



## 2022-2023 POCC Lecture Series

Jan 26, 2023, 7:30 PM

Prof. Jon Ellman

Yale University

Allan R. Day Award Lecture:  
*The Development of Synthetic Methods for  
Drug Discovery and Development*

IN PERSON @:

Carolyn Hoff Lynch Lecture Hall Chemistry Building,  
University of Pennsylvania

6:30 Reception in the Nobel Hall

*Food and drinks to be provided!*

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**Abstract:** Over the years my lab has focused on the development of synthetic methods for the efficient preparation of drug relevant structures. At a project's outset, we target a specific class of pharmaceutically relevant compounds or type of disconnection, but because we are receptive to the serendipitous discovery of new reactivity, research programs often evolve in unanticipated directions. Regardless of whether a project deviates from its original goal, readily available starting materials and high functional group compatibility are underlying priorities. Mechanistic studies on newly discovered transformations have contributed to an understanding of reaction pathways and have facilitated further advances. Collaborations with biomedical and pharmaceutical researchers have guided our development of synthetic methods and technologies for the more efficient discovery of potent and selective small molecule ligands to biomolecular targets. In this presentation, I will provide examples of both targeted and serendipitous reaction discovery and will discuss emerging programs on new types of C-H functionalization, photoredox-catalyzed highly stereoselective epimerization, and asymmetric catalysis for the convergent synthesis of drug relevant high oxidation state sulfur pharmacophores.

**Bio:** Jonathan Ellman is the Eugene Higgins Professor of Chemistry and Professor of Pharmacology at Yale University. Prior to moving to Yale in 2010, he was a member of the faculty at UC Berkeley where he held the rank of Professor of Chemistry from 1999 to 2010 and concurrently was appointed Professor of Cellular and Molecular Biology at UC San Francisco. His research emphasizes the development of practical and general synthetic methods and their application to the synthesis of pharmaceutical agents and bioactive natural products. His laboratory is also engaged in the development and application of chemical tools for the discovery of potent and selective ligands to biomolecular targets. Ellman has received numerous awards for his research, including the Scheele Award from the Swedish Academy of Pharmaceutical Sciences (2003), the Tetrahedron Young Investigator Award in Bioorganic and Medicinal Chemistry (2006), the Pedler Award from the Royal Society of Chemistry (2010), and an Arthur C. Cope Scholar Award (2000), the Herbert C. Brown Award for Creative Research in Synthetic Methods (2012), and the Award for Creative Research in Synthetic Organic Chemistry (2021) from the American Chemical Society.

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