

KING'S COLLEGE LONDON
INSTITUTE OF PSYCHIATRY, PSYCHOLOGY AND NEUROSCIENCE

MSc NEUROSCIENCE EXAMINATION

16th March 2015 at 14.00-16.30pm

Addiction Biology

B2 WRITTEN EXAMINATION

Answer FOUR questions only

1. What is the role of brain monoamine transporters in psychostimulant (e.g. cocaine, amphetamine) addiction? Describe the effects of the drugs on synaptic activity and their relation to behaviour in animals and humans.
2. Discuss how receptor agonists and antagonists can be used to treat drug addiction in humans. Discuss how animal studies can inform clinical treatment.
3. Evaluate the evidence from preclinical studies on mifepristone for the use of this drug in the treatment of alcohol dependence.
4. Critically evaluate the evidence that there are genetic influences on addiction.
5. Discuss the role of impulsivity as an underlying factor in psychostimulant dependence.
6. Choose two different imaging techniques for examining the brain and explain strengths and weaknesses of each technique for our understanding of the effects of drugs of addiction.
7. What is prospective memory and in what ways is it affected behaviourally by alcohol?
8. Compare and contrast the utility of oral fluid and urine for the detection of drug use, and discuss the implications for a positive drug screen upon behavioural impairment.