

Xiaoling Li, Ph.D., receives tenure

By Robin Arnette

When Xiaoling Li, Ph.D., joined NIEHS in 2007 as a tenure-track researcher, she knew that with a lot of hard work, this day would eventually come. On April 6, the National Institutes of Health Central Tenure Committee granted Li tenure, or a permanent research position. Li heads the NIEHS Metabolism, Genes, and Environment Group and focuses on the molecular signaling pathways that govern aging.

As a youngster, Li liked mathematics, but when she started high school, she became interested in biology. The simple DNA experiments she performed in class exposed her to endless research possibilities as a scientist. When she went to college, she chose biochemistry as her major and never looked back.

She earned a B.S. in biochemistry from Peking University, Beijing, an M.S. in molecular biology from the Chinese Academy of Sciences, Beijing, and a Ph.D. in biological chemistry from Johns Hopkins University School of Medicine, Baltimore. For her postdoctoral training, Li worked with Leonard Guarente, Ph.D., a Novartis Professor of Biology at the Massachusetts Institute of Technology, Cambridge, Massachusetts.

Li said tenure provides the job security that allows her to focus more on research. "It permits me to test novel ideas that may be high risk, but have the potential for high gain," she said.

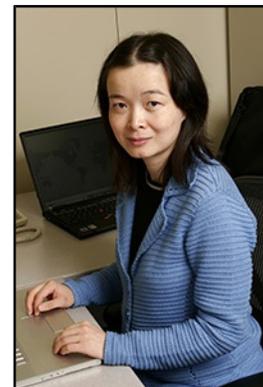
Her work at NIEHS extends past her own research, to help train the next generation of scientists. Besides teaching the trainees in her lab, Li has also mentored students in the NIEHS Scholars Connect Program (see [story](#)).

Examining the molecular mechanisms of aging

Li and her group examine how human genes interact with the environment and how this action regulates human physiology. In particular, Li is interested in a family of proteins called sirtuins, which detect metabolic fluctuations in the body, as well as environmental changes that affect metabolism. Sirtuins can regulate transcription, metabolism, and the stress response, and have been implicated in human disease and aging.

SIRT1 is the most studied sirtuin, and scientists have witnessed its involvement in a diverse range of organisms, such as yeast, roundworms, flies, and mice.

"We study the function of SIRT1 in age-associated illnesses, particularly metabolic diseases," Li said. "By watching the activity of SIRT1 in mice, we can follow animals from youth to old age."



In her spare time, Li enjoys music, art, skiing, hiking, and spending time with her children. (Photo courtesy of Steve McCaw)

Sirtuins in Aging and Age-associated Diseases

As a leader in the field, Li sponsored a sirtuin symposium in 2011 that brought like-minded researchers to NIEHS. The gathering resulted in several new collaborations. ([Story](#))

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