CMSI Center for Medical System Innovation

THE UNIVERSITY OF TOKYO

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医工薬融合 GCOE Seminar Series

Center for Medical System Innovation through Multidisciplinary Integration The University of Tokyo

Studies on Alkaloid and Terpenoid Synthesis

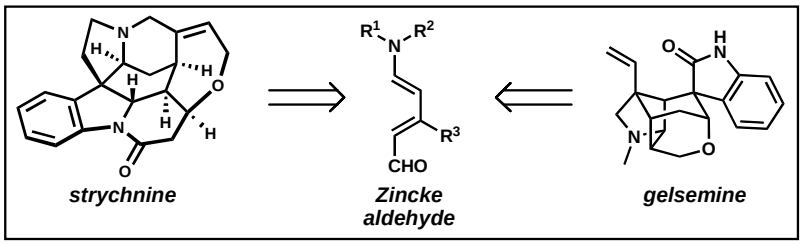
Christopher D. Vanderwal

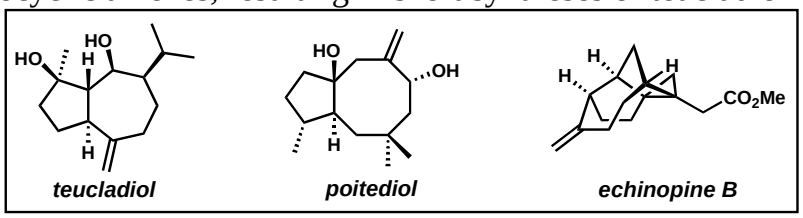
Associate Professor
University of California, Irvine, USA

Date: Tuesday, September 4, 2012
Time: 16:30 - 18:00
Venue: West Seminar Room, 1F. Faculty of Pharmaceutical Sciences, the University of Tokyo

Our research group has been engaged in the synthesis of complex alkaloids and terpenoid natural products. I will describe our efforts toward *Strychnos* and *Gelsemium* alkaloids featuring the strategic use of Zincke aldehydes, which derive from the ring-opening aminolysis of pyridinium salts. Some fascinating and unexpected discoveries from this research program will also be presented.

In the second part of my talk, I will describe our efforts toward several sesquiterpenoid natural products, culminating in our efforts toward the echinopines. These studies inspired the use of the ring-closing metathesis of allylsilanes as a means to access ring structures bearing exocyclic alkenes, resulting in short syntheses of teucladiol and poitediol. Ultimately, our synthesis of the echinopines took advantage of a late-stage enyne cycloisomerization reaction to build its tetracyclic architecture.





Organizer: GCOE Program Center for Medical System Innovation through Multidisciplinary Integration, the University of Tokyo
Tohru Fukuyama
Professor, Graduate School of Pharmaceutical Sciences, the University of Tokyo
Cooperation: Graduate Program for Leaders in Life Innovation, the University of Tokyo
Center for NanoBio Integration, the University of Tokyo

For Further Information Contact: Kiyoko Jarnes at CMSI Office
Phone: 03-5841-1509 / Fax: 03-5841-1510
E-mail: jarnes@cnbi.t.u-tokyo.ac.jp
Registration: http://park.itc.u-tokyo.ac.jp/CMSI/

GPLLI Graduate Program for Leaders in Life Innovation

CNBI Center for NanoBio Integration