

THE ROCKEFELLER UNIVERSITY

Science for the benefit of humanity

Convocation for Conferring Degrees

Virtual Ceremony

Thursday, June 11, 2020

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.

Dean of Graduate and Postgraduate Studies

Vice President for Educational Affairs

Conferring of the Degree of Doctor of Philosophy

Dr. Lifton

Presentation of the David Rockefeller Award for Extraordinary Service

Dr. Lifton

Alzatta Fogg

Torsten N. Wiesel, M.D., F.R.S.

Conferring of the Degree of Doctor of Science, Honoris Causa

Dr. Lifton

Marnie S. Pillsbury

Lucy Shapiro, Ph.D.

Academic Recession

New Castle Brass Quintet

2020 Graduates

Sarah Ackerman

B.S., State University of New York, College at Geneseo

The Role of Adipocytes in the Tumor Microenvironment in Obesity-driven Breast Cancer Progression

Paul Cohen

Sarah Kathleen Baker

B.A., University of San Diego

Blood-derived Plasminogen Modulates the Neuroimmune Response in Both Alzheimer's Disease and Systemic Infection Models

Sidney Strickland

Mariel Bartley

B.Sc., Monash University

Characterizing the RNA Editing Specificity of ADAR Isoforms and Deaminase Domains *in vitro*

Charles M. Rice

Kate Bredbenner

B.S., B.A., University of Rochester

Visualizing Protease Activation, retroCHMP3 Activity, and Vpr Recruitment During HIV-1 Assembly

Sanford M. Simon

Ian Andrew Eckardt Butler

B.A., The University of Chicago

Hybridization in Ants

Daniel Kronauer

Daniel Alberto Cabrera*

B.A., Columbia University

Time-restricted Feeding Extends Longevity in *Drosophila melanogaster*

Michael W. Young

* Participant in the Tri-Institutional M.D.-Ph.D. Program

James Chen

B.A., University of Pennsylvania
 Cryo-EM Studies of Bacterial RNA Polymerase
 Seth A. Darst

Brooke Conti Trousdale

B.S., University of Notre Dame
 DDI1/2 and RTF2-dependent Regulation of RNase H2 at the Replisome Ensures
 Genome Stability
 Agata Smogorzewska

Amelia Dunn

B.S., University of Pittsburgh
 Diverse Kappa Opioid Receptor Agonists: Relationships Between Signaling and
 Behavior
 Mary Jeanne Kreek

Nicholas Hernandez*

B.A., B.S., B.S., The University of Chicago
 Monogenic Defects of the Type I Interferon Signaling Pathway in Humans: Molecular
 and Clinical Implications
 Jean-Laurent Casanova

Alexis Jaramillo Cartagena

B.A., Amherst College
 Structural and Functional Studies of the Unconventional Proteobacterial Transcription
 Activator Crl in Complex with the Transcription Machinery
 Seth A. Darst

Nathaniel Kastan*

B.A., Williams College
 Small-molecule Activation of YAP for Inner-ear Regeneration – and Beyond
 A. James Hudspeth

Mariya B. London

B.S., Johns Hopkins University
 Molecular Mechanisms and Antigen Receptor Requirements for Lymphocyte
 Adaptation to Intestinal Tissues
 Daniel Mucida

* Participant in the Tri-Institutional M.D.-Ph.D. Program

Emily M. Lorenzen

B.A., Reed College

Identification of Previously Unknown Interactions Between G Protein-coupled Receptors and Receptor Activity-modifying Proteins

Thomas P. Sakmar

Maria Victoria Moya

B.S., The University of Texas at Austin

Distinct Populations of 5b Pyramidal Neurons in the Primary Motor Cortex

Nathaniel Heintz

Presented by Eric F. Schmidt

Member of the Graduating Class of 2019

Paul Andrew Muller

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

Sympathy for the Microbiota: How Changes in Gut Microbial Composition Influence the Immune System and Basic Physiology by Way of the Sympathetic Nervous System

Daniel Mucida

Lisa Brooke Noble*

B.A., University of California, Berkeley

Mechanisms of Evasion: Anti-tumor Immune Suppression and tRNA-dependent Growth in Cancer Metastasis

