Erik J. Sorensen

Professor Sorensen was born and raised in upstate New York and received his B. A. degree in Chemistry from Syracuse University, where he performed undergraduate research with Professor Roger Hahn. In 1989, he began his graduate studies in chemical synthesis at The University of California, San Diego. Under the direction of Professor K. C. Nicolaou, he synthesized a novel family of DNA cleaving, 10-membered ring enediynes, contributed to a laboratory synthesis of the cancer drug Taxol®, co-authored a book titled Classics in Total Synthesis, and obtained his Ph. D. degree in 1995. From 1995-1997, he was a National Science Foundation postdoctoral fellow in the laboratory of Professor Samuel Danishefsky at The Memorial Sloan-Kettering Cancer Center in New York, where he contributed to total syntheses of the epothilone class of antitumor agents. In 1997, he started his independent career at The Scripps Research Institute and became an Associate Professor with tenure in 2001. In 2003, he moved his research group to Princeton University where he is the *Arthur Allan Patchett Professor in Organic Chemistry*.

The Sorensen laboratory is interested in the field of complex chemical synthesis, questions about the structural origins of architecturally unique natural products, and evaluating hypotheses about the chemical basis of the biological activities of natural products and non-natural molecules. His research aims to increase the capabilities of organic synthesis through the development of powerful reactions and strategies.

For his achievements in chemical research and education, Professor Sorensen received a Beckman Young Investigator Award, a Camille Dreyfus Teacher-Scholar Award, the AstraZeneca Award for Excellence in Chemistry, the Lilly Grantee Award, the Pfizer Global Research Award for Excellence in Organic Chemistry, and the Bristol-Myers Squibb Unrestricted Grant in Synthetic Organic Chemistry. In 2001, Professor Sorensen was a Woodward Scholar at Harvard University.

Nature-Inspired Natural Product Synthesis

Monday, May 5, 3:00 P.M., NCB 114

Ideas about the structural origins of natural products have engendered powerful strategies for creating novel and complex molecular architectures. While some achievements in the field of "biomimetic" natural product synthesis simulated known biosynthetic transformations, others may have provided glimpses into the evolutionary past of a natural product's molecular structure. Through a discussion of historically significant and contemporary achievements in chemical synthesis, this lecture aims to show how ideas about biogenesis have benefited the planning and execution of many laboratory syntheses of complex natural products. A particular emphasis will be given to nature-inspired, cascade reaction processes.

Rapid Formation of Molecular Complexity in Natural Product Synthesis

Tuesday, May 6, 3:00 P.M., NCB 114

The field of complex natural product synthesis has come far since the early 1900's. However, the achievements in this field are rarely close approximations of the concept of the "ideal synthesis". This lecture will discuss some historically significant chemical achievements in the context of the ideal synthesis and offer some recent results from our ongoing efforts to design and execute reactions that enable substantial increases in molecular complexity.

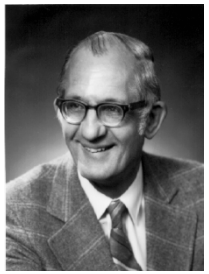
Our Preoccupation with the Diels-Alder Reaction

Wednesday, May 7, 3:00 P.M., NCB 114

Since its initial description in 1928, the Diels-Alder reaction has evolved into one of the most important structure building processes in the field of chemical synthesis. In addition to the fundamental studies of the factors controlling the orientational selectivities and stereochemical outcomes of [4+2] cycloadditions, innovations in the development of novel 4 pi electron systems have contributed to the evolution of this pericyclic process into the most powerful method for synthesizing diverse six-membered carbocycles and heterocycles. At present, many different types of electron-rich and electron-deficient dienes are known to exhibit useful reactivities in normal and inverse electron-demand Diels-Alder reactions. Continued efforts to expand the capabilities of 1,3-dienes that can adopt *s-cis* conformations are justified by the great utility and popularity of the Diels–Alder reaction in syntheses of structurally complex, biologically active natural products and pharmaceutical agents.

This lecture will also address our continuing commitment to the Diels-Alder reaction in syntheses of structurally complex natural products and the reactivity of an interesting type of 1,3-diene for use in chemical synthesis. The diene, which contains a functionalized hydrazino group at position 1, is utilized in intermolecular Diels–Alder reactions with various electron-deficient alkenes. The unique chemistry of this type of diene provides access to stereochemically complex cyclohexenes that would likely be difficult to construct by alternative synthesis strategies. 1-Hydrazinodienes are thus capable of giving chemists an alternative way of perceiving and utilizing the Diels-Alder reaction in the planning and execution of organic syntheses.

