THE NEW YORK STEM CELL FOUNDATION INVESTIGATOR PROGRAM

Scientists leading their generation in cutting-edge research
The New York Stem Cell Foundation is accelerating cures for the major diseases of our time through stem cell research.
The NYSCF Investigator Program supports early career scientists, creating and promoting a global community of leading stem cell and neuroscience researchers. The Program provides support for:

- NYSCF – Robertson Stem Cell Investigators
- NYSCF – Robertson Neuroscience Investigators
- NYSCF – Robertson Stem Cell Prize Recipients

The NYSCF Fellowship Program supports postdoctoral scientists at the early stage of their careers. These young researchers hold the potential to accelerate treatments and cures. The Program provides support for:

- NYSCF – Druckenmiller Fellows

The NYSCF Research Institute Laboratories conduct the most advanced human stem cell research and develop pioneering technologies for the field. Independent and privately funded, NYSCF takes a “team science” approach to advance cures, collaborating with leading global partners to unravel the root causes of disease through the power of stem cells.

A global community of over 140 scientists leading their generation in cutting-edge research
The NYSCF – Robertson Stem Cell Investigator Awards provide five years of critical seed funding to outstanding early career scientists all over the world. The Program fosters bold and innovative scientists with the potential to transform the field of stem cell research, and advance the understanding and use of stem cells in the development of treatments for human disease.

**NYSCF – ROBERTSON STEM CELL INVESTIGATOR AWARDS**

**MARIA BARNA, PHD**
Stanford University

Dr. Barna is an Assistant Professor in the Departments of Developmental Biology and Genetics at Stanford University. Her lab focuses on the importance of ribosomes in cell communication to determine stem cell development and gene expression. She aims to show how ribosomes are involved in the remarkable diversity of cell types characteristic of normal embryonic development. She completed her postdoctoral studies at University of California, San Francisco.

**MALIN PARMAR, PHD**
Lund University, Sweden

Dr. Parmar is a Professor in the Cellular Neuroscience Department at Lund University, Sweden, where she is focusing on bringing new cell-based therapies for Parkinson’s disease to the clinic by replacing lost dopamine neurons with new, healthy cells. Her work in cellular reprogramming opens up the possibilities of personalized treatments of patients with healthy versions of their own cells. She completed her postdoctoral studies at Lund University, Sweden and Edinburgh University, Scotland.

**TAKANORI TAKEBE, MD**
Cincinnati Children’s Hospital Medical Center

Dr. Takebe is an Assistant Professor in the Division of Gastroenterology, Hepatology and Nutrition and Division of Developmental Biology at the Cincinnati Children’s Hospital Medical Center and Associate Professor at Yokohama City University, Japan. His lab is developing and applying mini-organ technologies from human stem cells – namely organ bud transplants – in patients with a rare congenital metabolic disorder, ultimately expanding the clinical applications to diseases like liver cirrhosis. He completed his postdoctoral studies at Yokohama City University, Japan.
MITCHELL GUTTMAN, PHD
California Institute of Technology
Dr. Guttman is an Assistant Professor in the Division of Biology and Biological Engineering at the California Institute of Technology. His lab aims to understand how IncRNAs, a class of noncoding genes described by Dr. Guttman, perform many jobs in the cell, among them regulating the plasticity of embryonic stem cells and controlling how stem cells become any other kind of cell. He completed his postdoctoral studies at MIT and the Broad Institute of MIT and Harvard.

JUSTIN ICHIDA, PHD
University of Southern California
Dr. Ichida is an Assistant Professor in the Department of Stem Cell Biology and Regenerative Medicine at the University of Southern California, where he is focusing on using patient-specific disease modeling, next-generation sequencing, and chemical screening to identify disease mechanisms and new treatments for Lou Gehrig’s Disease and sensorineural hearing loss. He completed his postdoctoral studies at Harvard University.

