

Pharmacy and Pharmaceutical Sciences



PhD candidate Ben Finnin analysing the effects of cardiac drugs on heart cells derived from embryonic stem cells.

What makes Pharmacy and Pharmaceutical Sciences at Monash special?

- **Research success:** Monash researchers make important contributions that bring real change to people's lives across the globe, including drug development to combat influenza, malaria and cancer.
- **Links with industry:** The faculty is a major player in the Australian health care, pharmaceutical and biomedical community.
- **Excellent location:** The Parkville campus is just a few minutes from Melbourne's city centre and easily accessible by public transport.
- **Innovation:** The faculty has a reputation for innovation, particularly in the areas of drug discovery, drug delivery and medicine use and safety.
- **World-class facilities:** Our research students have access to a dedicated research building, modern laboratories, an extensive pharmaceutical sciences library and first-rate research equipment.

Research excellence

The Parkville campus is home to the Monash Institute of Pharmaceutical Sciences and the Centre for Medicine Use and Safety. Our postgraduate research and coursework students receive a research-driven education.

The Monash Institute of Pharmaceutical Sciences (MIPS) is a leading centre of pharmaceutical science that drives both basic and applied research. Knowledge, understanding and innovation are fostered and incubated, and expertise is leveraged through collaborative translational research programs with academic and commercial partners. MIPS focuses on cutting-edge research and the training of Australia's next generation of pharmaceutical scientists. The institute is based at Monash's Parkville campus and builds on the faculty's international reputation for innovation and collaboration.

The four MIPS research themes:



The Centre for Medicine Use and Safety (CMUS) develops, implements and evaluates new models and systems of healthcare practice, especially those involving pharmacists, with the ultimate goal of making the use of medicines as safe and effective as possible. Researchers have excellent access to multidisciplinary research collaborators and are in an ideal position to address issues around medicine use and safety across all sectors – the home, the broader community, hospitals, residential aged care facilities and the interfaces between these sectors.

The four CMUS research themes:



Contact

For further information, talk to one of our advisers:

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Graduate profile

Dr Timothy Morgan

Bachelor of Pharmacy (1992),
PhD (1999)

Executive Director, Lachesis
Biosciences

"I am motivated by the fact that the top 20 diseases in the world are all largely preventable. Despite this, in developed countries only three per cent of the health budget is spent on public health and disease prevention, which provides a market opportunity to bring preventive healthcare to life."



Cancer drug discovery: MIPS has a major role

Research into new drugs for the treatment of cancer has received a major boost, with the Federal Government and industry groups funding a \$38 million Cooperative Research Centre for Cancer Therapeutics (CRC-CT) that involves researchers from the Monash Institute of Pharmaceutical Sciences (MIPS). The CRC-CT brings together pharmaceutical scientists and medicinal chemists from MIPS with the leading cancer research organisations in Australia. These groups are also linked with a major UK cancer drug discovery and development technology transfer company.

CRC-CT is a significant opportunity for Australia to form the first combined preclinical cancer translation organisation in the country, modelling itself on best practice centres worldwide that have proven commercial success.

Cancer presents an enormous worldwide personal, social and economic burden. It is the nation's biggest disease concern, with one in three Australians developing cancer before the age of 75. With more than 88,000 new cases of cancer and 36,000 deaths per year, cancer causes an annual loss of nearly 480,000 disability-adjusted years of life in Australia, equivalent to 19 per cent of the estimated total for all causes of death and disability.

Research degrees

Doctor of Philosophy Master of Pharmaceutical Science

The Faculty of Pharmacy and Pharmaceutical Sciences is internationally renowned as a key research centre. It is home to the Monash Institute of Pharmaceutical Sciences, the largest and most experienced group of pharmaceutical scientists in Australia. The faculty's research students have access to a dedicated research building, modern laboratories, an extensive library and first-rate research equipment.

The faculty offers research programs in the areas of:

- Drug discovery biology
- Medicinal chemistry and drug action
- Drug candidate optimisation
- Drug delivery, disposition and dynamics
- Medicine use and safety

Research students are supervised by leading international experts in the field, and the research conducted by research graduates is highly regarded within Australia and internationally.

The faculty has established a strong reputation with industry in research, both nationally and internationally, and acts as a resource for industry and research institutes involved in the pharmaceutical and biomedical sciences.

