B.S., Ithaca College

*Developmental Dynamics of 5-Hydroxymethylcytosine and Its Role in the Terminal Differentiation of Neurons*

Nathaniel Heintz

**Tony Sun \***

B.A., Washington University in St. Louis

*A-to-I RNA Editing in Human Cells*

Charles M. Rice

**Taku Tsukidate**

B.E., Kyoto University

*Chemical Tools for Exploring Metabolite Interactions with Nuclear Receptors and Beyond*

Howard C. Hang

*In absentia*

**Putianqi Wang**

B.S., University of North Carolina at Chapel Hill

*The Identification of a Leptin-dependent Neural Pathway Regulating Adipose Tissue Innervation*

Jeffrey M. Friedman

**Xiao Wang**

B.S., Rhodes College

*Quantifying the Release of Protein Substrates from AAA+ ATPase ClpX by Single Molecule Total Internal Reflection Fluorescence Microscopy*

Sanford M. Simon

**Ross Weber \***

B.A., University of Pennsylvania

*The Role of Compartmentalized Metabolism in Cellular Metal Homeostasis*

Kivanç Birsoy

**Robert Williams \***

B.S., Massachusetts Institute of Technology

*Transcriptional Regulation of the Metabolic Response to Therapy in Leukemia*

Kivanç Birsoy

**Xiphias Ge Zhu**

B.Sc., National University of Singapore

*Deciphering Cancer Metabolic Dependencies in the Tumor Microenvironment*

Kivanç Birsoy

## Honorary Degree Recipients

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### Marie-Josée Kravis

Marie-Josée Kravis is an economist specializing in public policy analysis and strategic planning. She was Executive Director of the Hudson Institute of Canada Inc. from 1976 to 1994. That year, she became a Senior Fellow of the Hudson Institute Inc. (U.S.A.), where she is now Vice Chair of the Board. She has been associated with Hudson since 1973.

Mrs. Kravis directed Hudson's "Europe and the World" study and has worked on studies of economic development in Algeria, Morocco, France, and Mexico. She was project director and co-author, with B. Bruce-Briggs, of a book on the future of Canada, published in English under the title *Canada Has a Future*. She is co-author, with Maurice Ernst and Jimmy Wheeler, of *Western European Adjustment to Structural Economic Problems*.

Marie-Josée Kravis was a columnist for Canadian newspapers, notably *La Presse*, *The Gazette (Montreal)*, the *Financial Post*, and the *National Post*. She has also contributed to *Foreign Affairs* and *The Wall Street Journal*. From 1980 to 1985, she hosted a weekly economics television show, broadcast in Canada and the U.S.A.

She is a member of the International Advisory Committee of the Federal Reserve Bank of New York and Chair Emerita of The Economic Club of New York, having served as Chair from 2018 to 2020. She is a Trustee of The Bretton Woods Committee and a member of the Council on Foreign Relations. She serves on the boards of LVMH and Publicis Groupe.

Marie-Josée Kravis is Chair-Elect of The Museum of Modern Art. She is Chair of the Sloan Kettering Institute and Vice Chair of the Board of Trustees of Memorial Sloan Kettering Cancer Center. A major benefactor to those and many other institutions, Mrs. Kravis and her husband created the Marie-Josée and Henry R. Kravis Research Building at Rockefeller University.

Mrs. Kravis obtained her M.A. in economics from the University of Ottawa. She has received doctor of laws degrees (*honoris causa*) from the University of Windsor, Laurentian University, and Claremont McKenna College. A member of the American Academy of Arts and Sciences, she is also an Officer of the Order of Canada, a Commandeur of the French Légion d'honneur, and a Knight of the Order of Merit of the Italian Republic.



## **Henry R. Kravis**

Henry Kravis is Co-Founder, Co-Chairman, and Co-Chief Executive Officer of Kohlberg Kravis Roberts & Company (KKR). Founded in 1976 and led by Mr. Kravis and George Roberts, KKR is a leading global investment firm.

Mr. Kravis currently serves on the boards of Axel Springer and ICONIQ Capital, LLC. He also serves as a director, chairman emeritus, or trustee of several other cultural, professional, and educational institutions, including The Business Council (former Chairman), Claremont McKenna College, Columbia Business School (Co-Chairman), Mount Sinai Hospital, the Partnership for New York City (former Chairman), the Partnership Fund for New York City (Founder), Sponsors for Educational Opportunity (Chairman), and the Tsinghua School of Economics and Management in China. Mr. Kravis earned a bachelor's degree in economics from Claremont McKenna College and a master's degree in business administration from Columbia Business School.

Henry Kravis was elected to the Board of Trustees of The Rockefeller University in 2004. He was named Vice Chair of the Board in 2005, a position he held until becoming Trustee Emeritus in 2019. During his tenure, he was a member of the Board's Executive Committee, Finance & Operations Committee, and Nominating & Governance Committee. As Vice Chair and member of the Finance & Operations Committee, he oversaw a period of substantial growth and renewal at Rockefeller, which included the construction of new laboratories and other scientific facilities. His visionary leadership in governance and as a philanthropist sparked the creation of the Stavros Niarchos Foundation–David Rockefeller River Campus, with its centerpiece, the Marie-Josée and Henry R. Kravis Research Building.

