

JUNE 29, 2005

HHMI Names First Group Leaders for Janelia Farm Research Campus

The Howard Hughes Medical Institute (HHMI) announced today that it has selected seven dynamic researchers to be group leaders at its Janelia Farm Research Campus (JFRC), which is currently being constructed in Ashburn, Virginia.

When the group leaders arrive at Janelia Farm in the summer of 2006, they will have two ambitious goals waiting for them: Identifying the general principles that govern how information is processed by neuronal circuits; and developing imaging technologies and computational methods for image analysis.

"The scientists we have assembled □ and those who will join us later □ are all committed to the idea that creativity, collaboration, and the freedom to explore new areas, coupled with generous long-term support, are a winning combination for science."

— **Gerald M. Rubin**

As HHMI's first freestanding campus, Janelia Farm will provide a setting in which small research groups can explore fundamental biomedical questions in a highly collaborative, interdisciplinary culture. The \$500 million campus will open in late 2006.

"These scientists are an exceptional group with diverse backgrounds and training," said HHMI President Thomas R. Cech. "They bring extensive experience in biology, computational biology, genetics, mathematics and physics. But more importantly, they all share a deep curiosity about major scientific questions that lie at the boundaries of these disciplines."

The names and current institutional affiliations of those scientists selected as group leaders are:

Dmitri B. Chklovskii, Ph.D. Cold Spring Harbor Laboratory, New York Sean R. Eddy, Ph.D. HHMI investigator at Washington University School of Medicine in St. Louis Nikolaus Grigorieff, Ph.D. * HHMI investigator at Brandeis University, Massachusetts Eugene W. Myers, Ph.D. University of California, Berkeley Julie H. Simpson, Ph.D. University of Wisconsin-Madison Roland Strauss, Ph.D. ** University of Würzburg, Germany Karel Svoboda, Ph.D. HHMI investigator at Cold Spring Harbor Laboratory, New York

* Nikolaus Grigorieff has decided to remain an HHMI investigator at Brandeis University.

** Roland Strauss has decided to accept a position at a German university.

The Institute has also appointed two senior fellows, Nobel laureate Sydney Brenner of the Salk Institute for Biological Studies in La Jolla, California, who is former Director of the Medical Research Council Laboratory of Molecular Biology, and Charles V. Shank, the former Director of Ernest Orlando Lawrence Berkeley National Laboratory. The senior fellows will advise Janelia Farm Director Gerald M. Rubin, spend several weeks a year in residence at Janelia Farm, and help shape the research program at the new campus.

"In keeping with the interdisciplinary objectives of Janelia Farm, five of the nine scientists received their undergraduate training in physics and one in mathematics," said Rubin, who is also a vice president at HHMI. "Additionally, these scientists earned their Ph.D. degrees in fields ranging from physics, chemistry, and computer science to biophysics, molecular biology, and genetics."

The subjects of interest to these scientists are wide ranging and include applying mathematical theories to understand how the brain is designed; studying the structure and function of genes and genomes; developing new methods for image analysis; understanding how genes, neurons, and neural circuits contribute to specific behaviors; and learning how the brain of the fruit fly processes information to navigate successfully.

"We have picked big science problems that are not being addressed well in conventional research settings," said Rubin. "The scientists we have assembled - and those who will join us later - are all committed to the idea that creativity, collaboration, and the freedom to explore new areas, coupled with generous long-term support, are a winning combination for science."

The research programs at Janelia Farm are a natural extension of HHMI's commitment to offering creative scientists freedom from constraints that limit their ability to do groundbreaking research. The Janelia Farm campus and its scientific program will closely complement HHMI's longstanding investigator program. That program currently consists of more than 300 researchers at 64 universities throughout the United States, who have the freedom and flexibility to push the bounds of knowledge in some of the most important areas of biomedical research. HHMI recently announced the

selection of 43 of the nation's most promising biomedical scientists as HHMI investigators.

In this first phase of recruitment for the Janelia Farm group leaders, HHMI employed both targeted recruitment and an open international competition to identify scientific researchers in the fields of biology, chemistry, computer science, engineering, mathematics and physics.

The competition was open to scientists at any career stage. More than 300 applications were received. Although the Institute had chosen to focus on research in particular areas, "we also considered applications from exceptionally talented individuals working outside these defined areas," Rubin said. The applications were reviewed by groups of HHMI researchers, supplemented with physicists, engineers, and computer scientists, as needed.

HHMI will hold a second open application process during the fall of 2005. When the campus is fully operational, there will be 24 group leaders and a permanent research staff of about 300 scientists.

Background on the Scientific Culture at Janelia Farm

The plan for Janelia Farm grew out of an acknowledgment by HHMI leadership that while most biomedical problems are handled well in a university setting, there are some that might be better addressed in a place where small groups of researchers with different skills can work together without the barriers typically encountered at a university. Development of new tools to facilitate biological discovery, for example, can require diverse expertise. But at universities, scientists from different fields are often compartmentalized, and demands placed on researchers by their departments may restrict collaboration outside those walls.

Researchers at Janelia Farm will be freed from most of the administrative, grant writing, and teaching duties that consume time at a university. This, and the fact that individual groups will be small, will allow them to be hands-on scientists who will be able to spend most of their days working at the bench or engaging in collaborative discussions.

In planning Janelia Farm, HHMI carefully studied the structure and scientific culture of other important research models at both academic and for-profit biomedical laboratories, including the Medical Research Council Laboratory of Molecular Biology (MRC LMB) in England and AT's Bell Laboratories in the United States. "Both of those laboratories are well represented in the backgrounds of the new group leaders and senior fellows - seven of nine of the scientists spent time working at either the MRC LMB or Bell Labs," said Rubin.

Though the two labs were different in many ways, they did have several things in common. Both institutions kept research groups small, and principal investigators worked at the lab bench. The single sponsor provided all funding—applying for outside grants was not allowed—and good support services and infrastructure were in place. Notably, said Rubin, both

institutions evaluated their own people rather than rely on expert opinions from outsiders and both were patient in their support of those tackling difficult scientific problems.