

# HIGHER DEGREE RESEARCH

Your research  
can change  
the world

# NICM

The science of integrative medicine







**NICM HRI is an exciting and unique place to study. It brings together robust infrastructure, state-of-the-art laboratories, access to Western Sydney University's facilities and an internationally recognised reputation for excellence.**

**Most importantly, NICM HRI has a network of interdisciplinary world-class research scientists committed to your career development and research success.**

As part of a team of passionate researchers, you will study in a friendly, collaborative and innovative environment, learning from the best in their field, gaining hands-on experience for your future career in natural and traditional medicine, pharma, biotechnology or academia.

Higher Degree Research candidates at NICM Health Research Institute (NICM HRI) are motivated by what they do and the impact they have on society. Studying at NICM HRI will give you the skills, knowledge and ability to make an impact in whichever area of healthcare you wish to specialise.

Our Higher Degree Research projects help drive the evolution of healthcare with a focus on evidence-based integrative medicine, producing tangible outputs and publishable work. NICM's Higher Degree Research candidates have published in leading peer-reviewed journals, including BMJ Open, Journal of Affective Disorders, The Lancet, Cochrane Database Systematic Reviews, *PLOS ONE*, BMC Complementary and Alternative Medicine, and Midwifery.

Awarded the highest rating possible from the Australian Government with our research confirmed as "well-above world standard",<sup>1,2</sup> we are recognised nationally and internationally for our scientific capabilities and advice which is driving the development of innovations that make a vital contribution to the rapidly expanding integrative medicines sector and industry.

Demand for complementary medicine is strong worldwide and increasing. In Australia, industry revenue was \$3.9 billion in 2015-2016 with just under 31,000 businesses contributing \$1.5 billion in wages to the national economy,<sup>3</sup> and across the United States in 2012, Americans were spending out-of-pocket, \$30.2 billion a year.<sup>4</sup>

1 Australian Research Council. (2015). State of Australian University Research 2015-2016 (Vol. Vol 1 ERA National Report).

2 Australian Research Council. (2012). Excellence in Research for Australia 2012 National Report.

3 Richardson, A. (2016). IBISWorld Industry Report X0015 Alternative Health Therapies in Australia.

4 Nahin, R. L., Barnes, P. M., & Stussman, B. J. (2016). Expenditures on Complementary Health Approaches: United States, 2012. National health statistics reports, (95), 1.



As a trusted national leader, we collaborate with our partners to share and contribute our expertise and knowledge and help lead advances in integrative medicines worldwide, delivering results that benefit Australians and the wider global community.

As one of the world's largest integrative medicine research facilities, NICM HRI plays a major role in building capacity in the sector nationally and internationally.

Instrumental in developing highly skilled researchers in the sector, we further strengthen Australia's leadership and competitiveness in integrative medicine by fostering Australia's next generation of world-class researchers through our Higher Degree Research program, scholarships and development of early career researchers.

Our research program spans basic, mechanistic, translational, efficacy, and effectiveness research in clinical areas of national priority and global importance:

- **Healthy hearts: preventing and treating cardiovascular and metabolic disease**
- **Healthy minds: preventing and treating neurocognitive and mental health disorders**
- **Healthy women: promoting sexual and reproductive health**
- **Healthy lives post-cancer: staying healthy through the cancer journey**

As a NICM HRI Higher Degree Research candidate, you will benefit from our meaningful collaborations with external research institutes, health organisations, industry partners and community organisations at a local, national and international level.

Our Higher Degree Research graduates are highly sought after by many research institutes, industry organisations and clinical practices. NICM HRI's Alumni continue to develop rewarding careers across a wide range of healthcare areas.

**Our Higher Degree Research program is designed to enable you to focus on pressing health issues and scientific problems.**





Our Higher Degree Research candidates are an integral part of NICM's culture as they are the scientific leaders of tomorrow.

NICM HRI provides support and Higher Degree Research opportunities including clinical placements in China, project funding to support research, living stipend scholarships, conference travel, annual Best Postgraduate Student Paper Award, writing stipends and communication training.

“Undertaking my PhD at NICM HRI was a very rewarding experience. Completing a PhD is challenging, and through the mentoring and invaluable support received from NICM HRI and my internationally renowned supervisors, I knew I could accomplish it. It was a privilege to present my research findings at national and international conferences, and having completed my PhD, I now assist Traditional Chinese Medicine practitioners in attaining their Master qualification.”

