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William Newsome Receives the Champalimaud Vision Award

The Champalimaud Foundation, one of the world's largest international scientific institutions, announced today that J. Anthony Movshon, director of New York University's Center for Neural Studies, and William T. Newsome, investigator at the Howard Hughes Medical Institute (HHMI) and professor of neurobiology at Stanford University, are the recipients of its 2010 Vision Award.

The prestigious Champalimaud Vision Award comes with a \$1.3 million prize, the largest monetary award in the field of visual research and one of the largest scientific and humanitarian prizes in the world. The award is given to recipients for outstanding achievement, and the funds are to be used in any way that furthers and amplifies the recipients' scientific efforts. In 2008, HHMI investigator Jeremy Nathans shared the Vision Award with King-Wai Yau of Johns Hopkins University.

The Champalimaud Foundation, based in Lisbon, Portugal, is a private organization dedicated to the advancement of biomedical science. With an endowment of approximately \$605 million, the Foundation's work is focused on three core areas: neuroscience research, cancer research, and an outreach program to support the fight against blindness. The Foundation's new research center, the Champalimaud Center for the Unknown, is currently under construction and expected to open in the fourth quarter of 2010.

According to the Foundation, the Vision Award recognizes Movshon and Newsome for groundbreaking research conducted over the last 30 years. "Working at times together and at other times separately, these outstanding researchers have had a major impact on scientists' understanding of how the brain reconstructs images, so that human beings can perceive, interpret and act in the world," the Foundation said in a statement.

Leonor Beleza, President of The Champalimaud Foundation, said, "Visual perception starts with the eyes, but it happens in the brain. Over a 30-year period, the work of Dr. Movshon and Dr. Newsome has taken this axiom to new scientific levels of understanding. Because of these two outstanding neuroscientists, we now have a fundamental appreciation for the role of neurons in how we see things move about in the world."

In his early studies, Movshon, who was an HHMI investigator from 1991-2003, contributed to the understanding of how the brain represents the form and motion of objects, identifying for the first time neural circuits computing motion perception in the brain's middle temporal lobe (MT). In a joint 1989 study, that is today considered a classic, Movshon and Newsome demonstrated that neurons in the MT visual area are responsible for perceptual judgments about direction. By monitoring neuron responses, they could accurately predict decisions about perception, thus linking perception to specific activity within a neural circuit. Newsome demonstrated that by altering the activity of neurons, perceptual performance could be either improved or diminished.

These studies proved that the activity of neurons in the brain's MT is necessary in order for human beings to see moving objects. By unequivocally demonstrating this fact, Movshon and Newsome paved the way for studies of the mental processes that link perception to action and for a greater understanding of the complex computations that underlie human decision-making and behavior.

The jury panel for The Vision Award included Alfred Sommer (Johns Hopkins University), Mark Bear (HHMI/Massachusetts Institute of Technology), Nobel Laureate Susumu Tonegawa (MIT/RIKEN), Carla Shatz (Stanford University), Joshua Sanes (Harvard University), Paul A. Sieving (NIH), Gullapalli N. Rao (LV Prasad Eye Institute and International Center for Eyecare Education), Nobel Laureate Amartya Sen (Harvard University), Jose Cunha-Vaz (Coimbra University), Jacques Delors (former President, European Commission), Antonio Guterres (former Prime Minister of Portugal).