

***Salvia divinorum*: A Unique CNS Active Plant**

Thomas E. Prisinzano, Ph.D, University of Kansas

The neoclerodane diterpene salvinorin A is the major active component of the hallucinogenic mint plant *Salvia divinorum* Epling & Játiva (Lamiaceae). Since the finding that salvinorin A exerts its potent psychotropic actions through the activation of opioid receptors, the site of action of morphine and related analogues, there has been much interest in elucidating the underlying mechanisms behind its effects. These effects are particularly remarkable, because (1) salvinorin A is the first reported non-nitrogenous opioid receptor agonist, and (2) its effects are not mediated by 5-HT_{2A} receptors, the classical target of hallucinogens such as LSD and mescaline. This talk will outline our research program, illustrating a new direction to the development of tools to further elucidate the biological mechanisms of drug tolerance and dependence. Our multidisciplinary approach combines natural product isolation, synthetic medicinal chemistry, and behavioral pharmacology to better understand the actions of salvinorin A at opioid receptors with the goal of designing novel agents to treat pain, drug abuse, and other CNS disorders.