KRISTY RED-HORSE, PHD
Stanford University
Dr. Red-Horse is an Assistant Professor in the Biology Department at Stanford University, where her lab focuses on how cardiovascular stem cells behave in three dimensions and at the single cell level, bringing a high-resolution understanding of embryonic development to injury and disease models. She completed her postdoctoral studies at Genentech and Stanford University.

2014 NYSCF – ROBERTSON STEM CELL INVESTIGATORS

VALENTINA GRECO, PHD
Yale University
Dr. Greco is an Associate Professor at Yale University where she is utilizing genetic, live imaging and genomic approaches to capture the emergence of cancer by live imaging to transform current therapeutic strategies to cure and prevent cancer. She received her PhD from European Molecular Biology Laboratory, and completed her postdoctoral training at The Rockefeller University.

JENNIFER E. PHILLIPS-CREMINS, PHD
University of Pennsylvania
Dr. Phillips-Cremins is an Assistant Professor at the University of Pennsylvania where her lab focuses on understanding the mechanisms that govern producing healthy neurons from stem cells and how these mechanisms go awry during the onset of neurodegenerative diseases. She received her PhD from Georgia Institute of Technology, and completed her postdoctoral training at Emory University and UMass Medical School.

FENG ZHANG, PHD
Broad Institute of MIT and Harvard
Massachusetts Institute of Technology
Dr. Zhang is a Core Member of the Broad Institute and the W. M. Keck Career Development Professor of Biomedical Engineering at MIT where he is developing and applying disruptive technologies including optogenetics and genome engineering (TALEs and CRISPR) to understand nervous system function and disease. He received his PhD from Stanford University and completed his postdoctoral training at Harvard.
KRISTEN BRENNAND, PHD  
Icahn School of Medicine at Mount Sinai

Dr. Brennand is an Assistant Professor of Psychiatry at the Icahn School of Medicine at Mount Sinai where her research focuses on schizophrenia, a debilitating psychiatric disorder with no cure. She completed her postdoctoral research at the Salk Institute for Biological Studies.

JACOB HANNA, MD, PHD  
Weizmann Institute of Science, Israel

Dr. Hanna is a Senior Scientist in the Department of Molecular Genetics at the Weizmann Institute of Science in Israel, where he explores topics in embryonic stem cell biology, early embryonic development and the modeling of human diseases. His research holds the promise of creating powerful research models for degenerative and autoimmune diseases such as type 1 diabetes. He completed his postdoctoral studies at the Whitehead Institute for Biomedical Research at MIT.

JAY RAJAGOPAL, MD  
Harvard Medical School

Dr. Rajagopal is an Associate Professor at Harvard Medical School and the Center for Regenerative Medicine at the Massachusetts General Hospital, where his laboratory focuses on the application of stem cells and regenerative biology to human lung disease. He completed his postdoctoral research at Harvard University.

DEEPTA BHATTACHARYA, PHD  
Washington University School of Medicine

Dr. Bhattacharya is an Assistant Professor in the Department of Pathology and Immunology at Washington University School of Medicine in St. Louis. His lab focuses on stem cell-based approaches for the treatment of immune deficiencies and on the molecular and cellular mechanisms of resistance to viral infections. He completed his postdoctoral studies at Stanford University.

DIETER EGLI, PHD  
The NYSCF Research Institute  
Columbia University

Dr. Egli is a Senior Research Fellow at The New York Stem Cell Foundation Research Institute and an Assistant Professor at Columbia University. His research focuses on the generation of therapeutically relevant cells for the treatment of diabetes. His work has relevance for the use of stem cells to study disease, screen for new drugs, and cell replacement therapy. His research creating patient-specific stem cells using the DNA of patients with type 1 diabetes, first published in Nature in October 2011, was named the #1 Medical Breakthrough of 2011 by TIME magazine, which also named him one of 2011’s People Who Mattered. He completed his postdoctoral studies at Harvard University. He received a NYSCF - Druckenmiller Fellowship in 2008.