Fred L.M. Pattison



Born in Scotland, where he received his early education, he attended the University of Cambridge in 1941 for undergraduate work in Natural Sciences, followed by a Ph.D. in Organic Chemistry. After spending a year at Dalhousie University as Lecturer, he joined Western as Assistant Professor in 1948.

Fred established a Ph.D. program in the department, and his research on biologically active organic fluorine compounds produced many scientific papers, garnered the award of an Sc.D. by the University of Cambridge, and resulted in the publication of a book, *Toxic Aliphatic Fluorine Compounds*. In 1959, he became Professor and Head of the Department, and he presided over the expansion of the department and its move to new facilities.

In 1965, Fred decided on a career change, and at the age of 42, he enrolled at Western as a first-year medical student. After completing his M.D. four years later, he interned at St. Joseph's Hospital in London and served for a year as resident in the Family Practice Program. As well, he was enrolled in a diploma course in venereology at the University of Liverpool. During 1971-73, Fred followed up a long-standing interest in the people of Canada's North by working with the International Grenfell Association. He provided solo medical care to about 6,000 people scattered along 120 miles of the Atlantic coast of Newfoundland.

Fred returned to London in 1973, when he joined Western's student health service, holding the position of Director at his formal retirement in 1988. During the same period he was clinical assistant professor in the Faculty of Medicine, giving instruction in venereology, and director of the Middlesex-London Sexually Transmitted Disease Clinic.

On his retirement, Fred was able to resume his connection with the Chemistry Department with the rank of Professor Emeritus. In view of Fred's long service and many contributions to chemistry and medicine at Western, it is entirely fitting that the department dedicate a lecture series bearing his name.

Lecture Schedule

Nature-Inspired Natural Product Synthesis
Monday, May 5, 3:00 P.M., NCB 114

Rapid Formation of Molecular Complexity in Natural Product Synthesis
Tuesday, May 6, 3:00 P.M., NCB 114

Our Preoccupation with the Diels-Alder Reaction
Wednesday, May 7, 3:00 P.M., NCB 114

Light Snacks and Refreshments will be served at 2:45 P.M. inside the lecture room.

Contact Information

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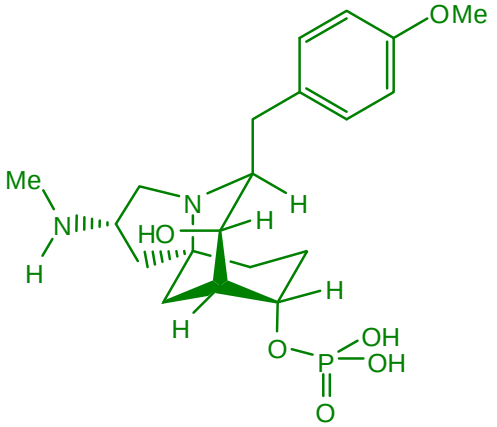
Fred Pattison Senior Lectureships

1992	Sir Derek Barton, Texas A & M University
1993	Barry Trost, Stanford University
1995	Stephen J. Benkovic, Penn State University
1996	Steven V. Ley, University of Cambridge
1997	Anthony J. Kirby, University of Cambridge
1998	Larry E. Overman, Univ of California, Irvine
1999	Sir Fraser Stoddart, Univ. of California, Los Angeles
2000	Dennis Curran, University of Pittsburgh
2001	Joseph Lambert, Northwestern University
2002	Anthony Barrett, Imperial College
2003	Richard Wolfenden, UNC Chapel Hill
2004	Victor Snieckus, Queen's University
2005	Lutz F. Tietze, Georg-August University, Göttingen
2006	Juan C. (Tito) Scaiano, University of Ottawa
2007	François Diederich, ETH Zürich

The Department of Chemistry
presents the
2008 Fred Pattison Senior Lecturer

ERIK J. SORENSEN

Arthur Allan Patchett Professor
Frick Chemical Laboratory
Princeton University



A three-part lecture series
May 5 – 7, 2008
North Campus Building

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