

Third Annual Wyeth/Douglass College Lectureship

Lecture by Dr. Susan S. Taylor "Dynamics and Integration of Signaling by PKA"

The Wyeth/Douglass College Lectureship was established to recognize prominent women working in the Chemical Sciences. The recipient of the third lectureship is Dr. Susan S. Taylor, Professor of Chemistry & Biochemistry at the University of San Diego.



Susan S. Taylor

Dr. Taylor has received many awards and has many professional accomplishments, including the NIH Career Development Award (1972-77); the NIH Biochemistry Study Section (1978-82); Editorial Board, *J. Biol. Chem.* (1985-90); election to the American Academy of Arts & Sciences (1992); National Research Council/Commission on Life Science (1992-95); Forefronts of Large Scale Computation Award (1993); Hans Lindner Memorial Lecture, The Weizmann Institute, Rehovot, Israel (1995); ASBMB President (1995-96); Merit Award, NIH GM19301 (1996); Member, Board of Scientific Councilors, National Cancer Institute (1996); election into the National Academy of Sciences (1997); election into the Institute of Medicine (1997); Howard Hughes Medical Institute Investigator (1997-present); Packard Foundation Fellowships Advisory Panel (1998); Burroughs-Wellcome Visiting Professor in Pharmacology, University of North Carolina (1998); Outstanding Scientist Award, San Diego American Chemical Society (1998); Outstanding Achievement Award, Miami Winter Symposium (1999); 2000 National Lecturer, The Biophysical Society National Lecture (2000) and the Francis P. Garvan-John M. Olin Medal (2001).

Dr. Taylor's research focuses on signaling molecules in the cell - specifically protein kinases that serve as molecular switches. This is one of the largest gene families and many diseases such as cancer and diabetes are associated with defects in protein kinases. Dr. Taylor's research has defined the molecular features of these enzymes.

The primary focus of Dr. Taylor's laboratory is to understand the structure, function and dynamics of cAMP-dependent protein kinase. This enzyme serves as a prototype for the entire protein kinase family. Functional sites and dynamic properties have been characterized by a variety of chemical, biophysical and recombinant approaches. The role of phosphorylation and myristylation as well as local and global dynamics are being probed. A crystal structure of the C-subunit solved in 1991, was the first protein kinase structure. The structure of the RIa and RIIB regulatory subunits have also been solved, and these reveal critical isoform-specific differences. The dimerization domain at the N-terminus serves also as a docking site for A Kinase Anchoring Proteins (AKAPs). The structure of the RIa D/D domain was solved by NMR in collaboration with Dr. Patricia Jennings. Fluorescence Resonance Energy Transfer has been used to detect PKA activation in living cells.

Dr. Taylor received her B.A. in Chemistry from the University of Wisconsin-Madison and her Ph.D. in Physiological Chemistry from the Johns Hopkins University, Baltimore, Maryland. She did postdoctoral work in Protein Chemistry at the MRC Laboratory of Molecular Biology, Cambridge, England and at the University of California, San Diego.

Tuesday, March 4, 2003

Coffee/Tea: 4:30 p.m.

Lecture: 5:00 p.m.

Trayes B, Douglass College Center

Corner of George Street and Nichol Avenue, New Brunswick

Park behind Douglass College Center

For more information: 732/932-2900 ext. 112

