Novartis — UCLA Lectureship

with

Professor Jonathan A. Ellman

Department of Chemistry
Yale University

“C-H Functionalization for the Versatile and Efficient Assembly of Heterocycles and Amines”

Abstract. Versatile transition metal-catalyzed C-H bond functionalization methods will be presented for the rapid assembly of drug relevant amines and heterocycles from simple and readily available inputs, including for architecturally complex structures. Rh(III) and Co(III)-catalyzed C-H bond additions to polarized \( \pi \)-bonds for the convergent asymmetric synthesis of amines and cascade reaction sequences to heterocycles found in pharmaceuticals along with relevant mechanistic studies will be described. Practical and convergent routes to substituted 1,2-dihydropyridines by a Rh(I)-catalyzed C-H bond alkenylation/electrocyclization sequence will also be presented. Regio- and stereoselective elaboration of these 1,2-dihydropyridines for rapid entry to densely substituted piperidines, tropanes, isoquinuclidines, and even more complex multicyclic nitrogen heterocycles will further be provided. The utility of the presented methods will be illustrated by short and efficient syntheses of important pharmaceutical agents.

Thursday, May 21, 2015
5:00 PM

Cram Conference Room – 3440 Molecular Sciences Bldg

For further information, contact David Gingrich at gingrich@chem.ucla.edu