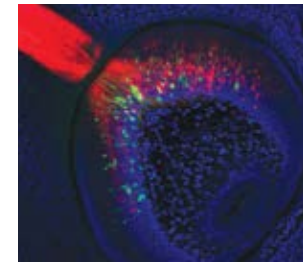




Join more than 30,000 scientists from more than 80 countries to foster scientific discoveries and form new collaborations.



## Featured Lectures

### DAVID KOPF LECTURE ON NEUROETHICS

#### Mind, Brain, and the Ethics of Intergroup Behavior

**Mahzarin Banaji, PhD**  
Harvard University

*Support contributed by: David Kopf Instruments*

Sunday, Nov. 16, 11:30 a.m.–12:40 p.m.

From the moment of birth, every human is a member of many groups. Group memberships create affiliations of “us” and “them” and sensitivity to status in social hierarchies. Human minds reflect these in myriad attitudes and beliefs that contain deep knowledge about the hidden presence or surprising absence of group love. Unveiling them by observing brain activity and behavior allows understanding of the natural and cultivated ways in which the meanings of in-group and out-group (self and other) are represented and group love is elusively tuned up and down.



### PETER AND PATRICIA GRUBER LECTURE

#### Circuits and Strategies for Skilled Motor Behavior

**Thomas M. Jessell, PhD**  
Columbia University, Howard Hughes  
Medical Institute

*Support contributed by: The Gruber Foundation*

Sunday, Nov. 16, 2:30–3:40 p.m.

The capacity to generate movement on demand is a reflection of neural computations that integrate internal command and external feedback for the purpose of patterned motor output. Advances in deciphering the logic of motor systems have not yet resolved the strategies and mechanisms through which neural circuits direct motor behavior. This lecture will probe this issue through an analysis of motor circuits in the mammalian spinal cord, focusing on the functions of interneurons assigned to two feedback circuits, one that evaluates the fidelity of intended motor acts and a second that filters external sensory reports.



### ALBERT AND ELLEN GRASS LECTURE

#### Cellular and Molecular Mechanisms of Explicit Learning in the Hippocampus **CME**

**Roger A. Nicoll, MD**  
University of California, San Francisco

*Support contributed by: The Grass Foundation*

Monday, Nov. 17, 3:15–4:25 p.m.

Long-term potentiation (LTP) has remained the most compelling cellular model for learning and memory since its discovery nearly 50 years ago by Bliss and Lomo. The thousands of papers published on LTP can be overwhelming to sift through for experts and novices alike. In this lecture, Nicoll will probe the core properties of LTP, arguing that the dozens of proteins linked to the phenomenon are not essential, but rather modulate the threshold and/or magnitude of LTP.



### HISTORY OF NEUROSCIENCE LECTURE

#### The Messengers of the Mind

**Floyd E. Bloom, MD**  
The Scripps Research Institute

Tuesday, Nov. 18, 2:30–3:40 p.m.

At the cellular and molecular levels of operation, neurons and their circuits achieve brain functions by chemical signals, in which the principle agents, neurotransmitters, convey the signal from the sending neuron to the receiving neuron. The discovery of each of the chemical families of neurotransmitters (amino acids, amines, and neuropeptides) provides important insight on understanding how brains function, changing our concepts of the complexities of short-term and long-term brain events, and how medications can intervene in brain dysfunctions.

