University of Minnesota
Driven to Discover℠

Department of Chemistry

Aldrich Seminar in Synthetic Organic Chemistry

9:45 a.m. Thursday, April 4, 331 Smith Hall

Professor

Andrew Myers

Department of Chemistry & Chemical Biology
Harvard University

Bringing the Full Power of Chemical Synthesis to Bear on the Discovery of New Antibiotics

Research program involves the synthesis and study of complex molecules of importance in biology and human medicine. His group has developed laboratory synthetic routes to a broad array of complex natural products, including the ene-diyne antibiotics neocarzinostatin chromophore, dynemicin A, N1999A2, and kedarcidin chromophore, undertakings greatly complicated by the chemical instability of all members of the class.

Website:
http://www.chem.harvard.edu/groups/myers/page5/page5.html

Abstract

Many of the classes of antibiotics in current use were revealed by screening of fermentation broths in the era circa 1940-1960, considered to be a golden age in the discovery of antibiotics. Since then new antibiotics have been developed mainly by the process of semi-synthesis, where natural (fermentation) products are modified by chemical synthesis. Many important therapeutic agents have arisen by semi-synthesis and no doubt many more remain to be discovered in this way, but the process is inherently limited. This lecture will focus on the development of new platforms for the discovery of antibiotics by applying the power of convergent chemical synthesis, providing readily modifiable scaffolds that were previously inaccessible by any other means.

Host: Professor Andrew Harned