Diabologic: Kavli Prizes 2012

by Frank Dolinar

Achievement, excellence, and lasting value are the criteria for awards of world renowned prizes.

The Nobel Prizes in Peace, Literature, Chemistry, Physiology or Medicine, and Physics have been awarded annually since 1901. The associated prize in Economics, which was not specified in Nobel's will was instituted by Sweden's central bank in 1968 and first awarded in 1969.

Nearly everyone knows about these prizes. The names of the winners have become, in many cases, household words – if not the stuff of legend. A Nobel Prize is the equivalent of Olympic Gold.

By comparison, few people yet know of the prizes instituted by the Kavli Foundation and the Norwegian Academy of Science and Letters. The first biennial Kavli Prizes in Astrophysics, Neuroscience, and Nanoscience were awarded in 2008. They acknowledge areas of science that didn't even exist at the time the Nobel Prizes were created.

The Kavli Prizes will be awarded for the third time on Tuesday, September 4, 2012, to seven outstanding scientists, who were selected for making fundamental contributions to our understanding of the outer solar system, the differences in material properties between nano- and larger scales, and how the brain receives and responds to sensations such as sight, sound and touch.

Note: The following award announcements are from the Kavli Foundation website.

This year's Kavli Prize in Astrophysics is shared among David C. Jewitt, University of California, USA, Jane X. Luu, Massachusetts Institute of Technology, Lincoln Laboratory, USA, and Michael E. Brown, California Institute of Technology, USA. They received the prize for "*discovering and characterizing the Kuiper Belt and its largest members, work that led to a major advance in the understanding of the history of our planetary system.*"

This year's Kavli Prize in Nanoscience is awarded to Mildred S. Dresselhaus, of MIT. Over more than five decades, Dresselhaus has made multiple advances in helping to explain why the properties of materials structured at the nanoscale can vary so much from those of the same materials at larger dimensions. She is recognized for her "*her pioneering contributions to the study of phonons, electron-phonon interactions, and thermal transport in nanostructures."*

This year's Kavli Prize in Neuroscience is shared among Cornelia Isabella Bargmann, Rockefeller University, USA, Winfried Denk, Max Planck Institute for Medical Research, Germany, and Ann M. Graybiel, Massachusetts Institute of Technology, USA. They received the prize "for elucidating basic neuronal mechanisms underlying perception and decision."

This isn't high school science. It can take years of dedicated and meticulous work for a working scientist to discover something fundamental that increases our understanding of the way things work. These scientists are living proof that such understanding can be achieved, for everyone's benefit.

The Kavli Foundation (http://www.kavlifoundation.org/) is dedicated to advancing science for the benefit of humanity, promoting public understanding of scientific research, and supporting scientists and their work. Its mission is implemented through an international program of research institutes, professorships, symposia, and other initiatives in the fields of astrophysics, nanoscience, neuroscience, and theoretical physics.

The Kavli Prizes are a partnership between the Norwegian Academy of Science and Letters, the Kavli Foundation (USA) and the Norwegian Ministry of Education and Research. His Majesty King Harald will present the Kavli Prizes at an award ceremony in Oslo, Norway on Tuesday, September 4, 2012.

Extensive information about the Kavli Prizes and this year's recipients is available on the Kavli Foundation website at: http://www.kavlifoundation.org/2012-kavli-prize