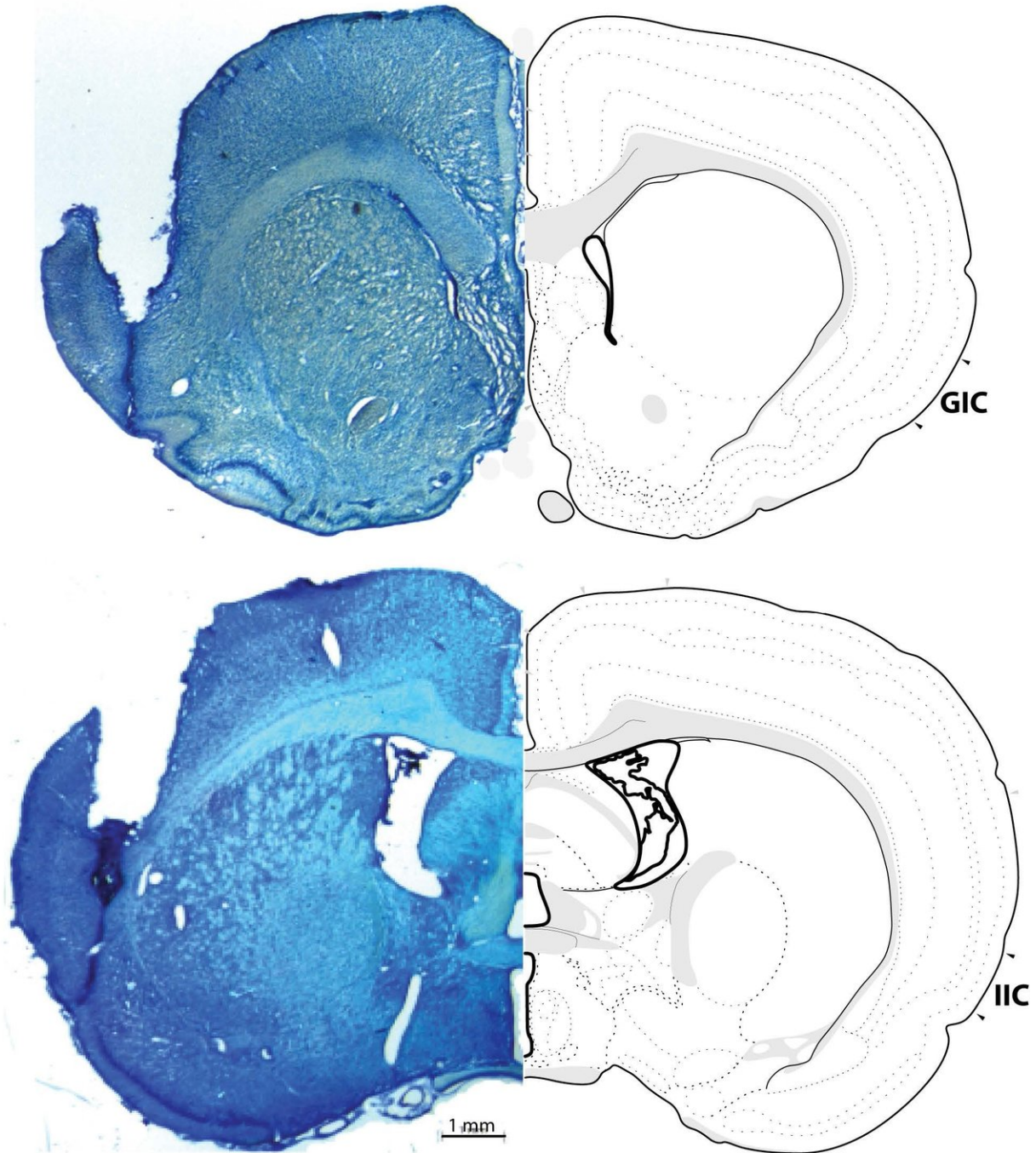


# Cannabidiol prevents nausea in rats

July 30 2018

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A non-psychoactive compound derived from marijuana could potentially be developed into new anti-nausea treatments for cancer patients receiving chemotherapy, suggests research in rats published in eNeuro. The study represents an advance in understanding the neurobiology of this distressing

symptom that accompanies vomiting but is not effectively treated by current drugs. Credit: Limebeer et al., *eNeuro* (2018)

A non-psychoactive compound derived from marijuana could potentially be developed into new anti-nausea treatments for cancer patients receiving chemotherapy, suggests research in rats published in *eNeuro*. The study represents an advance in understanding the neurobiology of this distressing symptom that accompanies vomiting but is not effectively treated by current drugs.

Linda Parker and colleagues observed a surge in levels of the [neurotransmitter serotonin](#) in the rat interoceptive insular cortex (IIC)—a brain region responsible for nausea in humans—following injection with the nauseating chemical compound lithium chloride. This increase in serotonin and subsequent gaping behavior (a behavior displayed by rodents to flavors paired with a nauseating treatments) was prevented by treatment with cannabidiol—a form of cannabis that does not contain the component found in [recreational marijuana](#) responsible for the drug's psychotropic effects. Treatment with a drug that elevates the endogenous cannabinoid, 2-AG, also prevented the elevation of serotonin in the IIC by activating the cannabinoid type 1 receptor.

These findings implicate the endocannabinoid system and IIC serotonin release in the sensation of nausea, opening up new therapeutic opportunities to explore in future research.

**More information:** Nausea-induced 5-HT release in the interoceptive insular cortex and regulation by monoacylglycerol lipase (MAGL) inhibition and cannabidiol, *eNeuro*, [DOI: 10.1523/ENEURO.0256-18.2018](#)

Provided by Society for Neuroscience

Citation: Cannabidiol prevents nausea in rats (2018, July 30) retrieved 2 May 2024 from <https://medicalxpress.com/news/2018-07-cannabidiol-nausea-rats.html>

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