



UNIVERSITY OF MINNESOTA

Driven to DiscoverSM

Opioid and Analgesic Chemical Compound Library (z09208)

Technology No. z09208

Pain Relief Chemical Compound Library - ChemBioFinder Database

Pain Relief Chemical Compound Library

Researchers at the University of Minnesota have compiled a library of 1,600 analgesics consisting of several classes of molecules and the synthetic intermediates used to create them by chemical reactions. The chemical compounds detailed in the library fall into the following broad categories: agonists, which stimulate a response from cells, antagonists, which obtain a desired outcome by blocking a response from cells, or affinity labels, which alter the mechanisms of chemical reactions inside the body to a desired effect. The majority of the compounds in this library have applications for pain relief or pain treatment in chronic pain sufferers. Other uses of the chemical compounds in this library include type-2 diabetes, obesity, compulsive disorders, schizophrenia, cancer, and depression.

Library of Compounds with Pain Relief Activity

The compound library would be an ideal tool to screen for drug candidates with pain relief activity. This library of analgesics contains compounds developed over forty-five years of research. This library contains the analgesic compounds characterized by chemical structure and biological activity. Several compounds have shown potential analgesic activity without the side effects associated with opioids. The results, entered into a ChemBioFinder database, are easy to access and analyze. The compounds in this library could form the basis of new pain medications and treatments of other diseases with less harmful side effects than current opioid based medications.

FEATURES OF OPIOID LIBRARY OF 1600 CHEMICAL COMPOUNDS WITH ANALGESIC PROPERTIES

- Library is highly focused on opioids, making it optimal to screen for compounds that have analgesic or metabolic activity
- All chemical compounds and intermediates are categorized chemically and biologically to facilitate efficient screening
- Compounds in library are candidates for pain relief or pain treatment applications
- Library contains chemical compounds which may be useful in treating type-2 diabetes, obesity, compulsive disorders, schizophrenia, cancer, and depression

Researchers: Philip S. Portoghese, PhD Medicinal Chemistry, College of Pharmacy
Patents pending for several compounds

<https://license.umn.edu/product/opioid-and-analgesic-chemical-compound-library>