

## **MCAM: A Novel Mu Opioid Receptor Antagonist for Treating Opioid Overdose and Abuse**

Deaths from opioid overdose continue to rise; from 2015-2016, there was a 28% increase in the number of fatal overdoses. Fentanyl derivatives are inexpensive, easy to synthesize, potent, and marketed to unsuspecting abusers as heroin or other drugs. The effects of fentanyl derivatives are reportedly more difficult to reverse with naloxone, compared with reversal of heroin. Pharmacotherapies for opioid abuse include the  $\mu$  opioid receptor agonists methadone and buprenorphine that are effective in many patients, although both drugs have limitations, including diversion and abuse, and they can have serious unwanted effects, including respiratory depression and death. The opioid receptor antagonists naltrexone and naloxone avoid the abuse liability and adverse effects of methadone and buprenorphine; however, short durations of action and surmountability limit their effectiveness. Methocinnamox (MCAM) is a new potential medication with a longer duration of action that prevents and reverses the effects of opioids in a manner that is not surmounted by increasing doses of agonist could improve significantly treatment of abuse and save lives by providing insurmountable extended protection after rescue from overdose.