

UNIVERSITY OF LONDON
NEUROSCIENCE MSc EXAMINATION

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

8th March 2010 10:00 am - 12:30 pm

Neurodegeneration

PAPER B4

Answer FOUR questions only

1. What is the evidence for synaptic pathology in the Neuronal Ceroid Lipofuscinoses (NCLs)? Compare and contrast between the different forms of NCL.
2. Compare the processing of amyloid precursor protein in control brain and in Alzheimer's disease.
3. Outline the contribution that study of the rare familial forms of Parkinson's disease has made to our understanding of the much more common sporadic form of this disease.
4. Protein aggregates characteristic of neurodegenerative diseases have been suggested to be toxic or protective. Review the arguments for both hypotheses.
5. What is the mechanism of action of the Alzheimer's disease drug Memantine? How might Memantine preserve memory in patients with Alzheimer's disease?
6. What anatomical sites are the first to show atrophy in Alzheimer's disease and how can they be imaged?
7. How do you model Parkinson's disease in *Drosophila*?
8. Discuss how transgenic mouse models have helped to elucidate the role of tau in Alzheimer's disease and related tauopathies.