Debra Betts LicAc BHSc (Ac) PhD  
Director of Postgraduate Programs,  
New Zealand School of Acupuncture and  
Traditional Chinese Medicine

# OUR POST GRADUATE RESEARCH OPTIONS

## MASTER OF RESEARCH

### Entry Requirement

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Admission Average Mark (AAM) of 65  
An appropriate undergraduate degree

OR  
Graduate certificate or graduate diploma  
in addition to one year of relevant work  
experience.

### Duration

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2F/4P

### Thesis Length

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20,000 – 25,000 words

### Coursework Content

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50%

### Scholarships Stipends

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\$24,000

### Where can it take you

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- Laboratory managers
- Management in both government and private organisations
- Industry/hospital clinical trials networks
- Product development
- Policy advising
- Undergraduate teaching/academia
- Industry research



# MASTER OF CHINESE MEDICINE (RESEARCH STREAM)

## Entry Requirement

Grade Point Average (GPA) of 5  
Undergraduate degree in Acupuncture or  
Traditional Chinese Medicine (TCM)

OR  
Diploma, Advanced Diploma or Associate  
Degree in TCM or Acupuncture

OR  
Five years full-time equivalent clinical  
work experience in the field of TCM  
or Acupuncture and recognised by  
an Australian professional association  
representing Chinese herbalists or  
acupuncturists.

## Duration

1.5F/3P

## Thesis Length

15,000 – 20,000 words

## Coursework Content

50%

## Scholarships Stipends

Varied, check Western Sydney University  
website [westernsydney.edu.au/graduate\\_research\\_school](http://westernsydney.edu.au/graduate_research_school)

## Where can it take you

- Industry/hospital clinical trials networks
- Product development
- Policy advising
- Undergraduate teaching/academia
- Industry research

# DOCTOR OF PHILOSOPHY (PHD)

## Entry Requirement

Demonstrated research experience gained either:

- in Honours undergraduate studies
- in postgraduate studies – Master's research program, and/or two independent quality publications expected
- during employment in a research based job.

It is also expected that the candidate will have a very good academic record.

The candidate has a sufficiently good grasp of English to communicate effectively and to be able to write a thesis.

The student needs to nominate a project or research area that is compatible with NICM's research and staff profiles.

## Duration

3F/6P

## Thesis Length

60,000 – 100,000 words

## Coursework Content

Nil

## Scholarships Stipends

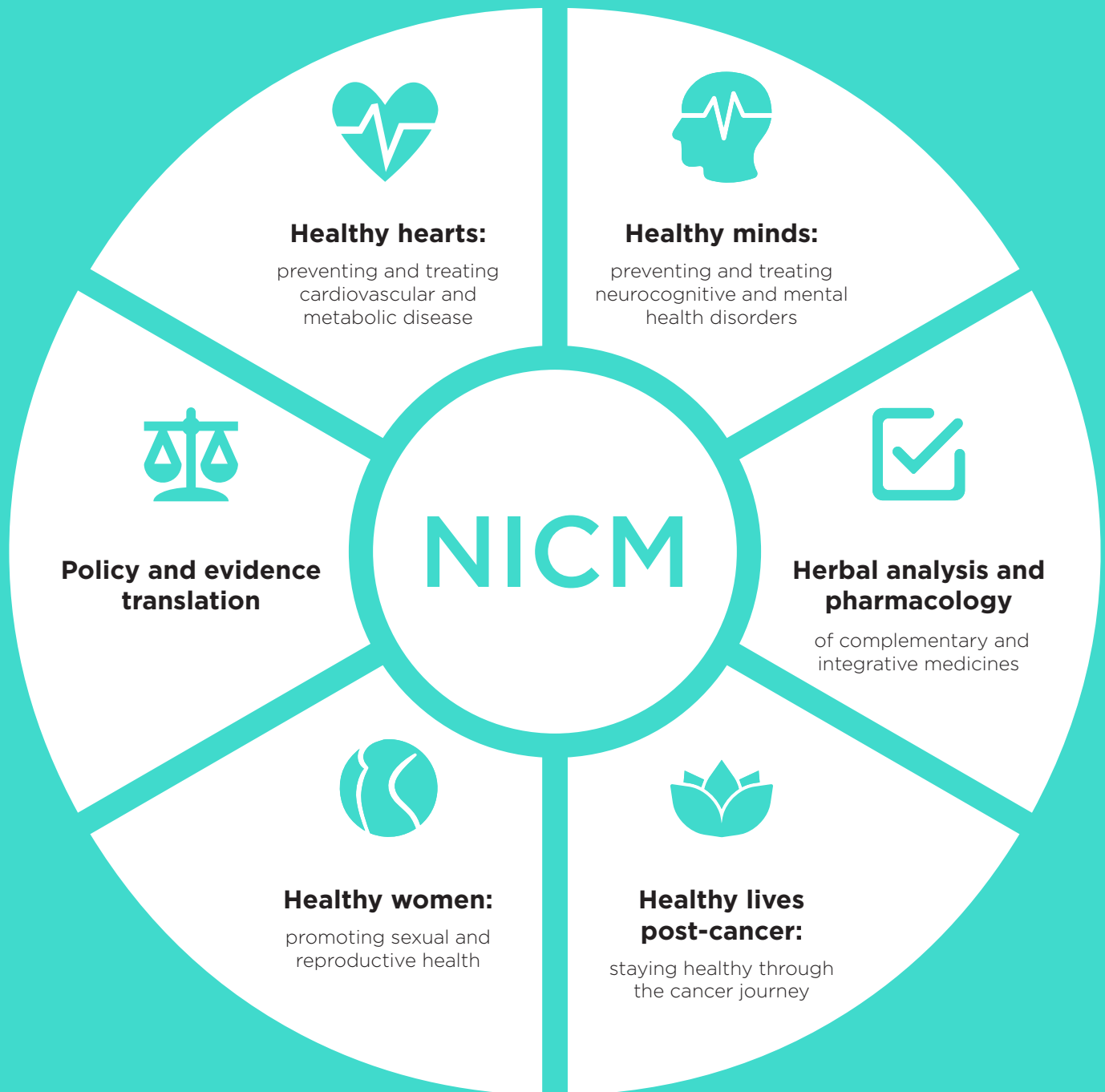
Varied, check Western Sydney University  
website [westernsydney.edu.au/graduate\\_research\\_school](http://westernsydney.edu.au/graduate_research_school)

