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FRANZISKA MICHOR RECEIVES NEW YORK STEM CELL FOUNDATION – ROBERTSON STEM CELL PRIZE

New York, NY (October 28, 2015) – The New York Stem Cell Foundation (NYSCF) announced today that Franziska Michor, PhD, is the 2015 recipient of the NYSCF – Robertson Stem Cell Prize for her work pioneering new approaches to study the growth, spread, and treatment of cancer. Her laboratory fuses her passions in mathematics, molecular biology and patient care to investigate how cancers form and progress.

"Dr. Michor's interdisciplinary work challenges biomedical research to reach beyond current approaches toward finding cures leveraging new technologies and capabilities," explained Susan L. Solomon, CEO and Co-founder of NYSCF. "From bone engineering to neurodegenerative disease, our NYSCF scientists work side-by-side influencing each other to incorporate new theoretical and practical approaches into their work. Dr. Michor fits this philosophy and it is a pleasure to recognize her accomplishments."

Dr. Michor is a Professor of Computational Biology at the Dana-Farber Cancer Institute and in the Department of Biostatistics at the Harvard T.H. Chan School of Public Health. At Dana-Farber Cancer Institute, she leads a Physical Science-Oncology Center aimed at using physical sciences to address the challenges of cancer biology. Her laboratory applies mathematical models developed to study evolutionary biology to understand cancer genesis. As animals age, cells accumulate random mutations as they divide. If cells accumulate enough mutations in the genes that control cell division then cells can divide without the normal roadblocks, leading to cancer. As cancerous cells divide more quickly, additional mutations accumulate. Since mutations underlie the mechanism of evolution, Dr. Michor can use this framework to study cancer, tracing the evolution of cancer cells.

Her quantitative approaches have called into question drug regimens for cancer treatments, in particular, chronic myelogenous leukemia (CML), a type of blood cell cancer. Dr. Michor used sophisticated mathematical models to trace the evolution of these blood cancer cells. Over time, cancer cells build up immunity to drug treatments since the cells that survive treatment divide to create larger treatment-resistant populations. Dr. Michor's work simulates what happens if drugs are introduced in different time intervals in order to optimize treatment by reducing the amount of surviving cancer cells.

"As the results of my work move from theoretical understandings into clinical trials, it is an honor to receive a prize that will help me continue to expand the capacities of what my laboratory can do. I am excited to grow my work and examine new types of cancer to model the challenges they pose to current treatments and build new strategies for tackling the root of these malignancies," said Dr. Michor.

The resulting drug treatment regimens she simulated are currently being tested in clinical trials involving non-small-cell lung cancer, and for a brain tumor called pro-neural glioblastoma.

Previously, Dr. Michor has received the Theodosius Dobzhansky Prize of the Society for the Study of Evolution, the Gerstner Young Investigator Award, the Leon Levy Young Investigator Award, the Alice Hamilton Award from Harvard University and recently, and the Vilcek Prize for Creative Promise in Biomedical Science.

"The selection of Dr. Michor reflects the increasing importance of systems biology and mathematical modeling approaches to the stem cell field," NYSCF Innovator juror and 2015 MacArthur Fellow Dr. Lorenz Studer applauded. "She is using such approaches not only to make basic research discoveries, but to directly impact therapeutic paradigms in human disease, in particular cancer."

The jury that selected Dr. Michor consisted of Fiona Watt, DPhil, from King's College London in the United Kingdom; Lorenz Studer, MD, Director of the Sloan-Kettering Center for Stem Cell Biology; Irving Weissman, MD, Director of the Institute for Stem Cell Biology and Regenerative Medicine at the Stanford School of Medicine; and Amy Wagers, PhD and 2013 NYSCF – Robertson Stem Cell Prize recipient from Harvard University.

Previous recipients of the Robertson Prize include Marius Wernig, PhD, Associate Professor in the Institute for Stem Cell Biology and Regenerative Medicine and the Department of Pathology at Stanford University School of Medicine, for his research directly converting skin cells into functional neurons; Professor Amy Wagers, PhD, Professor at Harvard University for her work on blood and muscle stem cells; Peter Coffey, DPhil, Director to the London Project to Cure Blindness at University College London for his research on using embryonic stem cells to cure age-related macular degeneration; and Kazutoshi Takahashi, PhD, Lecturer, Center for iPS Cell Research and Application at Kyoto University for his work founding the field of iPS cell research in the laboratory of Dr. Shinya Yamanaka, 2012 Nobel Prize Laureate in Medicine.

The Prize grants recipients a $200,000 stipend to be used at their discretion to further support their research. In addition to the monetary award, Dr. Michor will receive an award sculpture designed by celebrated architect Frank Gehry, honored in 2009 by NYSCF with its Humanitarian Award, which is given to a non-scientist who has been an active advocate of stem cell research.

About The New York Stem Cell Foundation

The New York Stem Cell Foundation (NYSCF) is an independent organization founded in 2005 to accelerate cures and better treatments for patients through stem cell research. NYSCF employs over 45 researchers at the NYSCF Research Institute, located in New York, and is an acknowledged world leader in stem cell research and in developing pioneering stem cell technologies, including the NYSCF Global Stem Cell Array™. Additionally, NYSCF supports another 75 researchers at other leading institutions worldwide through its Innovator Programs, including the NYSCF – Druckenmiller Fellowships and the NYSCF – Robertson Investigator Awards. NYSCF focuses on translational research in a model designed to overcome the barriers that slow discovery and replaces silos with collaboration. For more information, visit www.nyscf.org.