

# Analgesia produced by intrathecal administration of the $\kappa$ opioid agonist, U-50,488H, on formalin-evoked cutaneous pain in the rat

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The antinociceptive activity of the selective  $\kappa$  opioid agonist U-50,488H, given intrathecally (i.t.) against chemically induced cutaneous pain in rats, was assessed from cumulative dose-response experiments and the formalin test. Three successive i.t. doses of 5, 10 and 35 nmol of U-50,488H produced a gradual reduction of pain scores which was statistically significant at all observation periods. This effect was antagonized significantly by 3 mg/kg i.p. of the opiate antagonists, naloxone and WIN 44,441-3. The analgesia profile showed a clear dose-response relationship. A dose producing 50% 'maximum possible analgesia' of 6.20 nmol (95% confidence interval: 3.05-12.59 nmol) was calculated. The results indicated that cutaneous pain of a chemical/inflammatory nature is highly sensitive to activation of  $\kappa$  receptors of the spinal cord dorsal horn. © 1990.