The PhD program is offered to elite applicants with high academic standing, normally a Masters degree or an honours degree at H1 or H2A level in a relevant discipline.

Course Outline

The degree is awarded for research in the principal areas of drug discovery biology, medicinal chemistry and drug action, drug delivery, disposition and dynamics, drug candidate optimisation and medication use and safety.

Students may nominate the area in which they wish to pursue their studies, contingent upon supervision and funding support being available.

Assessment is by 100 per cent thesis.

Career Outlook

PhD graduates are employed in many areas including the pharmaceutical, manufacturing, chemical, biomedical and chemical industry. PhD graduates are also employed in government and military sectors, and research institutes.

Course Details

Course code: 2625

Duration: 4 years full-time, 8 years part-time

Campus: Parkville

Intake: First semester, second semester

Entry requirements: Qualifications and experience equivalent to a bachelors degree in pharmacy or other relevant field at a level of honours I or A from a recognised tertiary institution or a masters degree in pharmacy or other relevant field. Students will also need to provide details of publications in refereed journals, conference abstracts and reports or relevant research experience that demonstrates research proficiency.

2009 annual domestic fee: Research Training Scheme

See Doctor of Philosophy.

Course Outline

See Doctor of Philosophy.

Career Outlook

Graduates will find employment opportunities in the pharmaceutical industry. Examples of specific career areas include drug analyst, industry consultant, development chemist, medicinal chemist and clinical trial researcher.

Course Details

Course code: 2627

Duration: 2 years full-time, 4 years part-time

Campus: Parkville

Intake: First semester, second semester

Entry requirements: Qualifications and experience equivalent to a bachelors degree in pharmacy or other related field at a level of honours I, 2A or 2B from a recognised tertiary institution.

2009 annual domestic fee: Research Training Scheme



Graduate profile

Jagannath Kota

PhD (2008)

"I was impressed by the quality of the faculty's research in formulation and drug delivery – and that's why I chose to study at Monash. The support that I received to attend international conferences and present myself in front of a larger scientific group was fantastic.

I've just finished my PhD, and I hope to secure a position in a pharmaceutical research organisation and make a valuable contribution to the development of potent and safe drugs."

Coursework degrees

Master of Pharmacy Practice

The Master of Pharmacy Practice is designed to enable registered pharmacists to develop a deep and more specialised range of attributes than those able to be acquired in the undergraduate pharmacy course. The Master of Pharmacy Practice is 100 per cent coursework.

Course Outline

The course is very flexible, which allows students to juggle work and study commitments. Students can tailor the course to their individual needs by choosing from a range of elective units including those related to various advanced areas of pharmacy practice, for example aspects of clinical practice, wound care, and health economics.

Career Outlook

Upon completion of the course, graduates will be able to undertake advanced practice roles, critically evaluate literature and use evidence-based principles to guide practice.

Course Details

Course code: 3467

Duration: 1 year full-time, 2 years part-time

Campus: Off-campus (Parkville)

Intake: First semester, second semester

Entry requirements: The course is open to pharmacists practising in Australia. Applicants in this category must:

- hold a Bachelor's degree in Pharmacy or equivalent
- be registered to practice as a pharmacist in Australia; and
- meet Monash University English language requirements

Off-shore international students are not eligible to enrol in the Master of Pharmacy Practice. As this course is not CRICOS registered, international students located in Australia who wish to undertake the Master of Pharmacy Practice are only eligible to enrol if they are registered as a pharmacist in Australia and have the appropriate visa. It is the responsibility of the student to ensure that they have the appropriate visa.

Master of Clinical Pharmacy

The Master of Clinical Pharmacy provides pharmacists working in clinical settings the opportunity to develop their skills in evidence based practice, quality use of medicine, practice-based research and the provision of high-level clinical pharmacy services.

The course provides a knowledge base in core clinical pharmacy subjects and assists students with the development of their written and oral communication skills, their ability to critically evaluate clinical literature, and to conduct practice based research.

The course is intended primarily for those pharmacists practising in a clinical setting in hospital pharmacy. Some units may be attractive to pharmacists in community-based practice.

Course Outline

Areas of study include biostatistics, epidemiology, theory and practice of evidence-based medicine, interpretation of clinical data and pharmacotherapy and clinical research.

Each student will complete a four-week speciality rotation with an experienced clinical instructor and will carry out a practice-based research project. Students must arrange the necessary time release from their employer to complete the placement and research project.

