

Ollscoil na hÉireann, Gaillimh
National University of Ireland, Galway
Summer Examinations 2004 / 2005

Exam Code(s) 4BO2
Exam(s)

Module Code(s) PM418
Module(s)

Paper No. 4
Repeat Paper

External Examiner(s) Professor Iain Campbell
Internal Examiner(s) Dr. Maura Grealy
 Dr. Jill McMahon

Instructions: Answer section A **and** two questions from section B. Use separate answer books for each question.

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

Requirements:

MCQ
 Handout
 Statistical Tables
 Graph Paper
 Log Graph Paper
 Other Material

Section A

1. 'Recent advances in basic research have profound implications for pharmacology and therapeutics'. Discuss this statement based on your reading of the recent literature with respect to *one* of the following areas:
Cancer therapy
Auto-immune diseases
Regenerative medicine
Infectious diseases

Section B

2. 'Research over the past five years has transformed our understanding of G-protein coupled receptors.' Give an account of the main developments and their implications for pharmacology.
3. Give a detailed account of how transcription factors control gene expression. Include key techniques used to obtain this information and give examples of the applications of these findings in drug development and assay design.
4. 'Pharmacogenomics and related technologies will revolutionize drug discovery over the next five years' Discuss.
5. The Irish Government has awarded you 20 million euro to set up a Gene Therapy Research Institute. Give an outline of which disease (or diseases) would be suitable gene therapy targets and which gene therapy vectors would be most appropriate for this research.