03 JULY

11.30 A.M.
ROOM A103
POVO 1

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Multidimensional behavioral evaluation of the causal role of high-risk ASD genes in rats

Genomic studies in humans have identified **alterations within many genes** that drastically increase the risk of being diagnosed with **autism spectrum disorder (ASD)**. However, we still have a very limited understanding of how a mutation to a single gene can change behavior, let alone lead to the complex symptomatology of a psychiatric disorder such as ASD. I will present on our work using **transgenic rats with mutations to multiple of these high-risk ASD genes**. Using a high-throughput and large-scale behavioral phenotyping pipeline, coupled with data-driven analysis methods, we are able to identify a phenotype consistent with restrictive and repetitive behavior in rats haploinsufficient for **two different ASD risk gene**. I will present data showing that different mutations within a single gene can lead to clear behavioral differences, and that even the same mutation within a single gene leads to substantial individual variability in the behavioral phenotype.

CIBIO EXTERNAL SEMINAR

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