The program is conducted mainly online and via distance education. There is a small component of on campus teaching, however this is supported by online resources.

Assessment is by assignments, presentations, online activities, completion of a placement and submission of a research project.

Career Outlook

The Master of Clinical Pharmacy prepares students for specialisation as a clinical pharmacist, working as specialist in medical information, medication management or other areas of clinical practice.

In some instances graduates are entitled to extra salary increments.

Course Details

Course code: 3454

Duration: 2 years part-time

Campus: Multi-mode (Parkville)

Intake: First semester

Entry requirements: The course is open to pharmacists registered to practice in Australia. Applicants with a four year undergraduate degree will be eligible at the end of their internship year. Those with a three-year undergraduate degree will be eligible following a period of clinical experience. In the event of a surplus of applicants, selection may be via an interview process. The next intake for this course is in 2011.

2009 annual domestic fee: \$17,400 AUD

Off-shore international students are not eligible to enrol in the Master of Clinical Pharmacy. As this course is not CRICOS registered, international students located in Australia who wish to undertake the Master of Clinical Pharmacy are only eligible to enrol if they are registered as a pharmacist in Australia and have the appropriate visa. It is the responsibility of the student to ensure that they have the appropriate visa.



Graduate profile

Robyn Rayner

Master of Wound Care (2006)

"The Master of Wound Care provided me with a sound basis for achieving excellence in wound care. I'm now a specialist resource nurse for clients, carers and other health professionals in my local area of Bunbury, Western Australia."

Master of Wound Care

Wound care can be critical to patient recovery, and the preventative aspects of wound care management are gaining increasing prominence in areas such as aged care.

Monash's wound care courses have been developed in collaboration with the Wound Foundation of Australia, The National Ageing Research Institute, The University of Melbourne and La Trobe University.

Course Outline

Students complete the following core areas of study:

- Biology of wound healing
- Wound assessment and dressing
- Management of acute and chronic wounds
- Systemic medication and wound healing
- Nutrition and wound healing
- Practical wound care training and assessment
- Evidence based practice
- Introduction to epidemiology/biostatistics

Students may also complete elective study in the following areas:

- Dermatology
- Alternative therapies
- Scar management
- Palliative care and pain management
- Reconstructive surgery
- Diabetic foot
- Management of burns
- Clinical risk management and wound care

Students undertake a clinical project that explores the evidential basis for current practice and potential improvement of a complex wound care problem in the student's work place or within a healthcare setting.

Career Outlook

This program prepares students for specialisation in the field of wound care. It will be of particular benefit to doctors, nurses, pharmacists, podiatrists, dietitians, veterinary surgeons, occupational therapists and physiotherapists.

Course Details

Course code: 2985

Duration: 1.5 years full-time, 3 years part-time

Campus: Off-campus (Parkville)

Intake: First semester, second semester

Entry requirements: A degree or equivalent qualification in pharmacy, podiatry, medicine, nursing or related discipline and at least two years relevant clinical experience. Division 1 Registered Nurses who do not have a degree but can demonstrate extensive relevant clinical experience will be considered for admission.

2009 annual domestic fee: \$17,400 AUD

As this course is not CRICOS registered, international students are only able to study the Master of Wound Care in their home country. Please note there is a compulsory residential study block in Melbourne. International students must be able to meet visa requirements to undertake the residential study block. It is the responsibility of the student to ensure that they have the appropriate visa.

Graduate Diploma in Wound Care

Course Details

Course code: 2984

Duration: 1 year full-time, 2 years part-time

Campus: Off-campus (Parkville)

Intake: First semester, second semester

Entry requirements: A degree or equivalent qualification in pharmacy, podiatry, medicine, nursing or related discipline and at least two years relevant clinical experience. Division 1 Registered Nurses who do not have a degree but can demonstrate extensive relevant clinical experience will be considered for admission.

2009 annual domestic fee: \$17,400 AUD

As this course is not CRICOS registered, international students are only able to study the Graduate Diploma of Wound Care in their home country. Please note there is a compulsory residential study block in Melbourne. International students must be able to meet visa requirements to undertake the residential study block. It is the responsibility of the student to ensure that they have the appropriate visa.

