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Faculty of Psychology

Colloquium lecture of Dr. Daniel Quintana

Rethinking oxytocin's role in cognition and behaviour

The neuropeptide oxytocin has garnered considerable interest for its role in social behavior and its potential for the treatment of psychiatric illnesses characterised by social dysfunction, such as autism. However, initial excitement has turned to disappointment with some studies failing to replicate earlier results, which has been attributed to issues surrounding research methods, mechanistic understanding, and theory development. In this talk, Daniel will discuss efforts to improve research methods to enhance reproducibility, including precise sample size estimation, synthetic datasets, and ways to test evidence for null models. Daniel will also describe three lines of research aiming to better understand oxytocin signalling mechanisms: i) Research identifying whole brain voxel-by-voxel gene expression patterns of the oxytocin receptor (OXTR) gene and its association with mental states via a large-scale fMRI meta-analysis of 14,371 studies, ii) Preliminary data exploring oxytocin pathway gene expression patterns across development, and iii) data from two clinical trials demonstrating that compared to placebo, 8IU intranasal oxytocin (but not 24IU intranasal oxytocin or 1IU intravenous oxytocin) modulates social cognition, pupil diameter, and neural activity. Altogether, these studies provide the first steps towards identifying targets for oxytocin receptor engagement in the human brain and suggest that a lower 8IU intranasal dose might be more efficacious than the conventional 24IU dose. Daniel will also introduce his new theory of oxytocin's role in human behaviour, which proposes that oxytocin modulates both social and non-social behaviour to maintain stability in changing environments.

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The colloquium lectures of this semester take place online!
Thursday, March 4th 2021; 4 p.m.

Join Zoom Meeting

<https://zoom.us/j/92483043383?pwd=czdKTWVnUnJGWFNyRVNSWmMxL3J0UT09>

Meeting ID: 924 8304 3383

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