Two Columbians Named Howard Hughes Investigators

Oliver Hobert, assistant professor of biochemistry and molecular biophysics, and Rafael Yuste, associate professor of biological sciences, were recently appointed Howard Hughes Medical Institute (HHMI) investigators. They join 45 other HHMI investigators—an honor reserved for the country’s most promising biomedical scientists.

Hobert’s research focuses on molecular mechanisms that create and maintain the structure and function of the nervous system. His goal is to understand how neurons communicate with both nearby and distant cells through long processes, called axons, which extend from the neuron’s cell body. To ensure the proper flow of information within the nervous system and throughout the body, it is essential that axons reach their appropriate targets on neighboring cells. Scientists have spent decades exploring the complex cues that break axons to their correct destinations and help them make the right connections.

_referenced to HHMI is a wonderful recognition of the work accomplished by the researchers in my lab and also a reflection of the superb research and collegial environment here at Columbia—which constantly motivates one to think outside the box,” said Hobert.

Yuste is an associate professor of biological sciences at the Morningside campus—the first faculty member there to be honored with the HHMI distinction. Yuste works to understand the cortical microcircuit, the basic element of cortical network architecture in humans, the cerebral cortex is the primary site for memory, control of voluntary movements, imagination and language. By first unraveling the dynamics of specific cortical microcircuits, and next the interactions between those circuies, he hopes to build a better understanding of how the whole cortex works along the way. Yuste aims to identify potential drug targets for treating epilepsy.

“This award honors the research of the entire Department of Biological Sciences here at Columbia,” said Yuste. “This will enable my group to focus on long-term projects, such as the analysis of the cortical microcircuitry, and also risky projects, such as the development of new techniques or approaches, which are unlikely to be funded through conventional mechanisms.”

“These appointments should enable Hobert to significantly further his research efforts into the nervous system and to further Yuste’s efforts to develop new therapeutic options for epilepsy. Both scientists have already contributed great work in these areas,” said Gerald D. Fischbach, executive vice president of Columbia University Medical Center.

Robert and Yuste’s appointments bring the number of HHMI investigators at Columbia to 12, a group which includes Nobel Laureates Richard Axel and Eric Kandel, as well as Stephen Goff, Higgins Professor of Biochemistry and Molecular Biophysics and professor of microbiology; professors of biochemistry and molecular biophysics J. Nick Gonias, Ira Greenwald, Barry Honn and Thomas Jessell; University Professor Wayne Hendrickson; Steven Stieglitz, professor of pharmacology; and Gary Straf, professor of genetics and development.

HHMI is a nonprofit medical research organization that is one of the world’s largest philanthropies, with laboratories across the United States and throughout the world.

More on Columbia University Diversity Initiatives

The ADVANCE Program at the Earth Institute

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