ALEXANDER MEISSNER, PHD  
Harvard University  
Broad Institute of MIT and Harvard

Dr. Meissner is a Professor at Harvard University and a senior associate member of the Broad Institute of MIT and Harvard. He is developing and applying next generation sequencing technologies to the human genome with the goal of better understanding normal and diseased cellular states and how to alter them. He completed his postdoctoral studies at the Whitehead Institute for Biomedical Research at MIT.
The NYSCF – Robertson Neuroscience Investigator Awards provide five years of critical seed funding to outstanding early career scientists all over the world. The Program supports truly innovative neuroscientists whose research holds the potential to transform our fundamental understanding of the brain and how it functions.
**Hillel Adesnik, PhD**  
University of California, Berkeley  
Dr. Adesnik is an Assistant Professor of Neurobiology at University of California, Berkeley, where he is focusing on revealing the neural basis of sensory perception at the synaptic, systems, and behavioral levels. He completed his postdoctoral studies at University of California, San Diego.

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**Dragana Rogulja, PhD**  
Harvard Medical School  
Dr. Rogulja is an Assistant Professor in the Department of Neurobiology at Harvard Medical School, where her lab is focusing on the genetics of sleep regulation and the molecular regulatory mechanisms and neuronal circuitry of the sensory gating that takes place in the various stages of sleep. She completed her postdoctoral studies at The Rockefeller University.

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**Edward Chang, MD**  
University of California, San Francisco  
Dr. Chang is a neurosurgeon, Chief of Epilepsy and Pain Neurosurgery and an Associate Professor at the University of California, San Francisco, where he specializes in advanced clinical brain mapping methods, including awake speech mapping, to safely perform neurosurgical procedures in eloquent areas of the brain. He received his medical degree from UCSF, and completed his postdoctoral training at UC Berkeley.

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**Lisa Giocomo, PhD**  
Stanford University School of Medicine  
Dr. Giocomo is an Assistant Professor at Stanford University, where her lab integrates a variety of disciplines and tools to study how single-cell biophysics and network dynamics interact to mediate spatial memory and navigation. She received her PhD at Boston University, and completed her postdoctoral studies at The Norwegian University of Science and Technology.

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**Kay M. Tye, PhD**  
Massachusetts Institute of Technology  
Dr. Tye is an Assistant Professor at Massachusetts Institute of Technology where her lab focuses on understanding how the brain processes the differences between positive and negative stimuli, and leveraging cutting-edge techniques to reprogram neural circuits to induce long lasting changes in behavior. She completed her postdoctoral training at Stanford University.
WINRICH FREIWALD, PHD
The Rockefeller University
Dr. Freiwald is an Associate Professor at The Rockefeller University where he heads the Laboratory of Neural Systems. His work focuses on the neural circuit mechanisms of face recognition, attention, and social cognition. He completed his postdoctoral training at MIT and Harvard Medical School.

DANIEL HUBER, PHD
University of Geneva, Switzerland
Dr. Huber is an Assistant Professor in the Department of Basic Neurosciences at the University of Geneva, Switzerland, where his lab currently combines novel behavioral paradigms with electrophysiology and innovative optical imaging tools to study how different areas of the frontal cortex interact during decision-making and the control of goal-directed action. He completed his postdoctoral studies at the Cold Spring Harbor Laboratories and at the Janelia Farm Research Campus.

ZACHARY KNIGHT, PHD
University of California, San Francisco
Dr. Knight is an Assistant Professor in the Department of Physiology at University of California, San Francisco (UCSF), where his lab is developing new technologies for mapping neural circuits by sequencing RNA and using these tools to identify the cells that control innate behaviors such as feeding. He completed his postdoctoral research at The Rockefeller University.

