

Previous Nelson J. Leonard Lecturers

1986-1987 James P. Collman	Stanford University
1987-1988 Sir Derek H. R. Barton	Texas A&M University
1988-1989 Christopher T. Walsh	Harvard Medical School
1989-1990 Donald J. Cram	University of California, Los Angeles
1990-1991 Richard R. Ernst	Eidgenössische Technische Hochschule, Zürich
1991-1992 Thomas A. Steitz	Yale University
1992-1993 K. Barry Sharpless	Scripps Research Institute
1993-1994 Rudolph A. Marcus	California Institute of Technology
1994-1995 Phillip A. Sharp	Massachusetts Institute of Technology
1995-1996 Martin Rodbell	National Institute for Environmental Health Sciences
1996-1997 John D. Roberts	California Institute of Technology
Sidney M. Hecht	University of Virginia
Peter G. Schultz	University of California, Berkeley
Albert Eschenmoser	Eidgenössische Technische Hochschule, Zürich
1997-1998 F. Sherwood Rowland	University of California, Irvine
1998-1999 Jean-Michel Savéant	Centre National de la Recherche Scientifique
1999-2000 David A. Tirrell	California Institute of Technology
2000-2001 Alastair Ian Scott	Texas A&M University
2001-2002 Amos B. Smith III	University of Pennsylvania
2002-2003 Lawrence J. Marnett	Vanderbilt University
2003-2004 Robert S. Langer	Massachusetts Institute of Technology
2004-2005 Thomas R. Cech	Howard Hughes Medical Institute University of Colorado at Boulder
2006-2006 Joseph M. DeSimone	University of North Carolina-Chapel Hill
2006-2007 Rolf Thauer	Max Planck Institute for Terrestrial Microbiology



Nelson J. Leonard Distinguished 2008/09 LECTURER



Roger Y. Tsien

University of California - San Diego

2008 Nobel Prize in Chemistry Recipient



May 12, 2009

Painting Cell Signals with a Palette of Fluorescent Proteins

4:00 p.m.

B102 Chemical Life Sciences Laboratory

Reception immediately following lecture in CLSL-A Atrium

May 13, 2009

*Genetically Encoded and Synthetic Molecules
for Whole-Animal and Clinical Imaging*

9:30 a.m.

B102 Chemical Life Sciences Laboratory

SCHOOL OF CHEMICAL SCIENCES

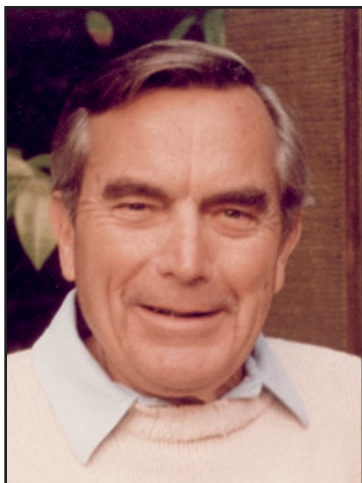
 ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Nelson J. Leonard

This lecture series is sponsored by the Nelson J. Leonard Distinguished Lecturer Fund, set up in 1986 by the late Mrs. Louise Leonard, Eli Lilly and Company, the Monsanto Company, Organic Syntheses, Inc., and Professor Leonard's colleagues and students. At the time of his retirement in 1986, Professor Leonard had been at the University of Illinois for 44 years, directed 120 graduate students, and published over 400 papers.

Professor Leonard received his B.S. from Lehigh in 1937, a B.Sc. from Oxford in 1940, a Ph.D. from Columbia in 1942, and a D.Sc. from the University of Oxford in 1983. He also received three honorary doctors' degrees.

Internationally acclaimed for his skill in organic synthesis, his work answered questions of fundamental importance to biochemistry and life processes. He invented fluorescent probes and dimensional probes of enzyme-coenzyme binding sites and DNA double-helical cross sections.



He received many honors including the ACS award for Creative Work in Synthetic Organic Chemistry (1963), the Medal for Creative Research in Synthetic Organic Chemistry of the Chemical Manufacturers Association (1970), the Roger Adams Award in Organic Chemistry (1981), the first Creativity Award, University of Oregon (1994), and the first Paul G. Gassman Distinguished Service Award, Division of Organic Chemistry, American Chemical Society (1994). He was a member of the National Academy of Sciences, a foreign member of the Polish Academy of Sciences, a fellow and past vice-president of the American Academy of Arts and Sciences, a member of the American Philosophical Society, and an honorary member of the Pharmaceutical Society of Japan.

At the time of his passing in the fall of 2006, Professor Leonard was a Faculty Associate in Chemistry at the California Institute of Technology.

Roger Y. Tsien

Roger Y. Tsien, born in 1952, received his A.B. in Chemistry and Physics from Harvard College in 1972. He received his Ph.D. in Physiology in 1977 from the University of Cambridge and remained as a Research Fellow until 1981. He then became an Assistant, Associate, then full Professor at the University of California, Berkeley. In 1989 he moved to the University of California, San Diego, where he is an Investigator of the Howard Hughes Medical Institute and Professor in the Depts. of Pharmacology and of Chemistry & Biochemistry.

He was a scientific co-founder of Aurora Biosciences Corporation (1996), which went public in 1997 (ABSC) and was acquired by Vertex Pharmaceuticals in 2001 (VRTX) for approx. \$600M. He was also a scientific co-founder of Senomyx Inc. in 1998, which went public in 2004 (SNMX).

Dr. Tsien is best known for designing and building molecules that either report or perturb signal transduction inside living cells. These molecules, created by organic synthesis or by engineering naturally fluorescent proteins, have enabled many new insights into signaling via calcium, sodium, pH, cyclic nucleotides, nitric oxide, inositol polyphosphates, membrane and redox potential changes, protein phosphorylation, active export of proteins from the nucleus, and gene transcription. He is now developing new ways to target contrast agents and therapeutic agents to tumor cells based on their expression of extracellular proteases.

His honors include First Prize in the Westinghouse Science Talent Search (1968), Searle Scholar Award (1983), Artois-Baillet-Latour Health Prize (1995), Gairdner Foundation International Award (1995), Award for Creative Invention from the American Chemical Society (2002), Heineken Prize in Biochemistry and Biophysics (2002), Wolf Prize in Medicine (shared with Robert Weinberg, 2004), Rosenstiel Award (2006), E.B. Wilson Medal of the American Society for Cell Biology (shared with M. Chalfie, 2008), and Nobel Prize in Chemistry (shared with O. Shimomura and M. Chalfie, 2008). He is a member of the National Academy of Sciences and the Royal Society.

