

## NIGMS Director: Biographical Sketch

*Jon R. Lorsch, Ph.D.*



Jon R. Lorsch, Ph.D., became the director of the National Institute of General Medical Sciences (NIGMS) in August 2013.

In this position, Lorsch oversees the Institute's \$2.366 billion budget, which supports basic research that increases understanding of biological processes and lays the foundation for advances in disease diagnosis, treatment and prevention.

NIGMS supports more than 4,500 research grants—about 10.5 percent of those funded by NIH as a whole—as well as a substantial amount of research training and programs designed to enhance the diversity of the biomedical research workforce and develop research capacities throughout the country.

Lorsch came to NIGMS from the Johns Hopkins University School of Medicine, where he was a professor in the Department of Biophysics and Biophysical Chemistry. He joined the Johns Hopkins faculty in 1999 and became a full professor in 2009.

A leader in RNA biology, Lorsch studies the initiation of translation, a major step in controlling how genes are expressed. When this process goes awry, viral infection, neurodegenerative diseases and cancer can result. To dissect the mechanics of translation initiation, Lorsch and collaborators developed a yeast-based system and a wide variety of biochemical and biophysical methods. The work also has led to efforts to control translation initiation through chemical reagents, such as drugs. Lorsch continues this research as a tenured investigator in the NIH's National Institute of Child Health and Human Development.

NIGMS supported Lorsch's research from 2000-2013. He also received grants from the NIH's National Institute of Diabetes and Digestive and Kidney Diseases and National Institute of Mental Health, as well as from other funding organizations.

Lorsch is as passionate about education as he is about research. During his tenure at Johns Hopkins, he worked to reform the curricula for graduate and medical education, spearheaded the development of the Center for Innovation in Graduate Biomedical Education, and launched a program offering summer research experiences to local high school students, many from groups that are underrepresented in the biomedical sciences. In addition, he advised dozens of undergraduate and graduate students and postdoctoral fellows.

Lorsch received a B.A. in chemistry from Swarthmore College in 1990 and a Ph.D. in biochemistry from Harvard University in 1995, where he worked in the laboratory of Jack Szostak, Ph.D. He conducted postdoctoral research at Stanford University in the laboratory of Daniel Herschlag, Ph.D.

Lorsch is the author of more than 70 peer-reviewed research articles, book chapters and other papers. He has also been the editor of three volumes of *Methods in Enzymology* and a reviewer for numerous scientific journals. He has two patents related to his translation research. His honors include six teaching awards from Johns Hopkins.

Lorsch's other activities have included membership on the American Society for Biochemistry and Molecular Biology's mentoring committee, the RNA Society's board of directors and NIH review committees.