CSR Reviewers Receive 2012 Nobel Prize for Chemistry

Two scientists who have reviewed grant applications for the NIH Center for Scientific Review recently won the 2012 Nobel Prize for Chemistry:

- Robert J. Lefkowitz, M.D., of the Howard Hughes Medical Institute and Duke University Medical Center;
- Brian K. Kobilka, M.D., of the Stanford University School of Medicine.

They were named to receive the 2012 Nobel Prize for chemistry “for studies of G-protein-coupled receptors.”

NIH Director Francis S. Collins, M.D., Ph.D., explained the importance of their work in a related NIH press release: “About half of all medications, including beta blockers, antihistamines and various kinds of psychiatric medications, act through these receptors,” he said “NIH is proud to have supported this work, which began as basic science and ultimately led to dramatic medical advances.”

“We are pleased to congratulate Drs. Lefkowitz and Kobilka and to note their past review service,” said CSR Acting Director Dr. Richard Nakamura. “Their accomplishment highlights the important role our best scientists play, largely unrecognized, as reviewers.” He noted that “it took reviewers with great expertise and insight to see the promise of their applications, and every year, it takes thousands of committed reviewers to help NIH identify research that will foster future breakthroughs.”

When the news broke, Dr. Kobilka was actually set to be at a meeting of CSR’s Molecular and Integrative Signal Transduction (MIST) study section the next day. Amid the flurry of phone calls from dignitaries and the media, he managed to call his CSR Scientific Review Officer, Dr. Raya Mandler, to apologize for not being able to travel to the MIST meeting. He nonetheless made arrangements to phone into the two day meeting so the applications would receive the reviews they deserved on time.

In addition to being a regular member of the MIST, Dr. Kobilka served previously as a regular member on CSR’s Pharmacology study section. He also has served as a temporary member of a number of other CSR and NIH review panels.

Though Dr. Lefkowitz has not recently reviewed NIH grant applications for CSR, he is remembered and appreciated for his service on NIH review groups.

Winning History of CSR Reviewers and NIH Grantees

In the last 13 years, 30 Nobel Prize winners in Chemistry, Physiology or Medicine have served on CSR and/or other NIH peer review groups. During this time, 73% of the Nobel Prizes awarded in these areas were either won or shared by scientists who reviewed NIH grant applications.

Since 1964, about 80 percent of the Nobel Prizes awarded for physiology or medicine went to an NIH grantee or to a team that included at least one NIH grantee.

2011 Nobel Prize in Physiology or Medicine

- Dr. Ralph Steinman, Rockefeller University, New York, NY.
• **Dr. Bruce Beutler,** University of Texas Southwestern Medical Center in Dallas and The Scripps Research Institute, La Jolla, CA.

They shared the prize with Jules Hoffmann at the University of Strasbourg, France.

**2010 Nobel Prize in Chemistry**

• **Dr. Ei-Ichi Negishi,** Purdue University in West Lafayette, IN, shared the Dr. Richard F. Heck at the University of Delaware and Dr. Akira Suzuki at Hokkaido University in Sapporo, Japan.

**2009 Nobel Prize in Physiology or Medicine**

• **Dr. Elizabeth Blackburn,** University of California at San Francisco.
• **Dr. Carol Greider,** The Johns Hopkins University School of Medicine, Baltimore, MD.
• **Dr. Jack W. Szostak,** Harvard School of Medicine, Cambridge, MA.

**2009 Nobel Prize in Chemistry**

• **Dr. Venkatraman Ramakrishnan,** the MRC Laboratory of Molecular Biology in Cambridge, U.K.
• **Dr. Thomas Arthur Steitz,** Yale University, New Haven, CT.

They shared the prize with Ada E. Yonath at the Weizmann Institute of Science, Rehovot, Israel.

**2008 Nobel Prize in Chemistry**

• **Dr. Martin Chalfie,** Columbia University in New York City.
• **Dr. Roger Tsien,** University of California at San Diego.

They shared the prize with Dr. Osamu Shimomura at the Marine Biological Laboratory, Woods Hole, MA.

**2007 Nobel Prize in Physiology or Medicine**

• **Drs. Mario Capecchi,** University of Utah, Salt Lake City, UT.
• **Dr. Oliver Smithies,** University of North Carolina at Chapel Hill.

