



INVESTIGATING THE ROLE OF MU OPIOID RECEPTOR IN CHX10-EXPRESSING NEURONS

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RESEARCH QUESTION AND IMPORTANCE

- What is your research question?
 - What role do μ opioid receptors play in mediating effects of opioids, such as analgesia (loss of pain sensation), tolerance, addiction, withdrawal, respiratory depression (the cause of death in opioid overdose cases), opioid-induced hyperalgesia (increased sensitivity to pain when not under the influence of opioids), and locomotor-related behaviors?
- Why does it matter?
 - Understanding the role played by the neurons that express μ opioid receptors can help researchers gain insight into the prevention of negative opioid effects through supplemental medications in conjunction with opioids or create new pain medications that lack these detrimental effects.

RESULTS

- What are your results?
 - While the μ receptor/Chx10-expressing neurons do not seem to play a role in analgesia, we found that they are involved in opioid-induced muscle rigidity, suggesting that they might contribute to respiratory depression caused by opioids.
- Why are they important to your scholarly or research community?
 - These findings will direct research into the μ receptor/Chx10-expressing neurons to better understand the mechanisms behind these specific opioid effects.
- Why are they important to a general audience?
 - These findings bring us a step closer to finding new pain medications or medications to be taken in conjunction with opioids to repress negative effects, and thus brings us closer to ending the opioid epidemic.