

## **Full Time MSc Neuroscience Programme 2010 – 2011**

### **Titles for Essay A3**

**Submission Deadline 18:00 on SUNDAY 6<sup>th</sup> February 2011**

- 1 Describe how the gate control theory can account for pain without damage (e.g. phantom limb pain) or damage without pain (e.g. injuries during war time). Anna Battaglia
- 2 How does retinal processing accommodate the enormous range of light levels to which the eye can be exposed? Ian Thompson
- 3 Neuroadaptations develop in response to chronic drug exposure. Taking opioids as an example, explain the main molecular and cellular mechanisms underlying these processes and how they may contribute to the expression of important features of addiction. Sylvane Desrivieres
- 4 Discuss the genetic contribution to alcohol dependence. David Ball
- 5 Are Schizophrenia and Bipolar Affective Disorder really one and the same? Use both clinical and research findings to illustrate your case. Toby Winton-Brown
- 6 Discuss whether the clinical diagnosis and management of dementia has significantly progressed since the initial description of Alzheimer's Disease. Jonathan Huntley
- 7 Review the evidence from neuroimaging studies on brain abnormalities in ADHD. Katya Rubia
- 8 Describe the animal models currently used to study Schizophrenia and review the contribution these models have made to our understanding of the disorder. Cathy Fernandes
- 9 Has fMRI lived up to its early promise of being clinically useful? If not, why not? Mick Brammer
- 10 Can molecular imaging improve the diagnosis and treatment of neurodegenerative disease? Mike Modo