

WHITEHEAD community

Cowen wins Genzyme Fellowship

Leah Cowen, a postdoctoral fellow in the lab of Whitehead Member Susan Lindquist, has been selected by a Whitehead committee to receive the Genzyme Postdoctoral Fellowship at Whitehead Institute. The \$90,000 award, sponsored by the Cambridge-based biotech company, completely funds Cowen's postdoctoral position—including all expenses—for one year.

Cowen's research focuses on the mechanisms by which opportunistic microbes, such



JOHN SOARES

A one-year Genzyme Fellowship will support Leah Cowen's work on the mechanisms by which opportunistic microbes evolve.

as pathogenic fungi, evolve. Such work can form the basis for creating better strategies for therapeutically combating life-threatening fungal infections. So far, she's been investigating a particular protein called Hsp90. This protein is part of a larger class of heat-shock proteins (HSPs), which are crucial for responding to environmental stress. Cowen is interested in how Hsp90 enables fungi to evolve a variety of new traits, such as drug resistance.

"My future research," says Cowen, "will focus on the evolution of host-pathogen interactions and Hsp90's role in this ubiquitous process."

Cowen received her PhD in 2002 from the University of Toronto in Ontario, Canada. For her thesis she researched the emergence of drug-resistant fungi using population genetics, evolutionary biology and genomics.

"When Leah came to my lab two years ago, I knew to expect some great things from her," says Lindquist. "Still, I continue to be amazed by the depth of her insight and her ability to accomplish very ambitious experiments with aplomb. She is also very involved in Whitehead programs—a real asset to our community."

Kim and Sharp named to Whitehead Board

Peter Kim, president of Merck Research Laboratories, and Phillip Sharp, Nobel laureate and founding director of the McGovern Institute for Brain Research at MIT, have joined Whitehead's Board of Directors.

It's a return of sorts for Kim, who became one of Whitehead's most renowned faculty members before joining the pharmaceutical company in 2001. "I can't tell you how delighted I am to have Peter Kim back on board—so to speak," says David Page, Whitehead Director. "Peter is an amazing scientist. That, combined with his 17-year history at Whitehead, will make him an indispensable member of our Board of Directors."

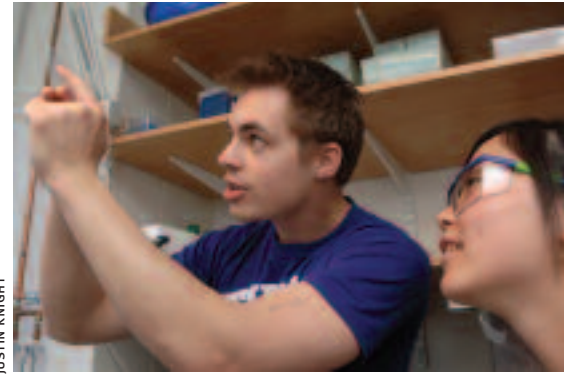
A pioneer in structural biology, Kim has made major contributions to the field of AIDS research. In 1997, his lab at Whitehead identified a vulnerable "pocket" on the HIV coat as a drug target. In 1999, the Kim lab recreated the pocket in the laboratory. With the pocket structure in hand, the researchers achieved a major breakthrough in the search for new oral drugs to treat HIV infection.

Kim came to Whitehead in 1985 as a

Fellow. In 1988 he became an Associate Member of the Institute. He was named an Assistant Investigator of the Howard Hughes Medical Institute in 1990, and became a Member of Whitehead Institute in 1992. In 1997, Kim was elected to the National Academy of Sciences. Two years later, he was elected to the American Academy of Microbiology and joined the ranks of the American Association for the Advancement of Science Fellows.

Incoming Board member Phillip Sharp is the author of more than 300 scientific papers. He is a recipient of the National Medal of Science, an Institute Professor at MIT, and a member of the National Academy of Sciences, the Institute of Medicine, and the American Academy of Arts and Sciences.

Sharp's landmark achievement was the 1977 discovery of RNA splicing, providing one early indication of "discontinuous genes" in mammalian cells ("nonsense" segments that cells edit out when they produce proteins). For this work he shared the 1993 Nobel Prize in Physiology or Medicine.



JUSTIN KNIGHT

Student program highlights stem cells

Whitehead's three-day spring lecture series gives Massachusetts high school students an opportunity to learn about cutting-edge topics in biomedical research. This year's event covered the promises and problems of stem cell research. Members Harvey Lodish and Robert Weinberg were among the speakers. The students visited Institute labs (shown here) as well as local biotech companies Biogen, Genzyme, Microbia and Millennium. The program concluded with a panel discussion on the scientific and political future of stem cells—with lively questioning from many students.

French academy honors Bartel

Whitehead Institute Member David Bartel is one of two scientists to receive the annual Louis-D. Prize from the Institut de France, an organization similar in many respects to the National Academy of Sciences in the U.S.

He received the prestigious award at a ceremony in Paris in June, along with fellow recipient Ronald Plasterk of the Netherlands Institute for Developmental Biology.

Bartel's research has recently been highlighted by the discovery of the abundance of microRNAs, molecules that play an active role in regulating the genomes of both plants and mammals by interrupting a gene's ability to produce protein.

It wasn't until 2000 that scientists were aware that these molecules existed in humans. Now, as shown earlier this year in a *Cell* paper, Bartel and his colleagues have found that more than one third of the human genes are at least partially controlled by microRNAs. And, Bartel says, that number is a conservative estimate.

This research is also exciting due to its potential therapeutic applications, using a technique known as RNA interference to shut off gene expression.