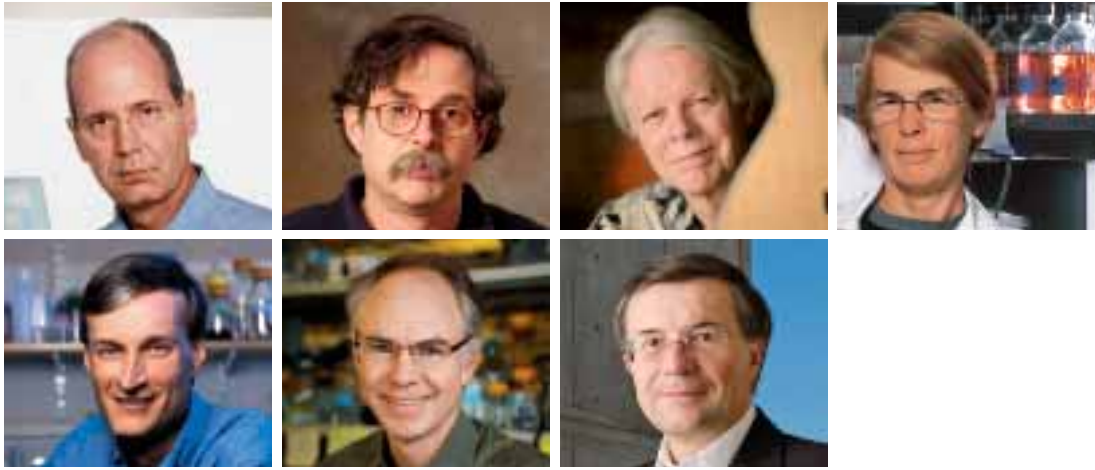


SPOTLIGHT

## Seven Elected to Institute of Medicine



TOP ROW: HARRY DIETZ III, ARTHUR HORWICH, JOHN KAPPLER, PHILIPPA MARRACK  
 BOTTOM ROW: DAVID PAGE, CHARLES SAWYERS, TERRENCE SEJNOWSKI

A total of seven HHMI investigators were elected to the National Academy of Science's Institute of Medicine in October 2008. The investigators are **Harry C. Dietz III**, Johns Hopkins School of Medicine; **Arthur L. Horwich**, Yale School of Medicine; **John W. Kappler**, National Jewish Health; **Philippa Marrack**, National Jewish Health; **David C. Page**, Massachusetts Institute of Technology; **Charles L. Sawyers**, Memorial Sloan-Kettering Cancer Center; and **Terrence J. Sejnowski**, Salk Institute for Biological Studies.

**BRUCE ALBERTS**, the HHMI undergraduate program director at the University of California, San Francisco, won the 2008 Carl Brändén Award from the Protein Society. The award is given annually to an outstanding protein scientist who has also made exceptional contributions in the areas of education and/or service to the sciences.

**DAVID BAKER**, an HHMI investigator at the University of Washington, **JONATHAN S. WEISSMAN**, an HHMI investigator at the University of California, San Francisco, and Martin Gruebele of the University of Illinois at Urbana-Champaign, were awarded the 2008 Raymond and Beverly Sackler International Prize in Biophysics. This annual award, administered by Tel Aviv University, recognizes the seminal contributions of the three researchers to studies of protein folding.

A total of ten HHMI investigators and five HHMI professors were named fellows of the American Association for the Advancement of Science. The investigators are **MICHAEL J. BEVAN**, University of Washington School of Medicine; **DAVID E. CLAPHAM**, Boston Children's Hospital; **JENNIFER DOUDNA**,

University of California, Berkeley; **DOUGLAS E. KOSHLAND**, Carnegie Institution for Science; **BARBARA J. MEYER**, University of California, Berkeley; **JEREMY NATHANS**, Johns Hopkins University School of Medicine; **NIPAM H. PATEL**, University of California, Berkeley; **NORBERT PERRIMON**, Harvard Medical School; **SUSAN S. TAYLOR**, University of California, San Diego; and **LI-HUEI TSAI**, Massachusetts Institute of Technology. The professors are **JO HANDELSMAN**, University of Wisconsin-Madison; **DIANE K. O'DOWD**, University of California, Irvine; **BALDOMERO OLIVERA**, University of Utah; **REBECCA RICHARDS-KORTUM**, Rice University; and **GRAHAM C. WALKER**, Massachusetts Institute of Technology. Also named were **DANIEL J. KLIONSKY**, HHMI undergraduate program director at the University of Michigan; and **JOAN RUDERMAN** of Harvard University, a member of the HHMI medical advisory board.

Two HHMI investigators—**MICHAEL B. ELOWITZ** of the California Institute of Technology and **JONATHAN K. PRITCHARD** of the University of Chicago—were named to *Discover* magazine's "20 Best Brains Under

40" list, which recognizes young innovators breaking ground in their fields. Elowitz studies how genetically identical cells have variability in their biological components, and Pritchard studies how organisms adapt to their environments over short periods of time.

Rutgers University and the Robert Wood Johnson Medical School awarded HHMI investigator **STANLEY FIELDS**, of the University of Washington School of Medicine, with the 2008 Paul Janssen Prize in Advanced Biotechnology and Medicine. Fields has developed technologies that use simple genetic strategies in yeast to analyze protein functions.