Sohail Tavazoie

Philip Mojsov Nussenzweig*

B.A., The University of Chicago

Cas9-primed Adaptive Immunity During the CRISPR-Cas Response

Luciano Marraffini

In absentia

Sean O'Connor

B.A., Occidental College

A Network Approach to Understanding miRNA Regulation in Adipose Tissue

Paul Cohen

* Participant in the Tri-Institutional M.D.-Ph.D. Program

Benjamin Ostendorf

M.D., University of Freiburg

Germline Genetic Determination of Cancer Outcome

Sohail Tavazoie

Luca Parolari

M.D., University of Bologna School of Medicine

Dissection of Neurons and Circuits Involved in Regulating Innate Behaviors,

Movement, and Higher Cognitive Functions in Mice

Jeffrey M. Friedman & Nathaniel Heintz

Presented by Jeffrey M. Friedman

Rudolf Píša

B.A., M.Sci., University of Cambridge

Analyzing Resistance to Design Chemical Inhibitors of AAA Proteins

Tarun Kapoor

Cristina Santarossa

B.A., Smith College

Chemical Biology of Dynein

Tarun Kapoor

Stephanie Lena Sarbanes

B.A., Columbia University

A Role for Mindbomb 1 in Adenovirus Genome Delivery

Charles M. Rice

Ayless Sordillo

B.A., Columbia University

Genetic and Functional Dissection of the Synaptic Output of a Dual-function Integrating Neuron

Cori Bargmann

Leonid Alexeevich Timashev

B.S., Cornell University

Testing the T-loop Model of Telomeric End Protection

Titia de Lange

In absentia

Waring “Buck” Tribble

B.S., B.S.E.S., University of Georgia

CRISPR/Caste: Functional Genetic Studies of the Major Evolutionary Innovations of
Ants

Daniel Kronauer

Zikun Wang

B.S., Peking University

Identification of Gene Expression Changes in Sleep Mutants Associated with Reduced
Longevity in *Drosophila*

Michael W. Young

Daniel Neil Weinberg*

B.S., University of Michigan

Molecular Characterization of Mammalian *de novo* DNA Methyltransferase Chromatin
Recruitment

C. David Allis

Anna Yoney

B.S.E., University of Pittsburgh

Cell Memory and Fate in Human Development

Ali H. Brivanlou & Eric D. Siggia

Presented by Ali H. Brivanlou

Aryeh Zolin*

B.A., Columbia University

Representations of Reward and Movement in *Drosophila* Dopaminergic Neurons

Vanessa Ruta

* Participant in the Tri-Institutional M.D.-Ph.D. Program

David Rockefeller Awards for Extraordinary Service

Alzatta Fogg

Alzatta Fogg has been a beloved member of the Rockefeller University community for 60 years. Always a beacon of warmth, kindness, and friendship, she is an exemplar of the civility and collegiality that distinguish this university's culture. Ms. Fogg joined Rockefeller in August 1960 and moved swiftly through the ranks to serve as assistant supervisor and then manager, first in the Welch Hall and Abby Aldrich Rockefeller Dining Rooms, then the Weiss Research Building Cafeteria and, finally, returning to the Abby Dining Room.

During her years at the university, Ms. Fogg has brought a very special human touch to Rockefeller. Her generous welcome and brilliant smile have disarmed everyone she encounters—from first time visitors to resident Nobel laureates—and helped them all to feel more a part of the university family. She still presides over the Abby several days a week, lifting the spirits of diners with her characteristic blend of courtesy and charm.

When Ms. Fogg first arrived at Rockefeller, the graduate program was only five years old. She quickly became a friend and mentor to many of the students. Over the years, she has nurtured generations of doctoral and postdoctoral fellows, serving as counsellor in times of stress and co-celebrant in times of joy. With unflagging dedication, sage advice, and good humor, she has also supported the faculty, administrators, and university presidents, earning the love and admiration of the entire Rockefeller community.

In 2001, Ms. Fogg was named an honorary alumna of the university. She remains the only person in Rockefeller's history to have received this distinction. In the almost two decades since, she has continued to inspire a deep sense of loyalty to the university and its mission.

Born in Savannah, Georgia, Ms. Fogg came to New York City as a young child in 1942 and has called the city home ever since. She is a quintessential New Yorker who enjoys music and loves the theatre and visiting museums. Ms. Fogg is actively involved in her community as a volunteer and a member of the Canaan Baptist Church of Christ and she is the mother of two daughters – Wanda and Regina.

Torsten N. Wiesel, M.D., F.R.S.

Torsten Wiesel's discoveries have revolutionized understanding of the brain's structure, function, and development. In 1981, while at Harvard University, he and his colleague David Hubel shared the Nobel Prize in Medicine, which recognized their discoveries about how the cerebral cortex receives and processes visual information. Their work revealed the cellular organization of the cerebral cortex and also led to improved therapies for children born with certain vision disorders.

Dr. Wiesel joined Rockefeller in 1983 to lead a new laboratory of neurobiology as the university's Vincent and Brooke Astor Professor. From 1992 to 1998, he served as Rockefeller's seventh president, guiding the university to a scientific renaissance. Dr. Wiesel's presidency was transformative, and programs he established continue to serve as the foundation for the university's success. This important work includes expanding Rockefeller's tenure-track faculty, establishing the modern philanthropy program, and launching the Women & Science initiative.

For more than 20 years, since stepping down as president, Dr. Wiesel has been a vital presence on campus, serving as a trusted friend, valued mentor, and esteemed advisor to scientists and staff alike. As co-director of the Shelby White and Leon Levy Center for Mind, Brain and Behavior, he continues to foster excellence in neuroscience at Rockefeller.