MELISSA WARDEN, PHD
Cornell University
Dr. Warden is an Assistant Professor in the Department of Neurobiology and Behavior at Cornell University and a Miriam M. Salpeter Fellow. Her work integrates neurophysiological, imaging, and cellular and molecular approaches to the understanding of neural circuits mediating reward, motivation, and learning. She completed her postdoctoral studies at Stanford University.

CHRISTOPHER HARVEY, PHD
Harvard Medical School
Dr. Harvey is an Assistant Professor in the Department of Neurobiology at Harvard Medical School, where his lab focuses on understanding the neuronal circuit mechanisms underlying short-term memory and decision-making, using a range of imaging, electrophysiological, genetic, and behavioral approaches. He completed his postdoctoral studies at Princeton University.

MICHAEL A. LONG, PHD
New York University School of Medicine
Dr. Long is an Assistant Professor in the Departments of Physiology and Neuroscience and Otolaryngology at New York University School of Medicine. His work focuses on developing approaches that adapt modern imaging and electrophysiological tools to the study of neural circuits underlying the production of skilled motor behaviors. He completed his postdoctoral studies at Massachusetts Institute of Technology.

VANESSA RUTA, PHD
The Rockefeller University
Dr. Ruta is an Assistant Professor of Neurophysiology and Behavior at The Rockefeller University, where her lab is using novel methods to trace and probe neural circuits to gain insight into the neural basis for innate and adaptive behaviors. She completed her postdoctoral studies at Columbia University.
The NYSCF – Robertson Investigator Alumni continue to participate in the greater Innovator community through The NYSCF Conference, the annual Innovators Retreat, and an ongoing series of collaborations and projects. They are part of a global network of scientists who are working to accelerate the path of research from bench to bedside.
The NYSCF – Robertson Stem Cell Prize has been awarded annually since 2011 to an outstanding young stem cell scientist in recognition of significant and pathbreaking translational stem cell research. Each NYSCF – Robertson Stem Cell Prize recipient receives a monetary award to be used for research purposes as well as a sculpture from The New York Stem Cell Foundation.

2016 FENG ZHANG, PHD
Core Member of the Broad Institute of MIT and Harvard Associate Professor at Massachusetts Institute of Technology

Dr. Zhang and his lab pioneered the development of genome editing tools from CRISPR-Cas9. These tools are accelerating biomedical research around the world. In theory, CRISPR-Cas9 will give scientists the ability to change, delete, and replace genes, which will allow researchers to revolutionize treatment of disease. His methods are being used in immunology, clinical medicine, and cancer biology. Dr. Zhang is also widely recognized for his work in optogenetics, a powerful discipline that enables scientists to use light to study the behavior of individual neurons.

2015 FRANZISKA MICHOR, PHD
Professor at Dana-Farber Cancer Institute
Professor at Harvard T.H. Chan School of Public Health

For the development of novel, interdisciplinary approaches to treat cancer

Dr. Michor has designed novel cancer drug treatment regiments, currently being tested in clinical trials. Her work will directly impact therapeutic paradigms in human diseases.

2014 MARIUS WERNIG, MD, PHD
Associate Professor at Stanford University

For a new method to generate neurons

Dr. Wernig’s research focuses on reprogramming skin cells into functional neurons, and he and colleagues are currently conducting clinical trials to find treatments for recessive dystrophic epidermolysis bullosa (RDEB), a rare tissue disorder.

2013 AMY J. WAGERS, PHD
Professor at Harvard University

For key insights into aging

Dr. Wager’s work involves the regulation and therapeutic potential of blood and muscle forming stem cells, especially in the role of aging.

2012 KAZUTOSHI TAKAHASHI, PHD
Junior Associate Professor at Kyoto University, Japan

For the discovery of induced pluripotent stem cells

Dr. Takahashi’s lab is aiming to understand the mechanisms underlying the pluripotent state of stem cells. He is also looking to study the variations between cell lines that arise from different individuals.