At Claremont McKenna College, Mr. Kravis founded the Kravis Leadership Institute and established the Kravis Prize in Leadership, awarded annually to an international organization that demonstrates leadership, creativity, and sustainability in the non-profit sector. In 1996, he established the New York City Investment Fund (now known as the Partnership Fund for New York City), a non-profit organization that works to create jobs and help small businesses in New York City. Mr. Kravis was made an Officier of the French Légion d'honneur and has been awarded the Order of the Aztec Eagle, Mexico's highest honor for foreigners. In addition, he has received honorary doctorate degrees from Claremont McKenna College and several other colleges.

## **Philippa Marrack, Ph.D., F.R.S., FMedSci**

Philippa Marrack's discoveries about T cells have shaped current understanding of the human immune system, vaccines, HIV, and many other immune-related disorders. Dr. Marrack chairs the Department of Immunology and Genomic Medicine at National Jewish Health, which she joined in 1979. She also holds a position at the University of Colorado Health Sciences Center, in Denver.

Born in England, Dr. Marrack attended Cambridge University as an undergraduate at a time when only ten percent of its students were women. She then earned a doctorate of philosophy at Cambridge, working with Alan Munro to study components of the immune system that defend against invaders and that had been discovered a few years earlier. These then-mysterious agents are now known to be T cells.

Dr. Marrack came to the U.S.A. for postdoctoral research with Richard Dutton at the University of California, San Diego. There she met her scientific partner and husband, John Kappler. Together, they resolved a major question when they discovered that a single receptor simultaneously recognizes foreign proteins and the host molecule that displays them, thus driving the immune system to destroy the invader.

Drs. Marrack and Kappler were among the first scientists to isolate the T-cell receptor, a crucial component of the immune response that identifies foreign invaders inside the body and destroys them. As a direct result of this research, Dr. Marrack discovered how T cells that could target the body's own tissues are destroyed in the thymus before they can cause harm. Rogue cells that are not destroyed can trigger destructive autoimmune diseases, such as juvenile diabetes and rheumatoid arthritis.

Drs. Marrack and Kappler also discovered superantigens, powerful toxins that stimulate large numbers of T cells and can cause devastating immune responses, such as those seen in toxic shock syndrome or food poisoning. In the past decade, Dr. Marrack has been exploring why autoimmunity afflicts more women than men. Her work has pointed to particular B cell culprits.

A member of the National Academy of Sciences and the National Academy of Medicine, Dr. Marrack is also a fellow of the Royal Society. Her many honors include Columbia's Louisa Gross Horwitz Prize, the Wolf Prize in Medicine, and Rockefeller University's Pearl Meister Greengard Prize. From 2004 to 2018, Dr. Marrack served on Rockefeller University's Committee on Scientific Affairs.

**Thomas Maniatis, Ph.D.**

Tom Maniatis is the Isidore S. Edelman Professor of Biochemistry and Molecular Biophysics at Columbia University, where he is a member of the Zuckerman Mind Brain Behavior Institute, as well as Founding Director of Columbia's Precision Medicine Initiative. He also serves as the Evnin Family Scientific Director and Chief Executive Officer of the New York Genome Center, which he co-founded.

Dr. Maniatis received B.A. and M.A. degrees in biology and chemistry from the University of Colorado, at Boulder, and a Ph.D. in molecular biology from Vanderbilt University. He carried out postdoctoral studies at Harvard with Mark Ptashne, and at the MRC Laboratory of Molecular Biology, in Cambridge, England, with Fred Sanger. He has served on the faculties of Harvard University, Cold Spring Harbor Laboratory, and the California Institute of Technology.

Tom Maniatis pioneered the development of gene cloning methods and their application to the study of the molecular mechanisms of gene regulation and to biotechnology. He also co-authored the Cold Spring Harbor Molecular Cloning manual, which served as the premier laboratory manual for generations of life scientists in molecular biology, internationally. His laboratory has provided foundational advances in molecular and cell biology, including fundamental insights into the mechanisms of gene regulation, RNA splicing, and innate immunity signaling pathways. Most recently, his focus has been on molecular neuroscience and neurodegenerative disease mechanisms.

A leader in the biotechnology industry, Dr. Maniatis co-founded Genetics Institute, ProScript, and Acceleron. In 2015, he co-founded Kallyope, a New York City-based company exploring the gut-brain axis.

Tom Maniatis was elected to the Board of Trustees of The Rockefeller University in 2012. From 2013 to 2018, he chaired the Board's Committee on Scientific Affairs, which he had joined in 2005. He continues to serve on the Scientific Affairs Committee as a Trustee Emeritus.

Dr. Maniatis's research contributions have been recognized by numerous awards, including the Eli Lilly Research Award in Microbiology and Immunology, the Richard Lounsbery Award for Biology and Medicine, the Jacob F. Javits Lifetime Achievement Award from the ALS Association, and the Lasker-Koshland Award for Special Achievement in Medical Science. He is a member of the National Academy of Sciences and the National Academy of Medicine, and a Fellow of the American Academy of Arts and Sciences.

Founded in 1901, The Rockefeller University is a world-renowned center for research and graduate education in the biomedical and physical sciences. The university's some 70 laboratories conduct research on a broad range of biological and biomedical questions with the mission of improving the understanding of life for the benefit of humanity. Over the years, Rockefeller has been the site of many historic breakthroughs, including the landmark discovery that genes are made of DNA. Twenty-six researchers associated with Rockefeller throughout its history have been awarded the Nobel Prize.

The graduate program, with a unique curriculum that emphasizes independent research, began in 1955 and was named in honor of David Rockefeller in 2005. Since the first convocation in 1959, The Rockefeller University has granted doctor of philosophy degrees to 1,355 individuals – including 33 students who will receive their Ph.D. degrees today.