47TH ANNUAL PRESENTATION CEREMONY

LEWIS S. ROSENSTIEL
AWARD FOR DISTINGUISHED WORK IN BASIC MEDICAL SCIENCE

THURSDAY APRIL 12, 2018
In 1971, the Lewis S. Rosenstiel Award for Distinguished Work in Basic Medical Science was established as an expression of the belief that educational institutions have an important role to play in the encouragement and development of basic science as it applies to medicine.

Since its inception, Brandeis University has placed great emphasis on basic science and its relationship to medicine. With the establishment of the Rosenstiel Basic Medical Sciences Research Center, made possible by the generosity of Lewis S. Rosenstiel in 1968, research in basic medical science at Brandeis has been expanded significantly. The Rosenstiel award provides a way to extend the center’s support beyond the campus community.

The award is presented annually at Brandeis based on recommendations from a panel of outstanding scientists selected by the Rosenstiel Basic Medical Sciences Research Center. Medals are given to scientists for recent discoveries of particular originality and importance to basic medical science research. A $25,000 prize (to be shared in the event of multiple winners) accompanies the award.

The winner of the 2017 Lewis S. Rosenstiel Award for Distinguished Work in Basic Medical Science is Titia de Lange of the Anderson Center for Cancer Research at The Rockefeller University.

De Lange was chosen for her seminal studies that solved the end-protection problem of linear chromosomes.
PRESENTATION CEREMONY

WELCOME
RON LIEBOWITZ
President
Brandeis University

REMARKS
JAMES E. HABER
Abraham and Etta Goodman Professor of Biology
Director, Rosenstiel Basic Medical Sciences
Research Center
Brandeis University

ADDRESS
HAROLD VARMUS
Lewis Thomas University Professor of Medicine
Weill Cornell Medicine at Cornell University
1989 NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

PRESENTATION OF MEDALLIONS AND AWARDS
JAMES E. HABER

RESPONSE
TITIA DE LANGE
Leon Hess Professor
The Rockefeller University
Titia de Lange was born in the Netherlands and studied biochemistry at the University of Amsterdam. She did undergraduate work with Richard Flavell at the National Institute of Medical Research in London and obtained her graduate degree with Piet Borst at the Dutch Cancer Center. She moved to the U.S. in 1985, joining Harold Varmus’ laboratory at UCSF for postdoctoral work. In 1990, she joined the faculty of The Rockefeller University as an assistant professor. She currently is the Leon Hess Professor and director of the Anderson Center for Cancer Research at The Rockefeller. De Lange became interested in telomeres during her graduate studies with Piet Borst. She revisited this subject in Harold Varmus’ lab, where she was one of several investigators to identify the sequence of human telomeres. At The Rockefeller, she focused on understanding how telomeres solve the chromosome end-protection problem. Telomeres need to ensure that natural chromosome ends are not detected and processed as damaged DNA. De Lange assumed this function of telomeres relies on telomere binding proteins and set out to identify such factors, cloning the first human telomeric protein. Her subsequent work helped to identify the six-subunit shelterin complex and illuminate how this complex represses all aspects of the DNA damage response.

De Lange is a foreign member of the NAS and both Dutch Royal Societies, as well as a member of NAM, AAAS and EMBO. She received the inaugural Paul Marks Prize for Cancer Research, the AACR’s Clowes Award, the Vilcek Prize, the Heineken Prize, the Breakthrough Prize in Life Sciences and the Canada Gairdner International Award.
2017 SPEAKER

HAROLD VARMUS

Harold Varmus, M.D., co-recipient of the 1989 Nobel Prize in Physiology or Medicine for studies of the genetic basis of cancer, joined the Meyer Cancer Center of Weill Cornell Medicine as the Lewis Thomas University Professor of Medicine in April 2015. He is also a senior associate member of the New York Genome Center, where he helps to develop programs in cancer genomics. Previously, Dr. Varmus was director of the National Cancer Institute for five years, president of Memorial Sloan-Kettering Cancer Center for 10 years, and director of the National Institutes of Health for six years. A graduate of Amherst College and Harvard University in English literature and of Columbia University in medicine, he was further trained at Columbia University Medical Center, the National Institutes of Health, and the University of California San Francisco (UCSF) before becoming a member of the UCSF basic science faculty for more than two decades. He is a member of the U.S. National Academies of Sciences and Medicine, is involved in several initiatives to promote science and health in developing countries and serves on advisory groups for several academic, governmental, philanthropic and commercial institutions. These positions currently include co-chair of the mayor’s LifeSci NYC and member of advisory boards for Chan Zuckerberg Science and three biotechnology companies (Surrozen, Dragonfly and Petra Pharma). The author of about 400 scientific papers and five books, including a recent memoir entitled “The Art and Politics of Science,” Varmus was a co-chair of President Obama’s Council of Advisors on Science and Technology, a co-founder and chairman of the board of the Public Library of Science and chair of the Scientific Board of the Gates Foundation Grand Challenges in Global Health.
Recent Recipients of the Lewis S. Rosenstiel Award for Distinguished Work in Basic Medical Science

