

*Ollscoil na hÉireann, Gaillimh*  
*National University of Ireland, Galway*  
**Semester II Examinations 2004 / 2005**

<b>Exam Code(s)</b>	1NP1
<b>Exam(s)</b>	
<b>Module Code(s)</b>	PM519
<b>Module(s)</b>	Neuropharmacology
<b>Paper No.</b>	2
<b>Repeat Paper</b>	
<b>External Examiner(s)</b>	Professor Iain Campbell
<b>Internal Examiner(s)</b>	Dr. John Kelly Dr. Maura Grealy Dr. Senthil Kumar Ms. Michelle Roche

**Instructions:** Answer 4 out of 6 Questions. Please use separate answer books.

<b>Duration</b>	3 Hours
<b>No. of Pages</b>	1
<b>Department(s)</b>	Pharmacology
<b>Course Co-ordinator(s)</b>	Dr. John Kelly

**Requirements:**

MCQ  
 Handout  
 Statistical Tables  
 Graph Paper  
 Log Graph Paper  
 Other Material

1. Discuss how the cytochrome P450 system can influence individual responses to psychotropic agents.
2. Write an essay on the applications of molecular drug discovery in Neuropharmacology.
3. Write an essay on “amphetamine and cocaine as drugs of abuse”.
4. Describe occupancy response relationships and the various theories of receptor-drug interactions.
5. Describe, using diagrams where appropriate, each of the following in terms of receptor binding studies
  - a) Scatchard Plot
  - b) Hill co-efficient
  - c)  $IC_{50}$
  - d) Dissociation rate constant
  - e) Radioactive isotope
6. Describe the methods used to assess spontaneous and conditioned behaviours.