Post-Doc / PhD in psychiatric genomics, fully funded

The laboratories of Danilo Bzdok (danilobzdok.de), Guillaume Dumas (ppsp.team) and Sebastien Jacquemont are recruiting a talented postdoctoral researcher or PhD candidate to investigate genomic determinants of brain function and psychiatric disorders.

The laboratory of Sébastien Jacquemont is mapping the relationship between rare genomic variants, cognition, behaviour, and risk for neuropsychiatric conditions. This work is conducted within the new "Genome 2 Mental Health" Consortium funded by the National Institute of Mental Health.

The laboratory of Guillaume Dumas is combining computational tools and multi-scale approaches for the study of mental function and dysfunction, and the tailoring of optimal care to the individual patient, from genomes to smartphones.

The laboratory of Danilo Bzdok capitalizes on the largest emerging biomedical datasets to revisit classical questions in neuroscience by translating analytical tools from machine learning.

Requirements:
The ideal candidate holds a solid background in genomics, bioinformatics, and data science and should have coding skills using either R, Python, or Matlab.

Nature of the research:
We aim to understand the relationship between rare genomic variants, cognitive and behavioural dimensions, and risk for psychiatric conditions. Neuroimaging can also be a focus based on the interests the candidate.

Analyses will be performed on general population and psychiatric cohorts with cognitive, neuroimaging, and genomic data. This aggregate dataset of over 30 different international cohorts includes between 400000 and 800000 individuals. CNV data are called using genotyping array data. Exome and Whole-genome sequencing data are also available for a subset of the dataset (target: > 200000 individuals).

The successful candidate will investigate the relationship between the functional annotation of genes (e.g. the topological distribution of gene expression across the brain and their effects on neural, cognitive, and behavioural measures as well as risk for psychiatric disorders.

Training and mentoring across the three labs will allow to perform analyses across modalities and use state-of-the-art computational methods.

Environment:
Labs offer a stimulating and international environment. The project is conducted with large consortia (USA, Canada, and Europe). Students thus interact with international teams and can train in a collaborating laboratory abroad to gain additional expertise. They can attend summer schools on specific topics as well. They are expected to present their research at international conferences.

Positions are available now and will remain open during the next year.

Candidates should send curriculum vitae and recommendation to:

Sébastien Jacquemont	Guillaume Dumas	Danilo Bzdok
Associate Professor	Assistant Professor	Associate Professor
University of Montreal	University of Montreal	University of McGill
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