**JO HANDELSMAN**, an HHMI professor at the University of Wisconsin-Madison, received the 2009 American Society for Microbiology's Carski Foundation Distinguished Undergraduate Teaching Award. This annual award, which has been supported by the Carski Foundation since 1968, honors an educator for outstanding teaching of microbiology to undergraduate students.

HHMI investigator **OLIVER HOBERT** of the Columbia University College of Physicians

Dietz III: Elena Dorfman; Horwich: Jerry Domian / Yale University; Kappler: Roy Ng; Marrack: Barry Silverstein/National Jewish Health; Page: Sam Ogden / Whitehead Institute; Sawyers: Liz Boylen / PR-Newswire; ©HHMI; Sejnowski: Tim Mantoni

and Surgeons received the 2008 Harland Winfield Mossman Award in Developmental Biology from the American Association of Anatomists. The award is given annually to an investigator in the early stages of his or her career for contributions to the field of developmental biology. Hobert studies how neural diversity and left-right asymmetries are generated in the nervous system.

HHMI-supported undergraduate **CAITLIN E. MULLARKEY** of Swarthmore College and **JARRAD M. AGUIRRE**, who worked in the lab of HHMI investigator Li-Huei Tsai at the Massachusetts Institute of Technology through the 2008 HHMI Exceptional Research Opportunities Program, were two of 32 U.S. students to be awarded a Rhodes Scholarship to study at Oxford University next year. A senior at Swarthmore, Mullarkey has been studying a gene implicated in glaucoma and glioblastoma. She intends to work in an HIV/AIDS lab at Oxford. Aguirre is a senior at Yale University majoring in molecular, cellular, and developmental biology. He will study medical anthropology at Oxford.

HHMI international research scholar **RAÚL A. PADRÓN** of the Venezuelan Institute for Scientific Research won the 2008 Science and Technology National Prize of Venezuela, the top scientific recognition in the country. Padrón studies how thick filaments of striated muscle are activated during muscle contraction.

**RAFAEL RADI**, an HHMI international research scholar at the Universidad de la República in Uruguay, was elected to the

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### Tsien Awarded Wilson Medal

The 2008 E.B. Wilson Medal went to HHMI investigator **Roger Y. Tsien** of the University of California, San Diego, and Martin Chalfie of Columbia University. The medal is the American Society for Cell Biology's highest science honor and is awarded for far-reaching lifetime contributions to cell biology. Tsien and Chalfie developed green fluorescent protein (GFP) as a tool for tagging proteins. The glowing marker allows scientists to watch the movements, positions, and interactions of tagged molecules. GFP also allows researchers to follow the fates of various cells, such as nerves affected by Alzheimer's disease, or cells in a growing embryo.



ROGER TSIEN

Latin American Academy of Sciences. The Academy has 222 members across Latin America and the Caribbean.

The 2008 Katz Prize in Cardiovascular Medicine was awarded to HHMI investigator **CHRISTINE E. SEIDMAN**, of Brigham and Women's Hospital, and Jonathan Seidman, of Harvard Medical School. The award, presented by the Columbia University Medical Center, recognizes outstanding contributions to cardiovascular research. The Seidman research team has detected many genetic causes for heart diseases, including hypertrophic cardiomyopathy—a condition that thickens the heart muscle and often causes arrhythmias and heart failure.

**LOUISA A. STARK**, the HHMI pre-college program director at the University of Utah School of Medicine, received the 2008 Award

for Excellence in Human Genetics Education from the American Society of Human Genetics. The award recognizes the work of Stark, and two colleagues, on the Genetic Science Learning Center, started with HHMI funds in 1994 to educate students, teachers, and the public about genetics.

**JOAN A. STEITZ**, an HHMI investigator at the Yale School of Medicine, received the 2008 New York Academy of Medicine Medal for Distinguished Contributions in Biomedical Science. She also received a Connecticut Women's Hall of Fame Award. Steitz is interested in the roles played by small RNA-protein complexes in vertebrate cells.

HHMI investigator **PETER WALTER**, of the University of California, San Francisco, received the 2009 Stein and Moore Award from the Protein Society, which recognizes his contributions to the study of proteins. Walter has discovered how the endoplasmic reticulum of a cell senses when proteins are misfolded and sends them to be degraded.

Two HHMI-supported Davidson College undergraduates, **PALLAVI PENUMETCHA** and **KRISTI MUSCALINO**, were on a team that won a gold medal at the 2008 International Genetically Engineered Machine competition (iGEM), an undergraduate synthetic-biology competition with 84 teams from 21 countries. The Davidson team designed, modeled, and constructed a bacterial computer.

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### HHMI Graduate Fellow Wins Grand Prize in Inventors Competition

**Timothy Lu**, an HHMI student fellow in the lab of HHMI investigator James J. Collins at Boston University, won first place in the 2008 Collegiate Inventors Competition. The prize was given for Lu's engineered bacteriophages—viruses that infect bacteria—which work in conjunction with existing antibiotics to enhance their efficacy against bacteria. During one of his clinical rotations, Lu, an M.D./Ph.D. student, was struck by the number of infectious outbreaks he witnessed in patients. So he used his synthetic-biology background to brainstorm solutions. The bacteriophages Lu developed produce enzymes that break down the protective coating surrounding communities of bacteria, enabling increased killing of bacterial cells.