

NEUROSCIENCE MSc EXAMINATION

For Students of the
INSTITUTE OF PSYCHIATRY
King's College London

14th March 2011 14:00 - 16:30

Addiction Biology

PAPER B2

Answer **FOUR** questions only

1. Discuss the link between the rate of onset of drug effect, its intensity and half life and its abuse liability and treatment of dependence.
2. Describe the factors that could compromise good reliability of data and discuss which measures can be taken to obtain reliable data.
3. Define drug addiction according to the DSM IV criteria. Describe three different dependent-related measures in animals that allow you to assess them in relation to your definition.
4. Describe the brain reward pathways and how cocaine and amphetamine interact with them. Discuss the relevance to addiction-related behaviour.
5. Discuss the evidence for epigenetic dysregulation in addiction.
6. How does a microRNA affect gene expression? Describe a microRNA finding which has been related to a psychiatric disorder.
7. Using examples of specific drugs, what is the impact of drug exposure during the different stages of development?
8. Critically review neuroimaging studies investigating drug-use risk factors and acute versus long-term effects of drug use on brain function.