Over the years, Dr. Wiesel has played a major role as an international science advocate, supporting interdisciplinary basic research in the life sciences. He has also worked tirelessly on behalf of global human rights. He is a former chair of the Okinawa Institute of Science and Technology, and was a founding member of the International Human Rights Network of Academies and Scholarly Societies. He has been affiliated with numerous other prestigious organizations.

In addition to the Nobel Prize, Dr. Wiesel has received the U.S. National Medal of Honor and many other accolades, including an honorary degree from Rockefeller. In 2005, the National Academies awarded him the David Rall Medal, recognizing his distinguished leadership of the Academies' Committee on Human Rights, which he chaired from 1994 to 2004.

Honorary Degree Recipients

Marnie S. Pillsbury

Marnie S. Pillsbury has been a dedicated and highly esteemed member of the Rockefeller University community for three decades. After an outstanding tenure as a trustee and vice chair of the board, she was elected a trustee emerita of the university last year.

Ms. Pillsbury has made extraordinary and lasting contributions to the university and society at large. She served as chief philanthropic advisor to David Rockefeller from 1990 until his death in 2017, and then as an advisor to his estate. Working closely with Mr. Rockefeller, she helped guide his philanthropy to have maximum impact at the myriad organizations he supported, substantially amplifying the effectiveness of his charitable giving. From 1990 until 2014, Ms. Pillsbury served as executive director of The David Rockefeller Fund.

As a Rockefeller trustee from 1998 to 2019, Ms. Pillsbury brought strong leadership, superb strategic acumen, a deep knowledge of the university, and exceptional dedication to her board responsibilities. Her astute guidance as vice chair of the board from 2005 to 2019 was a significant factor in the university's success during a period of great achievement. Her service over the years on a remarkable seven committees of the board—Audit, Compensation, Development, Educational Affairs, Executive, Facilities and Infrastructure, and Nominating and Governance—immeasurably strengthened the university. Rockefeller University was fortunate to call upon her wisdom and financial acumen in 2008, when, as chair of the Audit Committee, she helped steer the institution through a historic financial downturn. As vice chair of the Development Committee, she introduced the university's work to many new friends and benefactors. In addition, she helped launch and sustain the university's premier affinity groups, Women & Science and Parents & Science.

Marnie Pillsbury is a trustee of the Rockefeller Brothers Fund, the International Women's Health Coalition, and the Center for Curatorial Leadership. She is secretary of The Pinkerton Foundation, and a member of the Council on Foreign Relations and the International Council at The Museum of Modern Art. A graduate of Wellesley College, Ms. Pillsbury received an M.B.A. from New York University's Stern School of Business.

Lucy Shapiro, Ph.D.

Lucy Shapiro has applied her intellect, her capacity to think in three dimensions, and her love of science to illuminate the cell cycle's temporal and spatial choreography. Born and raised in Brooklyn, she defied her parents' expectation that she would gain entry to the High School of Music and Art in New York City based on her musical skills. Instead, she secretly learned to draw and secured admission based on her artistic talents. At Brooklyn College, she majored in biology and fine arts, thinking she would pursue a career in medical illustration. That plan got derailed when she was convinced to take an organic chemistry class by Rockefeller's own Ted Shedlovsky.

Hooked by the intellectual rigor of the topic and its visual nature, she decided to study the chemistry of life. As a graduate student, Shapiro discovered an RNA-dependent RNA polymerase, and she earned her Ph.D. at the Albert Einstein College of Medicine. Soon afterward, she accepted a faculty position at Einstein and launched her own lab. In 1989, she became a professor at Stanford University where she founded a new Department of Developmental Biology, and has directed the Beckman Center for Molecular and Genetic Medicine since 2001.

Her research has probed how cells translate a nucleic acid molecule's linear code into three-dimensional activities and how they differentially read that same genetic code to produce physiologically distinct offspring. Using the bacterium *Caulobacter crescentus*, she has mapped a multitude of mechanisms by which the cell functions as an integrated network as it divides. These findings have illuminated the exquisite precision that single-celled creatures deploy as they place specific components that perform specific tasks at specific sites and times. Her insights into bacterial asymmetry have shed light on the development of complex organisms.

In collaboration with Stephen Benkovic, she designed a new class of antimicrobial compounds that are based on boron rather than carbon. Two of these drugs have reached the market, and the team is now expanding this approach from medicine to agriculture.

Shapiro served as a White House advisor on bioterrorism threats, and she has won numerous awards and honors, including the National Medal of Science, the Gairdner Award, the Louisa Gross Horwitz Prize, and the Pearl Meister Greengard Prize.

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 75 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-five 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 1,322 individuals – including 30 students who will receive their Ph.D. degrees today.