

# MBL SPECIAL LECTURE SERIES

Tuesday, July 12, 2011 at 9 AM • Lillie Auditorium



## *The Irvin Isenberg Lectureship*

---

# Evolution of a protein complex involved in cell-cell adhesion and epithelial polarity

JAMES NELSON, *Stanford University*

Dr. Nelson is a professor of Biology and of Molecular & Cellular Physiology and the Rudy J. and Daphne Donohue Munzer Professor at Stanford University. Dr. Nelson's research objectives are to understand cellular mechanisms involved in development and maintenance of cell polarity. Recent studies indicate that development of epithelial cell polarity is a multistage process requiring instructive extracellular cues (e.g., cell-cell and cell-substratum contact) and reorganization of proteins in the cytoplasm and on the plasma membrane. Once established, polarity is maintained by targeting and retention of proteins to functionally distinct apical and basal-lateral plasma membrane domains.

Dr. Nelson received his Ph.D. from the Chester Beatty Institute for Cancer Research in London. He was awarded a postdoctoral position at the Max-Planck Institute for Cell Biology in Heidelberg. Following his postdoctoral work, he was a senior research fellow at the California Institute of Technology. Dr. Nelson is the recipient of many awards and honors including the Medical Research Council Pre-Doctoral Research Fellowship, Senior Investigator Award, American Heart Association, Max-Planck Research Prize, Henry Pickering Bowditch Award from the American Physiological Society, and the M.E.R.I.T. Award from the National Institutes of Health. He was appointed to Council, National Institutes of General Medical Sciences, is an elected Fellow of the American Academy of Arts and Sciences and is a Member of the American Society for Cell Biology.

## ABOUT THE IRVIN ISENBERG MEMORIAL LECTURESHIP

This lectureship was established in memory of Dr. Irvin Isenberg, whose distinguished career as a biophysicist began at the Marine Biological Laboratory. In 1950, Dr. Isenberg completed his Ph.D. in physics at the University of Pennsylvania and later developed an interest in biophysics while serving as a lecturer at the University of Chicago. In 1957, Dr. Isenberg and his family moved to Woods Hole, where he joined Nobel Laureate Albert Szent-Györgyi in his Institute for Muscle Research. Together they studied charge transfer reactions and free radicals using one of the early electron spin resonance instruments available in the United States. Dr. Isenberg also conducted research on fluorescence and phosphorescence of DNA before leaving the MBL in 1965 to become professor of Biophysics and Biochemistry at Oregon State University. There he developed his primary research interest in the structure and function of histones. The Isenberg family returned to Woods Hole every summer to rejoin beloved friends and to remain active participants in the scientific life of the community. Dr. Isenberg devoted his life to science and is remembered for instilling a strong sense of intellectual curiosity and integrity in the pursuit of scientific truth among his students. Today, we celebrate Dr. Isenberg's legacy by dedicating this lecture in his honor.