They shared the prize with Dr. Martin Evans from Cardiff University, U.K.

**2006 Nobel Prize in Chemistry**

• **Dr. Roger Kornberg,** Stanford University, Stanford, CA.

**2006 Nobel Prize in Physiology or Medicine**

• **Dr. Andrew Fire,** Stanford University, Stanford, CA.
• **Dr. Craig Mello,** University of Massachusetts Medical School, Worcester, MA

**2005 Nobel Prize in Chemistry**

• **Robert Grubbs,** California Institute of Technology, Pasadena, CA.
• **Richard Schrock,** Massachusetts Institute of Technology, Cambridge, MA.

**2004 Nobel Prize in Physiology or Medicine**

• **Richard Axel,** Columbia University, New York, NY.
• **Dr. Linda Buck**, Fred Hutchinson Cancer Research Center in Seattle, WA.

**2003 Nobel Prize in Chemistry**

• **Dr. Peter Agre**, from Johns Hopkins University School of Medicine, Baltimore, MD.
• **Dr. Roderick MacKinnon** from Rockefeller University, New York, NY.

**2003 Nobel Prize in Physiology or Medicine**

• **Dr. Paul C. Lauterbur**, University of Illinois, Urbana, IL.
  He shared the prize with Dr. Peter Mansfield from the University of Nottingham, School of Physics and Astronomy, Nottingham, U.K.

**2002 Nobel Prize in Chemistry**

• **Dr. John Fenn***, Virginia Commonwealth University, Richmond, VA.
  He shared the award with Dr. Koichi Tanaka, Shimadzu Corp., Kyoto, Japan; and Kurt Wüthrich, Swiss Federal Institute of Technology, Zurich, Switzerland, and The Scripps Research Institute, La Jolla, CA.

**2002 Nobel Prize in Physiology or Medicine**

• **Dr. H. Robert Horvitz***, Massachusetts Institute of Technology (MIT), Cambridge, MA.
  He shared the prize with Dr. Sydney Brenner, The Molecular Sciences Institute, Berkeley, CA; and Dr. John Sulston, The Wellcome Trust Sanger Institute, Cambridge, U.K.

**2001 Nobel Prize in Physiology or Medicine**

• **Dr. Leland H. Hartwell**, Fred Hutchinson Cancer Research Center, Seattle, WA.
  He shared the prize with Dr. Tim Hunt, Imperial Cancer Research Fund, London, U.K.; and Dr. Paul Nurse, Imperial Cancer Research Fund, London, U.K.

**2001 Nobel Prize in Chemistry**

• **Dr. K. Barry Sharpless**, The Scripps Research Institute in La Jolla, CA.
  He shared the prize with Dr. William S. Knowles at Monsanto; and Dr. Ryoji Noyori, Nagoya University, Nagoya, Japan.

**2000 Nobel Prize in Physiology or Medicine**

• **Dr. Eric Kandel**, Columbia University in New York City.
• **Dr. Paul Greengard*** at Rockefeller University in New York City.
  They shared the prize with Dr. Arvid Carlsson at Göteborg University, Gothenburg, Sweden.

* **Note**: Drs. Fenn, Horvitz and Greengard are the only reviewers on the list whose NIH service didn’t include service on a CSR review group. Dr. Fenn served on a special emphasis panel organized by the National Institute on Drug Abuse (NIDA), and Dr. Horvitz served on NIDA’s Advisory Council and currently serves on the Advisory Committee to the Director, NIH.

**About CSR**

CSR organizes the peer review groups that evaluate the majority of grant applications submitted to NIH. These groups include experienced and respected researchers from across the country and abroad. Since
1946, CSR’s mission has been to see that NIH grant applications receive fair, independent, expert, and timely reviews — free from inappropriate influences — so NIH can fund the most promising research. CSR also receives all incoming applications and assigns them to the NIH institutes and centers that fund grants. For more information, go to CSR’s Web site—http://www.csr.nih.gov—or phone 301-435-1111.

About NIH
NIH — the Nation’s Medical Research Agency — includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. It is the primary federal agency for conducting and supporting basic, clinical and translational medical research, and it investigates the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit www.nih.gov.