## Fully funded 4-year John Grace QC PhD Scholarship (MHRUK)

Title	Neural mechanisms of positive symptoms in first-episode and prodromal psychosis
To start	1 <sup>st</sup> October 2020
Award(s)	1 fully funded 4-year John Grace QC PhD Scholarship (MHRUK)
Project	About 1 in 100 people will develop a psychotic disorder such as schizophrenia over their lifetime worldwide. Schizophrenia is primarily diagnosed based on the presence of positive symptoms such as hallucinations and delusions, and these can be identified before the onset of psychosis in young people at clinical high risk for psychosis (CHR). There is an urgent need to understand the neural mechanisms associated with the development of psychosis in order to identify new targets for early intervention and prevention.
	Growing evidence indicates that the development of positive symptoms may be driven by alterations in the hippocampus, and that this may be due to abnormalities in the neurotransmitter system GABA. Interestingly, recent preclinical and human evidence suggests that GABAergic anomalies in schizophrenia could be due to oxidative stress, further supported by findings that premorbid administration of antioxidants can protect the integrity of GABAergic interneurons in animal models relevant to schizophrenia. These exciting findings indicate that treatment with antioxidants may be beneficial as novel avenue for early intervention.
	The aim of this project is to examine the oxidative stress-GABA-psychopathology pathway using reliable measures of oxidative stress, GABA, and hippocampal activity in relation to positive symptoms in patients with a first episode of psychosis and CHR individuals. This research is fundamental to understanding the mechanisms associated with psychotic symptoms and may provide a scientific basis for the development of novel preventive interventions.
	The student will acquire cutting-edge neuroimaging, neuropsychology and neuroscience techniques and use start-of-the-art neuroimaging equipment in the Invicro Imaging Centre. The project will join one of the world's leading research laboratories in early psychosis, based in the Department of Psychosis Studies at the Institute of Psychiatry, Psychology & Neuroscience.
Supervisors	Dr Gemma Modinos and Professor Philip McGuire
Entry requirements	Applicants should have a Bachelor's degree with 2:1 honours. A 2:2 degree may be considered only where applicants also offer a Master's with Merit.
Award types and eligibility	Fully funded for four years, UK tuitions fees (studentship not available to EU/Overseas applicants), and annual stipend.
Further information	Standard links: About the loPPN (link to http://www.kcl.ac.uk/ioppn/about/index.aspx)
	Studying at the IoPPN (link to http://www.kcl.ac.uk/ioppn/study/index.aspx)
	MSc programmes at the loPPN (link to http://www.kcl.ac.uk/prospectus/school/institute-of-psychiatry-psychology-and-neuroscience/programmes#graduate)

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	Research degrees at the IoPPN (link to https://www.kcl.ac.uk/ioppn/study/postgraduate-research-programmes)  KCL Researcher Development Programme (link to http://www.kcl.ac.uk/study/pg/school/RDP/training-and-development/Researcher-Development-Programme-2014-15.pdf)  MHRUK Studentship: http://www.mentalhealthresearchuk.org.uk/mentalhealth-research-uk-awards/john-grace-kcl-2020  Modinos Lab: https://modinoslab.com/
How to apply	Applicants must complete and submit an online admissions application, via the admissions portal by midnight (23:59 GMT), Sunday 23rd February 2020.  On the 'Choosing a programme' page, please select 'Research degrees' and enter the keyword Psychosis Studies Research MPhil/PhD (Full-time).  In your application, you will be asked to include:  • Academic Transcripts – where applicable, academic transcripts must be submitted with the online admissions application • Details of your qualifications (you will need to attach copies) • Details of previous employment • A personal statement describing your interests and why you wish to apply for this project. Please include this as an attachment rather than using the text box. • Academic References – all admissions applications require two supporting references. If the applicant is relying on his/her referees to submit references directly to the College after he/she has submitted his/her admissions application, then the applicant must ensure that their chosen referees are made aware of the funding deadline.  In the Funding section, please tick box 5 and include the following reference: GM-loPPN-MHRUK-2020  Please note there is no need to complete the Research Proposal section in your application as the project has already been set.  You are welcome to email gemma.modinos@kcl.ac.uk (supervisor) for more information regarding the project and studentship.  If you have any queries regarding the application process, please contact Olivia Rees, Postgraduate Research Administrative Assistant.  References must be received by the deadline for the applicant to be eligible. Only shortlisted applicants will be contacted.
Closing Date	23rd February 2020 (23:59 GMT)
Interviews	9 <sup>th</sup> March 2020