



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

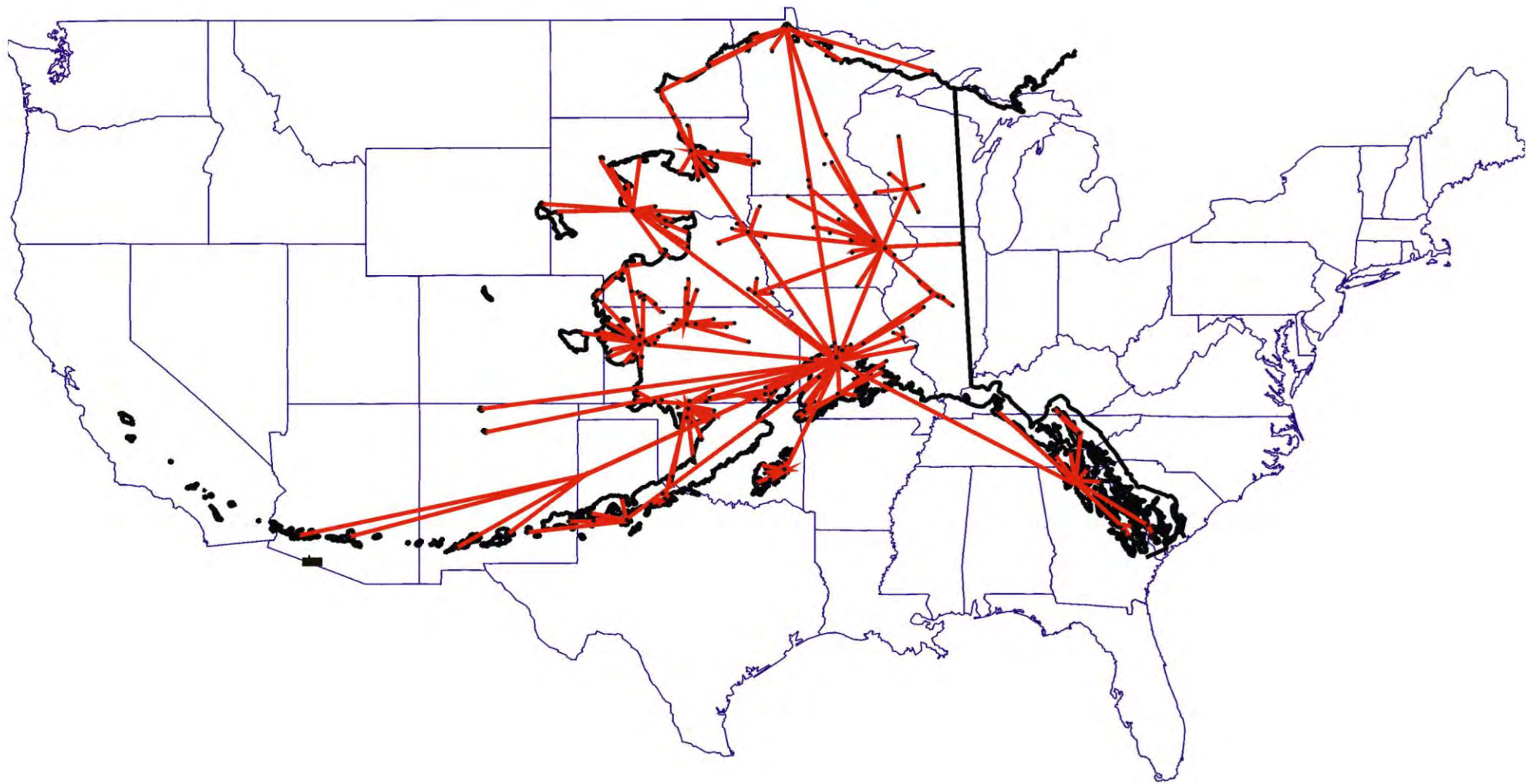
How ANTHC is developing immersive holograms to promote substance use dialogue

