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DEPARTMENT OF BIOCHEMISTRY

LUBOMIR S. HNILICA ENDOWED LECTURE

JIM WELLS, PH.D.

ENGINEERING CELLS TO DEATH

APRIL 26, 2012
4:00 P.M.
208 LIGHT HALL

Upcoming Discovery Lecturer

JEFF WRANA, PH.D.
University of Toronto

May 3, 2012
208 Light Hall / 4:00 P.M.



VANDERBILT  UNIVERSITY
MEDICAL CENTER

ENGINEERING CELLS TO DEATH

Apoptosis is a conserved process in multi-cellular organisms critical for removing unwanted or diseased cells. The final stages involves the activation of caspases, a set of proteases that act as cellular demolition experts that cleave critical target proteins. My group is involved in understanding the sequence of events, and molecular logic and conserved nature of the process. These studies reveal critical nodes and potential new cancer drug targets and biomarkers.



JIM WELLS, PH.D.

**CHAIR, DEPARTMENT OF PHARMACEUTICAL CHEMISTRY
UNIVERSITY CALIFORNIA SAN FRANCISCO
MEMBER, NATIONAL ACADEMY OF SCIENCES**

James A. Wells, PhD, focuses on development of enabling technologies for engineering proteins and for identifying small molecules to aid in drug discovery for challenging targets such as allosteric regulation and protein-protein interactions. He is interested in the discovery and design of small molecules and enzymes that trigger or modulate cellular processes in inflammation and cancer. Using small molecules and engineered proteins, the Wells lab is studying how activation of particular signaling nodes involving protease, kinases, or ubiquitin ligases drives cell biology. The lab has focused much on a set of proteases, known as caspases, responsible for fate determining cellular decisions involved in apoptosis and innate inflammation among others. These enzymes act as cellular remodelers and help us understand the essential protein struts that support life. These targets also provide leads for developing new cancer therapeutics and biomarkers for cancer treatment.

Wells is a professor and chair of the Department of Pharmaceutical Chemistry in the UCSF School of Pharmacy. He holds a combined appointment as professor in the Department of Cellular & Molecular Pharmacology in the School of Medicine. He joined UCSF in 2005 as holder of the Harry Wm. and Diana V. Hind Distinguished Professorship in Pharmaceutical Sciences. Wells also founded and directs the Small Molecule Discovery Center (SMDC) located at UCSF's Mission Bay campus. He earned a PhD degree in biochemistry from Washington State University with Professor Ralph Yount in 1979 and completed postdoctoral work at Stanford University School of Medicine with Professor George Stark in 1982. Before joining UCSF, Wells was a founding scientist in Genentech's Protein Engineering Department and in 1998 co-founded Sunesis Pharmaceuticals.

Wells is a recipient of the Hans Neurath Award by the Protein Society, the Pfizer Award and Smissman Award given by the American Chemical Society, the Perlman Lecture Award given by the ACS Biotechnology Division, the du Vigneaud Award given by the American Peptide Society, the Merck Award from the ASBMB and in 1999 a member of the National Academy of Sciences.
