Kim Irwin (kirwin@mednet.ucla.edu)
(310) 206-2805
Enrique Rivero (erivero@mednet.ucla.edu)
(310) 794-2273

Embargoed for Use Until 3 p.m. EST Tues., Sept. 18, 2007

UCLA SCIENTIST WINS PRESTIGIOUS NIH NEW INNOVATOR AWARD, CHOSEN FROM AMONG 2,100 APPLICANTS NATIONWIDE

Scientist Kathrin Plath, whose recent work reprogramming skin stem cells into embryonic-like stem cells garnered widespread media attention, has been chosen to receive a prestigious New Innovator Award from the National Institutes of Health (NIH).

Plath will receive a five-year, $1.5 million grant from the NIH, which is investing more than $105 million to fund the work of 41 "exceptionally innovative investigators" nationwide. Pioneer Awards were given to scientists at any career stage, while New Innovator Awards were reserved for new investigators like Plath who have not yet received an NIH research grant.

Plath was one of five California scientists to receive a New Innovator Award, and one of only 29 nationwide to be honored.

"Novel ideas and new investigators are essential ingredients for scientific progress, and the creative scientists we recognize with these awards are well-positioned to make significant - and potentially transformative - discoveries in a variety of areas," said Dr. Elias A. Zerhouni, NIH director. "The conceptual and technological breakthroughs that are likely to emerge from their highly innovative approaches to major research challenges could speed progress toward important medical advances."

In all, more than 2,100 applicants applied for NIH Pioneer and New Innovator awards. Both award programs are part of the NIH Roadmap for Medical Research initiative that tests new approaches to supporting research.

Plath, an assistant professor of the biological chemistry department, was recruited to UCLA in March 2006 from the Whitehead Institute at MIT. She is an investigator in the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at UCLA, a member of UCLA's Jonsson Comprehensive Cancer Center and the Molecular Biology Institute at UCLA.

The grant will fund her study of structural changes in chromosomes that underlie the development and differentiation of cells. Plath said she did not believe she would be chosen as a New Innovator.

"It is exciting," said Plath, who added that the funding will allow her to concentrate more on her research and less on grant writing. "This grant will allow me to push my research forward more quickly and I'm confident that within five years we'll

have made significant progress on the research and have valuable insights into mammalian development."

Born in Germany, Plath earned her doctorate degree in cell biology from Harvard Medical School and did her first post-doctoral training at the University of California, San Francisco. In 2003, Plath moved to the Whitehead Institute at MIT. At UCLA, she studies the chromatin structure underlying pluripotency and self-renewal of embryonic stem cells to determine the parallels and differences between those cells and adult stem cells. She also is interested in reprogramming somatic cells into stem cells and discovering how changes in chromatin structure contribute to the development of cancer.

In a recent article in the journal Cell Stem Cell, Plath and colleagues showed that they could take skin cells from mice and reprogram them into cells with the same unlimited properties as embryonic stem cells, the cells that are able to give rise to every cell type found in the body. The scientists took the skin cells and added four genes that turned the cells into pluripotent cells that, in every aspect tested, were identical to embryonic stem cells.

The implications for disease treatment could be significant. Reprogramming adult stem cells into embryonic stem cells could generate a potentially limitless source of immune-compatible cells for tissue engineering and transplantation medicine. If the work can be replicated in human cells, it may mean that a patient's skin cells, for example, could be reprogrammed to become embryonic stem cells. Those embryonic stem cells could then be prodded into becoming various cells types – beta islet cells to treat diabetes, hematopoetic cells to create a new blood supply for a leukemia patient, motor neuron cells to treat Parkinson's disease.

NIH selected the award recipients through a special application and evaluation process that engaged 262 experts from the scientific community in identifying the most highly competitive individuals in each pool. The Advisory Committee to the Director, NIH, performed the final review and made recommendations to Zerhouni based on the evaluations by the outside experts and programmatic considerations.

"In addition to supporting outstanding research, these programs represent experiments in new ways of identifying and funding promising but unconventional ideas, especially those from new investigators," Zerhouni said. "The approach is part of our ongoing efforts to enhance the NIH peer review system."

-UCLA-