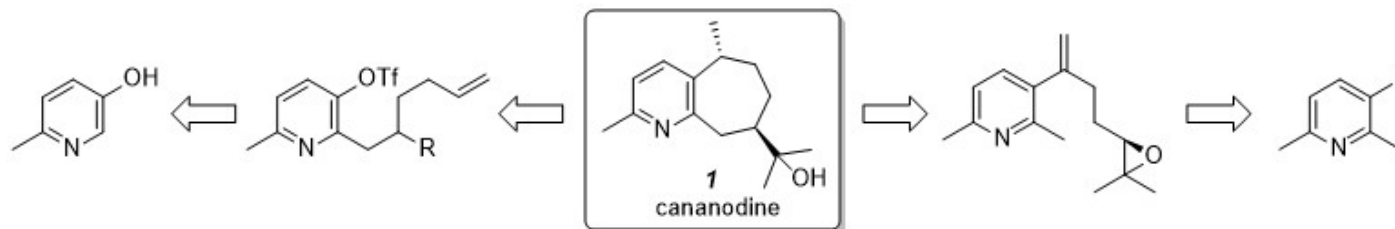


# EASTERN MICHIGAN UNIVERSITY

## *Chemistry Seminar*

### Synthetic Studies on Guaipyridine Alkaloids



*Dr. James Vyvyan*

*Western Washington University*

The guaipyridine alkaloids possess a rare structural motif consisting of a pyridine fused to a 7-membered carbocycle with two stereocenters and varying substituents at the 8-position of this bicyclic core. One member of this family, cananodine, has promising activity against liver cancer, but is isolated only in small amounts from the fruit of *Cananga odorata*, a tree native to the Philippines. More recently discovered guaipyridines include rupestines A-M, isolated from *Artemesia rupestris*, a plant that has been used in traditional Chinese medicine for its antitumor, antibacterial, and antiviral properties. We will present our synthesis of cananodine that hinges on an intramolecular opening of an epoxide by a picolyl anion to form the 7-membered ring. Also presented is an alternative route to the 7-membered carbocycle of the guaipyridines using an intramolecular Heck reaction.

*Monday, November 6<sup>th</sup> 4:00 PM*  
*Room 154 Science Complex*