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[\[PDF \(513K\)\]](#) [\[References\]](#)**Daily increase of fat ingestion mediated via mu-opioid receptor signaling pathway**Takafumi MIZUSHIGE¹⁾, Shigenobu MATSUMURA¹⁾, Takeshi YONEDA¹⁾, Satoshi TSUZUKI¹⁾, Kazuo INOUE¹⁾ and Tohru FUSHIKI¹⁾

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ABSTRACT

We investigated the involvement of opioid receptors such as the mu and delta receptors in the predominant elevation of corn oil appetite just after 5-day repeated treatment of corn oil ingestion. Rats were given 5% corn oil emulsified with 0.3% xanthan gum for 20 min at the same hour for 5 consecutive days. A strong appetite for fat was formed after the 5 days presentation, and it was inhibited by naloxonazine, a selective antagonist of the mu-1 receptor, at doses of 3 mg/kg, but not by antagonists of the opioid delta receptor. In days 6, after the formation of a strong appetite for corn oil, an additional injection of naloxonazine suppressed fat intake 0-30, 30-60, 60-90 and 90-150 min after the presentation of the corn oil, but antagonists of the opioid delta receptor did not. These data suggested that the opioid mu receptor is involved in the sharp elevation of corn oil appetite during repeated presentation of corn oil to rats.

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