

University of Wisconsin: UW neuroscientist Dr. Robert Fettiplace wins 2018 Kavli Prize for hearing research

Posted on Thursday, May 31, 2018

>> **WisPolitics is now on the State Affairs network. Get custom keyword notifications, bill tracking and all WisPolitics content. [Get the app or access via desktop.](#)**

Contact: Susan Lampert Smith

11 a.m. CST Thursday, May 31, 2018 (608) 513-6946

Ssmith5@uwhealth.org

MADISON, Wis. – Dr. Robert Fettiplace, who pioneered techniques to better understand the physiology of hearing, was announced today as one of the winners of the Kavli Prize in Neuroscience, one of the world's pre-eminent scientific honors, for work that helped unravel the mysteries hearing and deafness.

Fettiplace, the Steenbock Professor of Neural and Behavioral Sciences at the University of Wisconsin School of Medicine and Public Health, will receive a gold medal and share the \$1 million Kavli Prize in Neuroscience with fellow hearing researchers Dr. A. James Hudspeth, of Rockefeller University, and Dr. Christine Petit, of the Pasteur Institute.

The Kavli Prize, established in 2008, is awarded in three areas of scientific inquiry: astrophysics, nanoscience and neuroscience.

The nanoscience prize was awarded to the inventors of the CRISPR-Cas9 gene-editing tool – Dr. Emmanuelle Charpentier of the Max Planck Institute, Berlin; Dr. Jennifer Doudna of the University of California-Berkeley; and Dr. Viginijus Sisnys, of Vilnius University. Dr. Ewine Van Dishoeck, of Leiden University, won the

astrophysics prize.

Today's announcement of the Kavli Prize winners by the president of the Norwegian Academy of Science and Letters was broadcast live in New York as part of the opening event at the World Science Festival.

"The School of Medicine and Public Health is very proud of Professor Fettiplace's outstanding scientific accomplishments and we are delighted that he has received this very well-deserved international recognition," says Dr. Robert Golden, dean of the school.

Dr. Donata Oertel, chair of the Department of Neurosciences, says that Fettiplace has devoted his career to understanding how hair cells of the inner ear allow us to hear.

"He pioneered numerous new techniques with which he could address problems unique to the ear," Oertel says. "He published his findings in a series of groundbreaking papers that are as elegant in their approach, as beautiful in their writing, as rigorous in their analysis, and as meticulous in their scholarship as any I have read.

"I feel lucky to have Robert as a colleague and am thrilled that his work is being recognized by the Kavli Prize."

Fettiplace, who began his studies at Cambridge University, is one of the world's preeminent sensory physiologists. He spent his early career studying the inner ear of turtles, and found that that individual hair cells were tuned to resonate to a specific frequency, and that they were arranged along the cochlea much like the keys of the piano.

He predicted, then showed in a series of experiments in turtles and later in mammals, that the fine tuning of each hair cell is controlled by ion channels. Ole Petter Ottersen, head of the neuroscience prize committee, says that the work of the three scientists "provided fundamental new insight in how our inner ear transforms sound into electrical signals - the basis of hearing - and have unveiled genetic and molecular mechanisms underlying hearing loss."

"Their work serves as a sterling example of how concerted efforts across disciplines and technologies can revolutionize our understanding of complex neurobiological

processes. Between them the three laureates have helped unravel the sense of hearing.”

Fettiplace is a Fellow of the Royal Society and a Fellow of the American Academy of Arts and Sciences (AAAS).

The Kavli Laureates will receive their medals and prizes in September during a week of festivities in Oslo and Trondheim, Norway. The ceremony is presided over by King Harald of Norway, and hosted by American actor Alan Alda and Norwegian actress and singer Heidi Ruud Ellingsen.