The Department of Chemistry and Biochemistry

Seminar Series

Presents a Seminar Titled:

"The Pursuit of Structurally Diverse Anticancer Leads from Filamentous Fungi"

Presented By

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Natural products have a long history of providing new drug leads. Fungi, in particular, have yielded several drugs that have had a dramatic impact on society. Indeed, it has been posited that penicillin may have had the greatest impact on life expectancy in the 20th century. Presently, the statins are one of the largest selling drugs in the history of mankind. Even the newest agent for the treatment of multiple sclerosis, fingolimod, was hailed as one of the top 10 medical inventions of 2010. Common to all of these drugs is fungi as the initial source of the lead.

For the past four years, the Oberlies Laboratory has been examining the Mycosynthetix library of >55,000 filamentous fungi grown in culture for anticancer agents. Several leads have been identified; many of these are produced in a high yield, providing and entry point into medicinal chemistry studies. The chemical diversity of the leads compares favorably to FDA-approved anticancer agents, particularly when evaluated against leads from other source materials, such as cyanobacteria and tropical plants.

In general, this presentation will discuss both the basics of natural products drug discovery, as well as, present some cogent examples from the front lines of research.

Thursday, March 21, 2013 at 12:20 in BAL 1012