PHRM30008 Drugs: From Discovery to Market

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 3 x one hour lectures per week (total contact hours: 36) Total Time Commitment: 120 hours
Prerequisites:	BSc students: **Subject** / **Study Period Commencement:** / **Credit Points:** PHRM20001 Pharmacology: How Drugs Work / Semester 2 / 12.50 or BBiomed students: **Subject** / **Study Period Commencement:** / **Credit Points:** BIOM20002 Integrated Human Structure and Function / Semester 2 / 25 Students wishing to undertake this subject as breadth will need the approval of the subject co-ordinator.
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	This subject cannot be taken if credit has been previously obtained for: **Subject** / **Study Period Commencement:** / **Credit Points:** 534-301 Cellular and Molecular Pharmacology / Not offered 2010 /
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Coordinator:	Assoc Prof Richard Hughes, Dr Michael Lew
Contact:	Dr Michael Lew: **michaell@unimelb.edu.au (mailto:michaell@unimelb.edu.au)** Dr Richard Hughes: **rahughes@unimelb.edu.au (mailto:rahughes@unimelb.edu.au)** Administrative Coordinator: Ms Hong Nguyen
Subject Overview:	Modern rational drug discovery and development is a coordinated, multidisciplinary undertaking. This subject will introduce students to the basic science, including aspects of cellular and molecular pharmacology such as drug-receptor interactions, cell signalling, absorption-distribution-metabolism-excretion (ADME) and toxicology/safety pharmacology. A variety of techniques used at each stage of the drug development process will be presented, such as quantitative structure -activity relationships (QSAR), combinatorial chemistry, high throughput

	screening, integrated pharmacological assays and clinical trial design. Consideration will also be given to executive strategies underpinning this enterprise, such as scientific and economic aspects of target choice, lead optimisation and pharmacogenomics. Students will be encouraged to integrate knowledge from different parts of the subject and their course, reinforcing the multidisciplinary nature of drug discovery and development.
Objectives:	Upon completion of this subject, students will have: # a detailed understanding of the three tiers of drug discovery and development; # the elements of a coordinated strategy; # the techniques that are required to implement such a strategy and # the basic science that fuels these strategies and techniques. They will gain an appreciation of how modern drug discovery and development brings together input from a range of disciplines, including chemistry, structural biology, pharmacology and clinical sciences.
Assessment:	Continuing assessment 20%Mid-semester assessment 20%A 2 hour examination in the examination period 60%
Prescribed Texts:	Pharmacology, Rang et al., Churchill Livingstone, 6th edition, 2007.ORPrinciples of Pharmacology, Golan et al., Lippincott, Wilkins & Williams, 2nd edition, 2007.
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Arts (https://handbook.unimelb.edu.au/view/2010/B-ARTS)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2010/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2010/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2010/B-MUS)** You should visit **learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html)** and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	By the end of this subject, students will: # be adept at learning in a variety of ways # be able to examine critically, synthesise and evaluate knowledge from multiple sources # have gained experience in collaborative learning
Notes:	This subject is available to students enrolled in the pre 2008 BSc, New Generation BSc, Biomedicine degree.
Related Course(s):	Bachelor of Science
Related Majors/Minors/ Specialisations:	Biomedical Biotechnology Biotechnology Biotechnology Medicinal Chemistry Pharmacology Pharmacology Pharmacology