Graduate Certificate in Wound Care

Course Details

Course code: 2982

Duration: 1 year part-time

Campus: Off-campus (Parkville)

Intake: First semester, second semester

Entry requirements: A degree or equivalent qualification in pharmacy, podiatry, medicine, nursing or related discipline and at least two years relevant clinical experience. Division 1 Registered Nurses who do not have a degree but can demonstrate extensive relevant clinical experience will be considered for admission.

2009 annual domestic fee: \$17,400 AUD*

As this course is not CRICOS registered, international students are only able to study the Graduate Certificate in Wound Care in their home country.

Graduate Certificate in Pharmacy Practice

The Graduate Certificate in Pharmacy Practice allows students to develop further knowledge and skills in a range of pharmacy practice-related areas.

There are two streams of this course:

- The Pharmacy Internship stream is for students who have just completed the Bachelor of Pharmacy and are undertaking their internship year
- The Registered Pharmacist stream is for practicing pharmacists.

Course Outline

New pharmacy graduates complete two units of applied pharmacy practice and two elective units.

Registered pharmacists complete two core units from evidenced based practice, geriatric pharmacy practice, and wound assessment.

Students also complete elective study in the following areas:

- Health economics
- Pharmaceutical economics
- Epidemiology and biostatistics
- Economic evaluation in healthcare
- Principles of health economics for developing countries
- People management in pharmacy
- Evidence-based practice
- Patient data and pharmacotherapy
- Dermatology
- Geriatric pharmacy practice
- Geriatric disease state management
- Biology of wound healing
- Wound assessment
- Wound dressings
- Management of acute wounds
- Management of chronic wounds
- Systemic medication and wound healing

Course Details

Course code: 3460

Duration: 1 year part-time

Campus: Off-campus (Parkville)

Intake: First semester, second semester

Entry requirements: A degree or equivalent qualification in pharmacy from Australia or New Zealand. Overseas applicants must have completed APEC (Australian Pharmacy Examining Council) requirements. Applicants must be planning to commence internship (pre-registration) practical training at a Pharmacy Board of Victoria approved pharmacy or hospital, under supervision of an approved pharmacist preceptor within 90 days of commencing the course. Registered pharmacists are also eligible to enrol in the Graduate Certificate of Pharmacy Practice. If you are a registered pharmacist, please refer to www.pharm.monash.edu/courses/pre-reg/regpharm.

2009 annual domestic fee: \$17,400 AUD*

Off-shore international students are not eligible to enrol in this course. As this course is not CRICOS registered, international students located in Australia must apply for an Occupational Trainee Visa (subclass 442) through DIAC (Department of Immigration and Citizenship). Further information can be found at www.pharm.monash.edu/courses/pre-reg/international.html

CSP Available

Pharmacy Internship Program

This program is designed to consolidate and build on theoretical knowledge gained as an undergraduate and to prepare candidates for the Pharmacy Board of Victoria registration examination and for practice as an independent pharmacy professional.

The program enhances problem solving and practice skills as it explores relevant professional issues through pharmacist-moderated online discussion forums, seminars and small group meetings.

Course Outline

The program consists of two single units of applied pharmacy practice.

Career Outlook

This program is ideal preparation for candidates wishing to take the Pharmacy Board of Victoria registration examination. It is an approved course of study for the purpose of registration by the Pharmacy Board of Victoria.

Course Details

Course code: 3461

Duration: 1 year part-time

Campus: Off-campus (Parkville)

Intake: First semester, second semester

Entry requirements: A degree or equivalent qualification in pharmacy from Australia or New Zealand. Overseas qualified applicants must have completed APEC (Australian Pharmacy Examining Council) requirements. Applicants must be planning to commence pharmacy internship (pre-registration) practical training at a Pharmacy Board of Victoria approved pharmacy or hospital, under supervision of an approved pharmacist preceptor within 90 days of commencing the course.

2009 annual domestic fee: Consult faculty for further information

Off-shore international students are not eligible to enrol in this program. As this program is not CRICOS registered, international students located in Australia who wish to undertake this program must apply for the appropriate visa through DIAC (Department of Immigration and Citizenship). Further information can be found at:

www.pharm.monash.edu/courses/pre-reg/international.html

* Domestic fee per 48 credit points. 48 credit points represents a standard full-time course load for a year. Courses with fewer or more credit point values, such as part-time courses, will attract a proportionate amount. For more information see Page 144.