Bellgrove Laboratory, School of Psychological Sciences, Monash University

Attention deficit hyperactivity disorder (ADHD) is the most common childhood mental condition and is associated with significant negative lifetime outcomes. We know from numerous twin studies across the world that the disorder is highly heritable but we are yet to identify the specific genes conferring risk to the disorder.

This PhD project will interface directly with ongoing work within the Bellgrove laboratory that is aimed at 1) identifying susceptibility loci for ADHD and 2) functionally characterising the impact of associated variants using state-of-the-art techniques from functional genomics.

Although exact PhD topics will be negotiated with individual candidates, topics to be addressed include:

1. Examining whether the top 20-GWAS genes identified as potential susceptibility loci for ADHD are also predisposing to ADHD in Australian and Colombian cohorts of 800 families.
2. Investigating the hypothesis that rare DNA variants are risk factors for ADHD. Sequence analysis of targeted regions (coding sequences [exons], expression control regions [5’ and 3’ UTR] in the above candidate genes will be performed.
3. Conducting functional genomic analyses on genetic variants at DAT1, DRD4, DRD5, 5-HTT and SLC6A2. This analysis will also be extended to include variants resulting from association mapping.

We welcome applications from high calibre candidates with diverse backgrounds including (but not limited to) biomedical science and genetics, psychology and neuroscience.

Applicants who secure a competitive scholarship (e.g, APA) will also be offered a scholarship top-up of $5K per annum for 3 years.

About the Bellgrove Lab: The Bellgrove laboratory at Monash University is devoted to studying the biological mechanisms of cognition with a view to delineating susceptibility pathways for common psychiatric disorders, such as attention deficit hyperactivity disorder (ADHD). Members of the Bellgrove laboratory have backgrounds in cognitive neuroscience (EEG, fMRI), molecular genetics and statistics. Laboratory facilities include over 200m² of dedicated office and laboratory space for molecular genetics and human cognitive neuroscience (EEG and cognitive testing suites) meaning that all the necessary equipment and space for projects is available within the one laboratory.

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