CRHR1 AGONISTS: AN INNOVATIVE APPROACH FOR THE TREATMENT OF THE SOCIAL ANXIETY DISORDER

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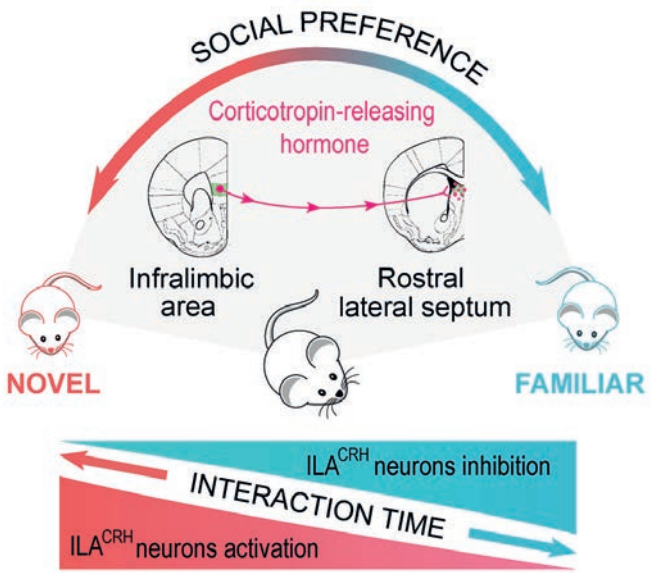
Executive Summary

Social anxiety disorder (SAD) is a mental illness characterized by an intense and persistent fear of social situations, which causes debilitating introversion. This disorder affects 7-9% of the population in developed countries, and 20% of the university population highlights it as their main health problem. In addition, 20-70% of people with social anxiety disorder experience subsequent depression. Currently, there are no specific medications for SAD. Therefore, its treatment includes antidepressant drugs, such as selective serotonin reuptake inhibitors (SSRIs) or benzodiazepines, along with cognitive behavioral therapy. However, accessibility, tolerance, and therapeutic response to these strategies are low, and it is essential to develop new therapies to treat social anxiety disorders specifically.

We have discovered that signaling through a particular cell receptor (CRHR1) in a specific brain area (lateral septum) is a key regulator of social preferences in a preclinical model of gregarious animals (De León Reyes et al, 2023 Cell). Importantly, by manipulating the activity of this neural circuit using CRHR1 agonists we have managed to rescue altered social preferences in experimental models, attenuating symptoms of isolation and promoting social novelty. Therefore, our results represent the first step toward achieving a specific treatment for social anxiety disorder

Main innovation and advantages

Current pharmacological treatment for SAD with antidepressants is inefficient, as only 35% of SAD patients treated are considered recovered after 10 years of medical follow-up, and it produces significant side effects (serotonin syndrome, suicidal thoughts, hyponatremia, risk of bleeding, bone fractures, or addiction). In contrast, administration of corticotropin-releasing hormone (CRH), a 41-amino acid peptide, or other CRHR1 receptor agonists in the lateral septum effectively reverses social isolation behavior in experimental models of altered social preference. Several clinical trials show that CRH administration in human patients does not cause toxicity, and the optimal dose of CRH to minimize its cross-effect on non-nervous tissues in patients has already been determined. In addition, CRH can be administered via intranasal sprays, which deliver the compounds to the brain more efficiently.



Therefore, the use of CRHR1 agonists may represent a new and effective future therapy for the treatment of introversion and social isolation in patients with SAD, overcoming the limitations of current drugs.

Intellectual property

Patent title: "CRHR1 AGONISTS FOR USE IN THE TREATMENT OF SOCIAL ANXIETY DISORDERS" (WO/2025/046136)

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For more information

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