

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
2005-2006 Joseph M. DeSimone	University of North Carolina-Chapel Hill
2006-2007 Rolf Thauer	Max Planck Institute for Terrestrial Microbiology
2008-2009 Roger Y. Tsien	University of California, San Diego
2011-2012 Ada E. Yonath	Weizmann Institute of Science



Nelson J. Leonard Distinguished

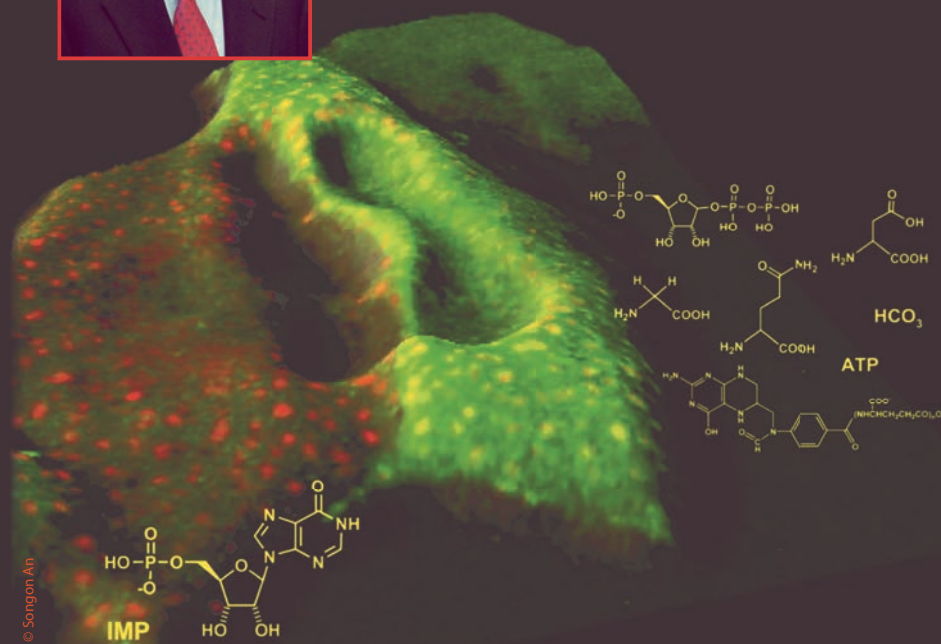
2013 LECTURER



Stephen J. Benkovic

The Pennsylvania State University

Evan Pugh Professor and Eberly Chair in Chemistry



October 29, 2013

On de novo Purine Biosynthesis: The Purinosome

4:00 p.m.

Alice Campbell Alumni Center Ballroom

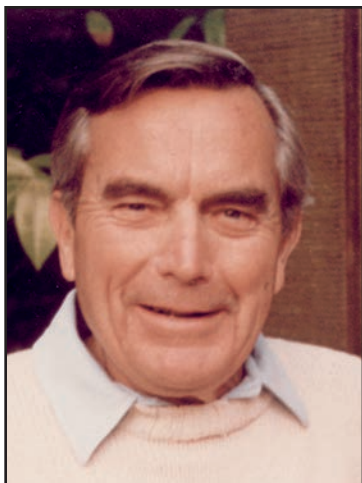
Reception immediately following lecture in atrium

Nelson J. Leonard

This lecture series is made possible by the Nelson J. Leonard Distinguished Lecturer Fund, established 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 doctoral 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.

Gifts in support of the lecture fund may be directed to: University of Illinois Foundation, Attn: Nelson J. Leonard Distinguished Lectures Fund - 1305 W. Green St., Urbana, IL 61801, or you may contact Nick Jaeger directly at njaeger@illinois.edu

Stephen J. Benkovic

Stephen J. Benkovic was born in Orange, NJ. He received his B.S. degree in Chemistry and A.B. degree in English Literature from Lehigh University, and his Ph.D. in Organic Chemistry from Cornell University. After a period as a postdoctoral research associate at the University of California, Santa Barbara, he joined the Chemistry Department at Penn State University in 1965 and became a Full Professor of Chemistry in 1970, followed by recognitions as an Evan Pugh Professor of Chemistry, and in 1988 the holder of the Eberly Chair in Chemistry. His work has been recognized by awards and fellowships including: Alfred P. Sloan Fellowship, NIH Career Development Award, Guggenheim Fellowship, the Pfizer Award in Enzyme Chemistry, the Gowland Hopkins Award, the Repligen Award for Chemistry of Biological Processes, the Alfred Bader Award, the Chemical Pioneer Award from the American Institute of Chemists, the Christian B. Afinsen Award, the Benjamin Franklin Medal in Life Science, the Ralph F. Hirschmann Award in Peptide Chemistry, the National Medal of Science, and the National Academy of Science Award in Chemical Sciences. In addition, he has been elected to memberships in the American Academy of Arts and Sciences, the National Academy of Sciences, the Institute of Medicine, National Academy of Sciences, and the American Philosophical Society.



Benkovic's recent work has focused on the assembly and kinetic characteristics of the protein machinery that is responsible for DNA replication by T4 phage and yeast; the importance of dynamic coupling of proximal and distal residues in the catalytic cycle of the dihydrofolate reductase enzyme that serves as a paradigm for describing enzymic catalysis in terms of a series of orchestrated protein conformations; the discovery of the purinosome through intracellular observation by fluorescent imaging of *de novo* purine biosynthesis; and the development of novel pharmacophores including cyclic peptides for modulating protein/protein interactions and benzoxyboroles as a new class of antibiotics and antifungal agents.