

Kenner Rice (NIH)

Seminars in 2049

March 27–28, 2008

3:00 p.m. Thursday, March 27, 2008

Medicinal Chemistry in Opioid Research

The annual economic cost of the abuse of legal and illegal drugs to the U.S. is estimated at more than \$500 billion and the worldwide human cost to drug abusers and their families is enormous. Recent research has shown that chronic drug abuse alters multiple brain centers and their function, and that genes, stress and various environmental factors play a central role in such behavior. Our group has taken an organic and medicinal chemical approach to the study of drugs of abuse by the design and synthesis of novel ligands as (a) probes for study of their mechanism of action and (b) agents for the treatment and prevention of drug abuse. This presentation will include some of our studies on imaging agents, rigid rotational isomers as opioid receptor probes, and the development of the NIH Opiate Total Synthesis as a practical route to either enantiomer of morphine alkaloids and their derivatives as research tools and drugs.

9:00 a.m. Friday, March 28, 2008

Corticotropin Receptor Antagonists and Drugs and Research Tools