PHRM30008 Drugs: From Discovery to Market

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2012, 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 BBiomed students: **Subject** / **Study Period Commencement:** / **Credit Points:** BIOM20002 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:	Not Applicable
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
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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 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 10% Mid-semester assessment 20% A 2 hour examination in the examination period 70%
Prescribed Texts:	None
Recommended Texts:	*Pharmacology*, Rang *et al*., Churchill Livingstone, 6th edition, 2007. OR *Principles 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/2012/B-ARTS)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2012/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2012/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2012/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 independent learning
Notes:	This subject is available to students enrolled in the pre 2008 BSc, New Generation BSc, Biomedicine degree.
Related Majors/Minors/ Specialisations:	Biomedical Biotechnology (specialisation of Biotechnology major) Biotechnology (pre-2008 Bachelor of Science)

	Medicinal Chemistry (specialisation of Chemistry major) Pharmacology Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.