Modeling data and neuroscience in Augmented Reality

February 2020



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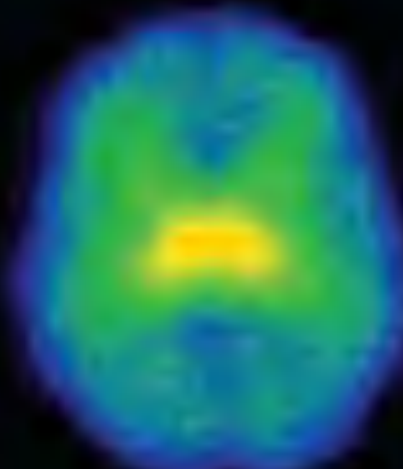
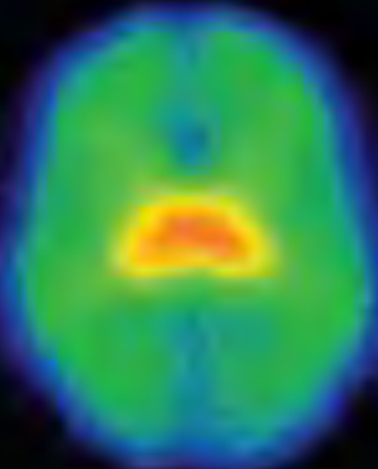
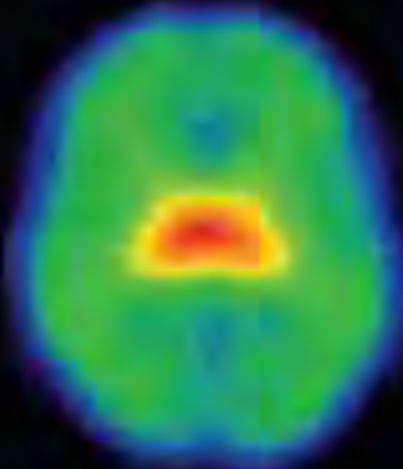
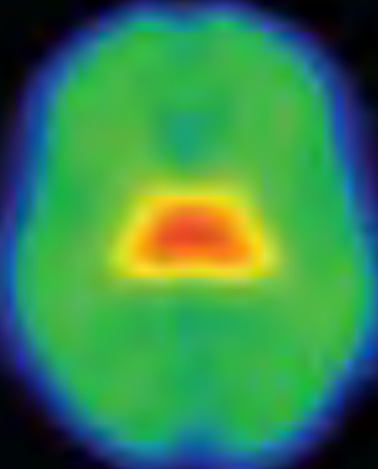
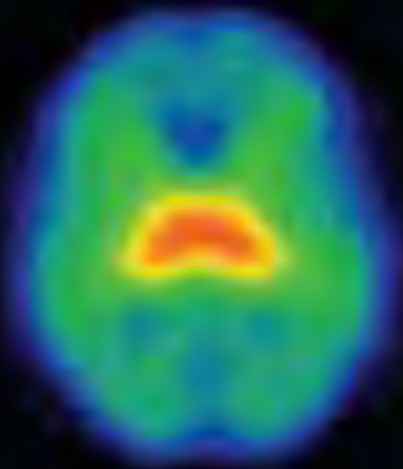
Nonsmokers

