A PhD IN INTERDISCIPLINARY NEUROSCIENCE @ LISBON

Being awarded the NeurULisboa PhD scholarship (for which a CV and letter of motivation, and subsequent interview is necessary) is an excellent opportunity to be part of a PhD project at the Biomedical Neuroscience Lab (Dian Prata's lab; dpratalab.wordpress.com), at the University of Lisbon.

If you are interested in the project within the research stream below, please contact the PI (diana.prata@kcl.ac.uk) for a quick interview, to ascertain mutual interest. Following that, application to the NeurULisboa PhD scholarship (deadline 14th Feb) should include your mention of interest in the lab.

The Neurobiology of Social Cognition.

Keywords. Oxytocin, dopamine, genetics, neuropharmacology, neuroimaging, cognitive empathy, theory-of-mind, trust, cooperation, reward, reinforcement learning, mirror neurons, emotion recognition, anorexia nervosa, schizophrenia.

Context. Understanding the neurochemistry and circuitry mediating social cognition is key to treat a large range of neuropsychiatric disorders – as social deficits are often present at their origin and often do not subside with treatment. Working out what others think, intend and feel (i.e. cognitive empathy or theory-of-mind) is essential for optimal communication and cooperation and is dysfunctional in schizophrenia, borderline personality disorder, drug addiction, anorexia nervosa, and autism, among others. We are characterizing what molecules and brain pathways are involved in social cognition, for example: how does oxytocin promote cognitive empathy? Where does it act? What effect does it have in brain and our function? How does it interact with other neurotransmitter systems? Tools. We will study healthy humans and schizophrenia patients with structural and functional neuroimaging (MRI, DTI and MRS), double blind placebo-controlled pharmacological administration, psychological testing, social cognition tasks, eye-tracking, pupilometry, skin conductance response, EEG, DNA/proteomics testing and computational modelling. We use mainly MATLAB, SPSS, and other more specific quantitative data analysis and task presentation software.

Sponsors. The European Commission, Portuguese Science and Technology Foundation, and Bial Foundation. Main collaborations. King's College London (UK), Emory University (USA), and The Netherlands Institute for Neuroscience (The Netherlands).