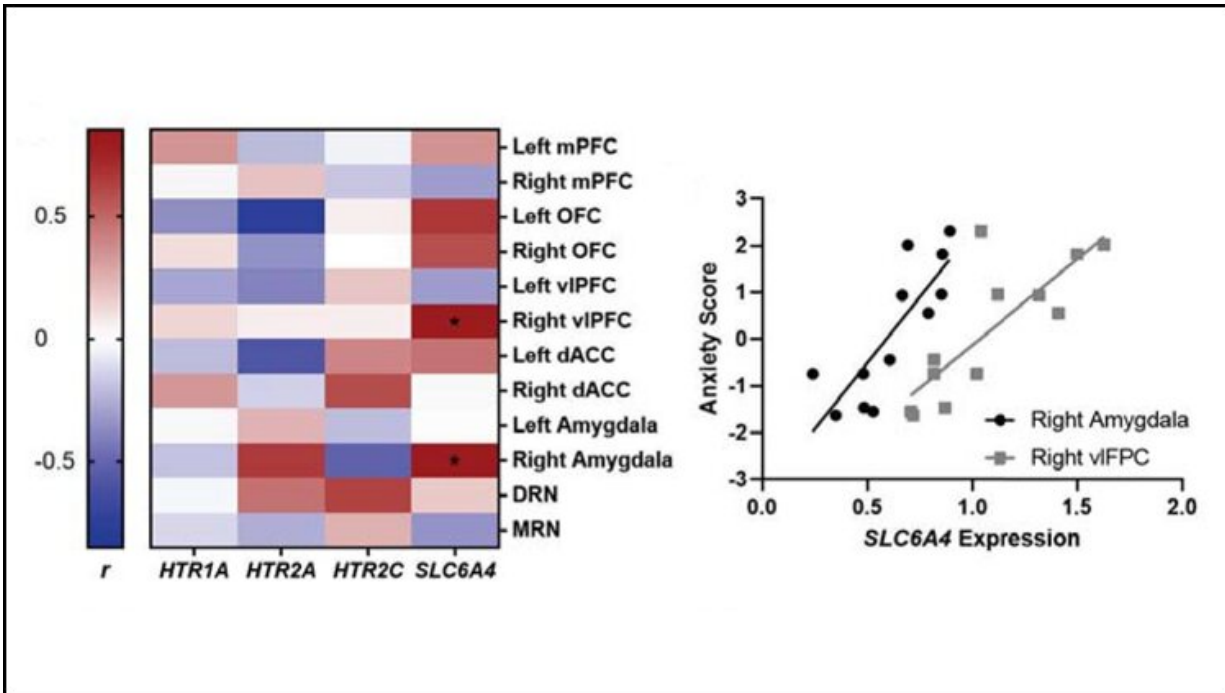


Why some people are more prone to anxiety

May 11 2020



Gene expression of the serotonin transporter gene (SLC6A4) in the right amygdala and vIPFC correlated with anxiety-like behavior in the human intruder test. Credit: Quah et al., JNeurosci 2020

Anxiety-prone people can blame serotonin cleanup proteins gone awry in their amygdala, according to research in marmosets recently published in *JNeurosci*. Targeting the amygdala with anti-anxiety medication could provide quicker relief.

The same event or set of life circumstances could send one person into the depths of anxiety or despair while leaving another unaffected. This distinction, called trait anxiety, arises from the proteins involved in [serotonin signaling](#), a neurotransmitter implicated in anxiety and depression.

Quah et al. measured the level of gene expression for genes encoding serotonin transporters—the protein tasked with cleaning up serotonin after its release—and those encoding receptors in marmosets.

The researchers focused on [brain areas](#) involved in emotional processing, such as the amygdala and prefrontal cortex. Marmosets with greater [trait anxiety](#) had high levels of gene expression for serotonin transporters in their amygdalae.

The research team administered [selective serotonin reuptake inhibitors](#) (SSRIs), a common anxiety medication, directly into the amygdalae of anxious marmosets.

This provided immediate symptom relief—an effect that normally takes several weeks to appear if the drug is taken orally.

More information: Trait Anxiety Mediated by Amygdala Serotonin Transporter in the Common Marmoset, *JNeurosci* (2020).

Provided by Society for Neuroscience

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