2016: *In recognition of her pioneering work on the mechanisms of protein folding and the severe consequences of protein misfolding that are manifest in disease.*

**Susan Lindquist (1949-2016)**
Profesor of Biology  
HHMI  
Massachusetts Institute of Technology  
Cambridge, Mass.

2015: *For his pioneering discoveries of molecular pathways and biological functions of protein degradation by autophagy.*

**Yoshinori Ohsumi**
Professor  
Frontier Research Center  
Tokyo Institute of Technology  
Tokyo, Japan  
2016 NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

2014: *For his pioneering work in elucidating the mechanisms of genome rearrangements in immune and cancer cells.*

**Frederick Alt ’71**
Professor of Genetics and Pediatrics  
Harvard Medical School  
Director, Program in Cellular and Molecular Medicine  
Boston Children's Hospital  
Boston, Mass.
2013: For their invention of multiphoton fluorescence microscopy and its application to illuminating the function of brain microcircuits.

Winfried Denk
Director, Department of Biomedical Optics
Max Planck Institute for Medical Research
Professor of Physics
Heidelberg University
Heidelberg, Germany

David Tank
Henry L. Hillman Professor in Molecular Biology
Co-Director, Princeton Neuroscience Institute
Princeton University
Princeton, N.J.

Watt Webb
Samuel B. Eckert Professor of Materials Science and Engineering Emeritus
Cornell University
Ithaca, N.Y.

2012: For his role in explaining how eukaryotic cells sense and respond to DNA damage.

Stephen J. Elledge
Howard Hughes Medical Institute Investigator
Professor of Genetics
Harvard Medical School
Boston, Mass.
2011: *For his discoveries of the mechanisms by which translational control regulates gene expression and plays roles in cancer, development, memory, innate immunity and virus infections.*

**Nahum Sonenberg**  
Professor  
Department of Biochemistry  
McGill University  
Montreal, Quebec

2010: *For their pioneering work in molecular connections among histones, histone modifications and chromatin structure and their effects on the regulation of gene transcription.*

**C. David Allis**  
Tri-Institutional Professor  
Joy and Jack Fishman Professor  
Laboratory of Chromatin Biology and Epigenetics  
The Rockefeller University  
New York, N.Y.

**Michael Grunstein**  
Distinguished Professor, Biological Chemistry  
Department of Biological Chemistry  
University of California, Los Angeles  
Los Angeles, Calif.

2009: *For their pioneering work in the field of innate immunity.*

**Ruslan Medzhitov**  
David W. Wallace Professor of Immunobiology  
Howard Hughes Medical Institute  
Yale School of Medicine  
New Haven, Conn.
Jules Hoffmann
Professor and Distinguished Class Research Director
Institute of Molecular and Cellular Biology, CNRS
University Louis Pasteur
Strasbourg, France
2011 NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

2008: For their pioneering work in the field of stem cell research.

John Gurdon
Professor, Department of Zoology
Gurdon Institute
University of Cambridge
Cambridge, England
2012 NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

Irving Weissman
Professor of Pathology and Developmental Biology
Director, Stem Cell Biology and Regenerative Medicine Institute
Stanford School of Medicine
Stanford, Calif.

Shinya Yamanaka
Professor, Kyoto University, Japan
Senior Investigator, Gladstone Institute of Cardiovascular Disease
L.K. Whittier Foundation Investigator in Stem Cell Biology
Professor of Anatomy
University of California, San Francisco
San Francisco, Calif.
2012 NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE
2007: For their elucidation of the molecular machinery that guides proteins into their proper functional shape, thereby preventing the accumulation of protein aggregates that underlie many diseases, such as Alzheimer’s and Parkinson’s.

F. Ulrich Hartl
Director, Max Planck Institute of Biochemistry
Martinsried, Germany

Arthur L. Horwich
Investigator, Howard Hughes Medical Institute
Yale School of Medicine
New Haven, Conn.

2006: For their pioneering work in understanding the mechanisms of gene silencing by epigenetic chromosome modifications.

Mary F. Lyon
Mammalian Genetics Unit
MRC Harwell
Oxfordshire, England

Davor Solter
Max Planck Institute of Immunobiology
Freiburg, Germany

Azim Surani
Gurdon Institute
University of Cambridge
Cambridge, England

A complete list of awardees may be viewed at
www.brandeis.edu/rosenstiel/rosenstielaward/past.html.