2011 PETER J. COFFEY, DPHIL
Professor at University College London, United Kingdom
Professor at University of California, Santa Barbara

For the first stem cell trial to treat blindness

Dr. Coffey’s work using stem cells to halt visual deterioration and treat age-related eye diseases resulted in the first clinical stem cell trials to attempt to treat blindness.
Since its inception, The NYSCF Research Institute has used private funds to advance the most cutting-edge stem cell research.

With the generous support of private philanthropists, the NYSCF Research Institute Investigators are moving the field of stem cell research closer to the cures we need.
INSTITUTIONS OF CURRENT STEM CELL INVESTIGATORS

- Broad Institute of MIT and Harvard
- California Institute of Technology
- Cincinnati Children’s Hospital Medical Center
- Columbia University
- Harvard Medical School
- Harvard University
- Icahn School of Medicine at Mount Sinai
- Lund University, Sweden
- Massachusetts Institute of Technology
- Stanford University
- The NYSCF Research Institute
- University of Pennsylvania
- University of Southern California
- Washington University School of Medicine
- Weizmann Institute of Science, Israel
- Yale University

INSTITUTIONS OF CURRENT NEUROSCIENCE INVESTIGATORS

- Boston Children’s Hospital
- Brain & Spine Institute (ICM), France
- Cornell University
- Harvard Medical School
- Massachusetts Institute of Technology
- New York University School of Medicine
- Stanford University
- The Rockefeller University
- University of California, Berkeley
- University of California, San Francisco
- University of Geneva, Switzerland

INSTITUTIONS OF NYSCF – ROBERTSON STEM CELL PRIZE RECIPIENTS

- Broad Institute of MIT and Harvard
- Dana-Farber Cancer Institute
- Harvard Institute
- Kyoto University, Japan
- Stanford University
- University College London, United Kingdom

INSTITUTIONS OF ALUMNI INVESTIGATORS

- Case Western Reserve University School of Medicine
- Harvard University
- Johns Hopkins University School of Medicine
- Massachusetts Institute of Technology
- Stanford University
- The NYSCF Research Institute
- The Rockefeller University
- University of California, San Diego
- University of Utah
- Weill Cornell Medical College
**IMPACT**

SINCE THE PROGRAM’S INCEPTION

- **54** Scientists Supported
- **32** Different Institutions Throughout the World

- NYSCF – Robertson Stem Cell Investigators
- NYSCF – Robertson Neuroscience Investigators
- NYSCF – Robertson Stem Cell Prize Recipients
- NYSCF Research Institute Investigators
- ALUMNI

Over **700** young scientists being trained in their labs

Over **350** awards & honors received in their careers

Over **1650** total publications

Over **1800** talks given on their exciting work

**RESEARCH AREAS BY THE NUMBERS**

**AREA OF STUDY**
- Aging
- Autoimmune Diseases
- Cancer
- Cardiovascular Diseases
- Diabetes
- Gene Editing/Human Genome
- Lung Diseases
- Macular Degeneration
- Neurodegenerative Diseases
- Stem Cell Biology
- Tissue Engineering

**STEM CELL RESEARCH AREAS**
- Multiple Sclerosis (MS)
- Amyotrophic Lateral Sclerosis (ALS)
- Parkinson’s Disease
- Schizophrenia
- Rare Diseases
- Alzheimer’s
- Neuronal Degeneration

**NEUROSCIENCE RESEARCH AREAS**
- Neurobiology
- Neurotechnologies
- Development
- Learning & Memory
- Decision Making

14% 3% 9% 3% 9% 3% 3% 9% 3% 3%
NYSCF INNOVATORS


NYSCF LEADERSHIP

BOARD OF DIRECTORS*

NYSCF’s Board of Directors are leaders in medicine, the arts, and business. Their talents and experience, combined with an unwavering commitment to advancing stem cell research, guide the Foundation in realizing its mission.

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NYSCF’s Leadership Council members are valued ambassadors who are committed to funding and promoting the Foundation’s mission to accelerate stem cell research.

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*as of 10/4/2016