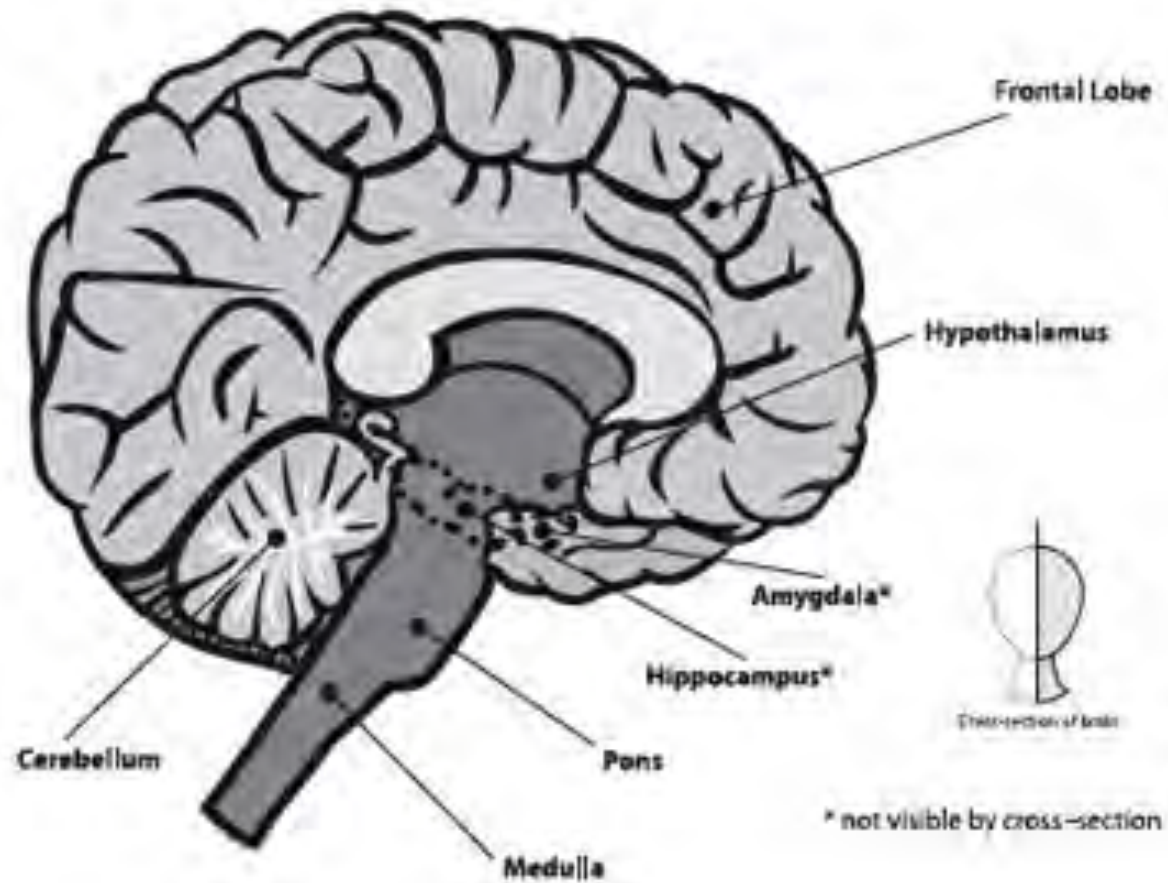
**Smokers
1 Week**

**Smokers
2 Weeks**

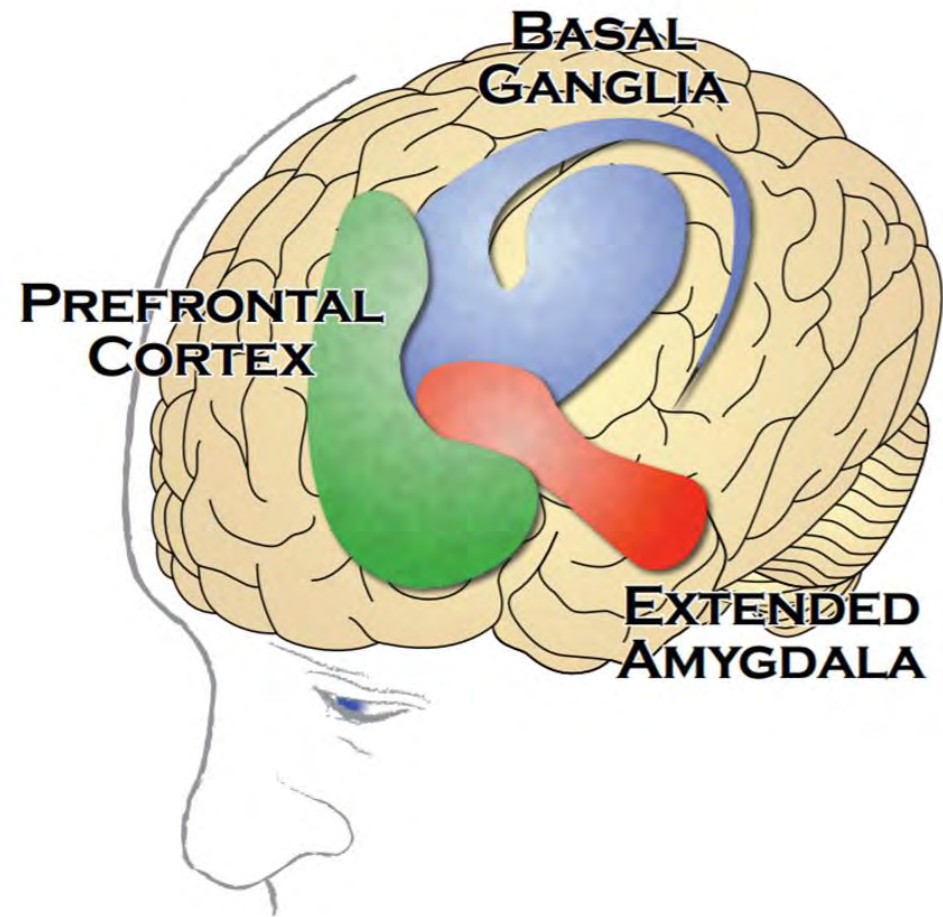
**Smokers
4 Weeks**

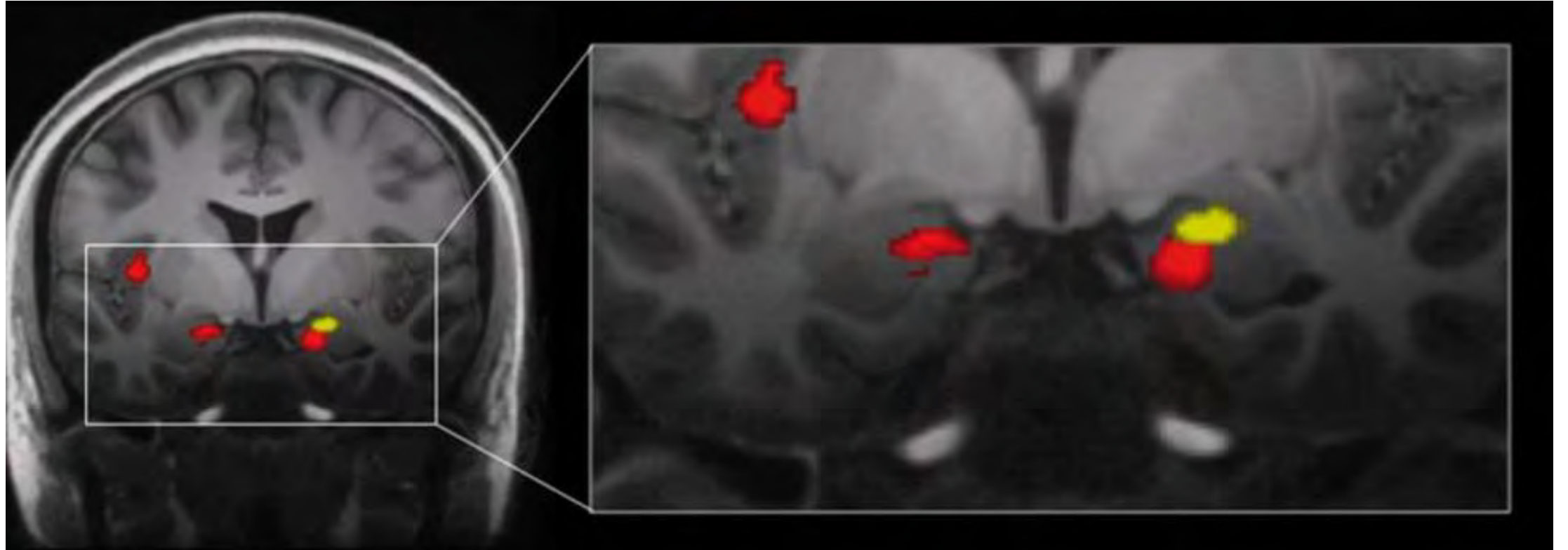
**Smokers
6-12 Weeks**



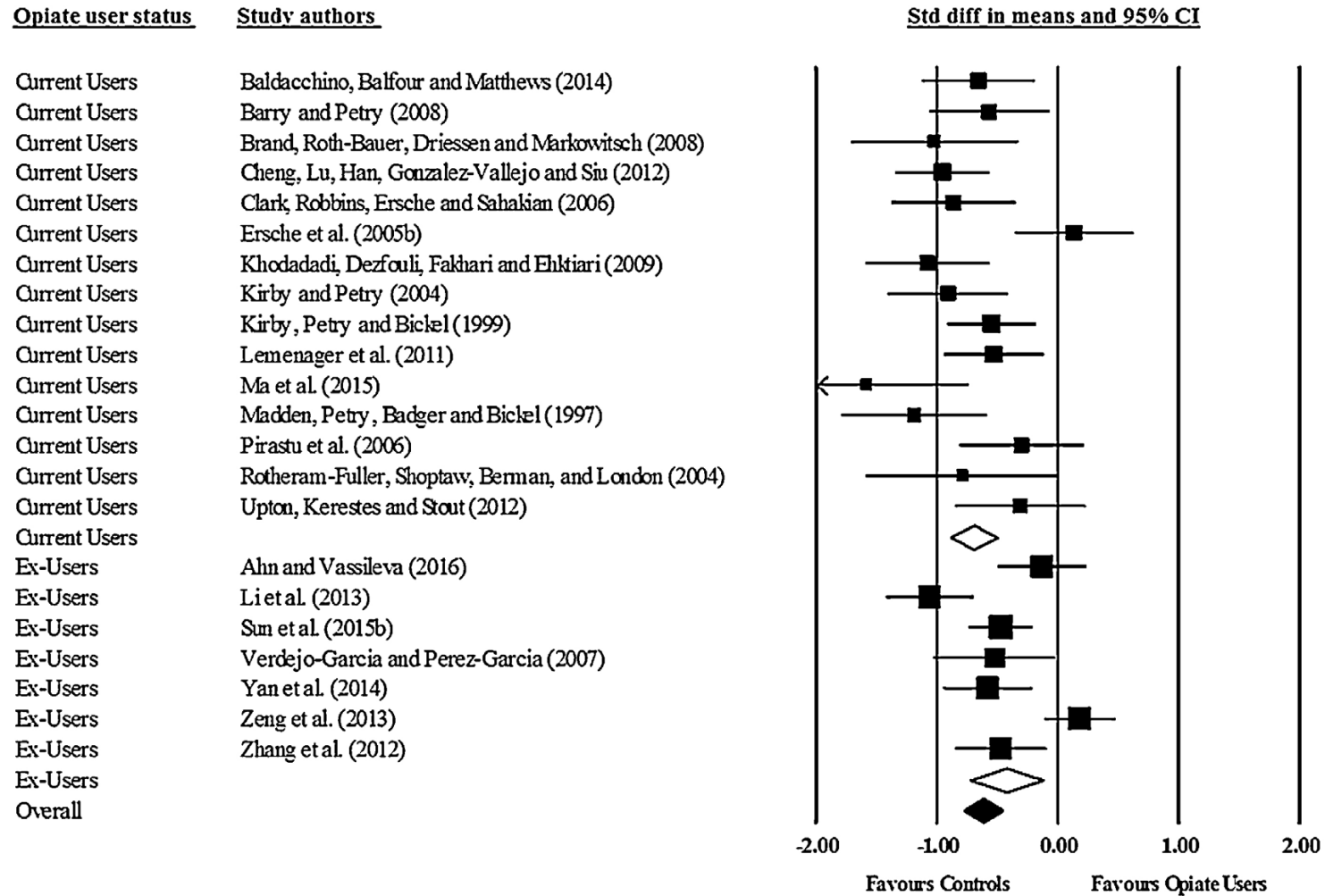


Brain Power: Module 1: An introduction to the brain and nervous system. National Institute on Drug Abuse, Washington, D.C. (June 2007).
<https://www.drugabuse.gov/publications/brain-power/grades-6-9/introduction-to-brain-nervous-system-module-1>





Lin, J. C., Chu, L. F., Stringer, E. A., Baker, K. S., Sayyid, Z. N., Sun, J., Campbell, K. A., & Younger, J. W. (2016). One month of oral morphine decreases gray matter volume in the right amygdala of individuals with low back pain: Confirmation of previously reported magnetic resonance imaging results. *Pain Medicine (Malden, Mass.)*, 17(8), 1497–1504. Retrieved: <https://doi.org/10.1093/pm/pnv047>





March is colorectal cancer awareness month: Demystifying the colonoscopy. (February 26, 2018). Alaska Native Tribal Health Consortium, Anchorage, AK. <https://anthc.org/news/march-is-colorectal-cancer-awareness-month-demystifying-the-colonoscopy/>





OPIOIDS AND THE BRAIN

Opioids bind to and activate opioid receptors in the brain, which are part of the endogenous opioid system (EOS). The EOS is a group of brain receptors that are activated by opioids.

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OPIOIDS AND THE BRAIN

- Opioids bind to OPR, OR, and KOR
- OPR is the most sensitive and most abundant
- OPR is found in the brain, spinal cord, and gut
- OPR is found in the brain, spinal cord, and gut

OROPALMUS
The most sensitive and most abundant

OROPALMUS
The most sensitive and most abundant

OROPALMUS
The most sensitive and most abundant

OROPALMUS
The most sensitive and most abundant



OROPALMUS
The most sensitive and most abundant

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References

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