University of Minnesota
Driven to Discover℠

# Department of Chemistry

# Seminar

**9:45 a.m. Thursday, December 11, 2014 • 331 Smith Hall**


Post-Doctoral Fellow

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Department of Chemistry
University of Michigan


## *Synthesis of Schweinfurthin Natural Products and the Promise of C-H Activation*


**Abstract**

Natural products have a vibrant history in the arena of drug discovery - particularly with regard to chemotherapeutics. The Schweinfurthins are a small family of meroterpenoid stilbenes that demonstrate remarkable and selective activity against intractable central nervous system cancers. Due to this activity, a total synthesis of the Schweinfurthins was executed. Herein, the total synthesis will be detailed along with a description of the methods developed to enable a robust synthetic route. This discussion will illustrate limitations to modern synthesis and highlight the need for more efficient and sustainable methods to assemble biologically active agents. Palladium-catalyzed C-H activation will be presented as a potential solution to this challenge. Specifically, the distal (C-4) C-H functionalization of piperidine, a ubiquitous and privileged pharmacophore, will be disclosed to support this claim.


**Host: Thomas Hoye**
**Refreshments will be served prior to the seminar.**