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**STEM CELL RESEARCHERS CONVENE TO SHARE LATEST DISCOVERIES AT
THE NEW YORK STEM CELL FOUNDATION
SEVENTH ANNUAL TRANSLATIONAL STEM CELL RESEARCH CONFERENCE**

*Sessions Cover Stem Cell Research Breakthroughs, Moving Toward Better Treatments
for Major Chronic Diseases, Injuries*

NEW YORK, NY (October 11, 2012) – For the second day, The New York Stem Cell Foundation (NYSCF) Seventh Annual Translational Stem Cell Research Conference hosts the world’s most preeminent stem cell scientists to present their findings on how advances in stem cell science lead to better treatments and cures for disease and injury. The conference is held at The Rockefeller University in Manhattan on October 10-11.

Today, in disease-specific sessions, scientists will share their latest finds in moving stem cell research to treatments in the following areas: cancer and blood disease; diabetes and autoimmunity; heart and muscles; neurodegeneration and spinal cord injury.

In Cancer and Blood Disease, Elaine Fuchs, PhD, The Rockefeller University, will share findings on identification of skin cancer stem cells, which have implications in understanding other cancers as well as stem cells. Joanne Kurtzberg, MD, Duke University, will discuss her work developing therapies for disease with autologous cord blood transplants. Ravi Majeti, PhD, Stanford University, will describe his recent insights into acute myeloid leukemia and how stem cell technologies can lead to new cancer treatments.

Dieter Egli, PhD, The New York Stem Cell Foundation (NYSCF), will open the session on Diabetes and Autoimmunity by detailing his group’s development of stem cell-derived models of pancreatic beta cells for the study of diabetes. Yuval Dor, PhD, Hebrew University, Israel, will discuss experiments with pancreatic beta cells with the goal to understand the regenerative potential of these cells. Matthias von Herrath, MD, Novo Nordisk, will delve into another aspect of Type 1 diabetes, the problem of autoimmunity. He will close the session by sharing insights into the need for an immune modulated therapy to diabetes.

Before the afternoon sessions, Shahin Rafii, MD, Weill Medical College of Cornell University will deliver the first of two keynote addresses of the conference. He will describe his recent successes in deriving vascular cells from amniotic cells.

In the afternoon session on Heart and Muscle Diseases, Amy Wagers, PhD, Harvard University, will focus on advances in treatments and explain how studies into the mechanisms of tissue stem cell renewal may have relevant therapeutic implications. Gordon Keller, PhD, McEwen Centre for Regenerative Medicine, Canada, will describe modeling cardiac cell development from human pluripotent cells for use in toxicology and electrophysiology studies. Helen Blau, PhD, Stanford University, will describe her research

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to improve stem cell culture in the direction of stem cell fate and for drug screens.

In Neurodegeneration and Spinal Cord Injury, Paola Arlotta, PhD, Harvard University and a NYSCF-Robertson Stem Cell Investigator, will address the application of stem cells to understanding and possibly treating these debilitating diseases and conditions, and will describe investigations to direct reprogramming of neurons into different neuronal lineages. Lorenz Studer, MD, Memorial Sloan-Kettering Cancer Center, will discuss the potential stem cell technology holds in the treatment of Parkinson's disease. Despite past failures in the replacement of lost dopamine neurons, Dr. Studer will describe his novel protocols for the generation of these neurons for eventual use in clinical trials.

Rudolf Jaenisch, MD, The Whitehead Institute, will deliver the second keynote address of the day. Building on Shinya Yamanaka's paradigm-changing work in induced pluripotent stem (iPS) cell reprogramming, Dr. Jaenisch will discuss new methods to counter the generally low successful output of these cells. He will also summarize how targeted genome editing may help unleash the potential of iPS cells and embryonic stem cells for both the study of and therapy for disease.

During yesterday's sessions, scientists discussed their research to bring new drugs and treatments to patients with devastating diseases. Some highlights include the opening panel, "Road to the Clinic", which featured Peter J. Coffey, PhD, London Project to Cure Blindness and the Institute of Ophthalmology, who discussed his work bringing human derived retinal pigmented epithelium to clinical trial later this year. Mahendra S. Rao, MD, PhD, NIH Center for Regenerative Medicine, discussed the work the new NIH Center for Regenerative Medicine is conducting and the varied ways in which cells can be used.

In the panel "Revolutionizing Functional Human Genetics" discussion focused on advances in stem cell technology to allow for disease modeling. Kevin Eggan, PhD, Chief Scientific Officer of NYSCF and a Professor at Harvard University, highlighted the potential disease modeling holds for addressing current problems facing the pharmaceutical industry. Bernard Munos, Founder of InnoThink Center for Research in Biomedical Innovation also stressed those problems facing the pharmaceutical industry and noted that the current model is broken and no longer delivering the innovation needed to keep the industry alive. Susan Solomon, CEO of NYSCF, elaborated on the new NYSCF Global Stem Cell Array which has the capability of producing large amounts of standardized and genetically diverse stem cell lines using iPS cells. This new technology will allow drug compounds to be tested on the representative cells of the disease they are trying to cure and cells from patients with the genetic background the disease is affecting.

The final panel included a discussion on programming and reprogramming stem cells. Hans Sholer, PhD, Max Planck Institute for Molecular Biomedicine, detailed his investigations with several transcription factors to establish cellular pluripotency.

The 2012 NYSCF-Robertson Investigator, Kazutoshi Takahashi, MD, PhD, Kyoto University, Japan, closed the first day of the conference by discussing the current issues and future directions human pluripotent stem cell research for clinical use.

The **full conference agenda** is available at www.nyscf.org/events/annual-conference.

The New York Stem Cell Foundation (NYSCF) conducts cutting-edge translational stem cell research in its laboratory in New York City and supports research by stem cell scientists at other leading institutions around the world. More information is available at www.nyscf.org.