## Where can it take you

- Senior laboratory managers
- Senior management in both government and business organisations
- Policy advising
- Academia (research and teaching), government research organisations (e.g. CSIRO) and private enterprise
- Industry research



# RESEARCH AT NICM HRI





## POLICY AND EVIDENCE TRANSLATION

**Lead: Professor Alan Bensoussan**

The integrative medicine policy and evidence translation at NICM HRI focuses on working with government to build appropriate policy frameworks and improving integrative healthcare practice by translating high-quality research into relevant guidelines and practice protocols. Topics include:

- Cost effectiveness and decision making in the use of integrative medicine
- Improving evidence translation and integrative medicine practice
- Australian bush medicines







## **HERBAL ANALYSIS AND PHARMACOLOGY**

**of complementary and integrative  
medicines**

**Lead: Associate Professor Chun Guang Li**

The quality control program at NICM HRI focuses on quality assurance and standardisation of herbal medicines and the development of protocols and instruments for use in clinical trials. Topics include:

- **Phytochemical analysis of herbal medicines**
- **Effect of preparation methods on bioavailability and bioactivity of herbal compounds**



## **HEALTHY HEARTS:**

**preventing and treating  
cardiovascular and metabolic  
disease**

**Lead: Professor Dennis Chang**

The cardiovascular and metabolic health program at NICM HRI focuses on understanding how integrative medicine can assist with the prevention and treatment of various cardiovascular and metabolic diseases. Topics include:

- Chinese herbal medicine for diabetes and metabolic syndrome
- Diabetes and cognitive impairments
- Nutraceutical supplementations (e.g., omega-3) and cardiovascular health
- Synergistic interaction of herbal medicine compounds on cardiovascular function
- Yoga and tai chi on negative affective states, cardiovascular and cognition function in post-cardiac rehabilitation





## **HEALTHY MINDS:**

### **preventing and treating neurocognitive and mental health disorders**

**Lead: Professor Jerome Sarris**

The neurological and mental health program at NICM HRI focuses on the prevention and treatment of dementia and neurocognitive decline and improvement of mental health in response to integrative medicine treatment. Topics include:

- Memory attention and learning
- Evaluations of herbal medicines and nutraceuticals used for dementia, mild cognitive impairments and healthy ageing with cognitive deficits
- Chinese herbal medicine to improve function and quality of life in patients with ischemic stroke
- Mind-body interventions (e.g., tai chi) and neurocognition
- Mechanisms of action underlying neuroprotective effects of herbal medicine
- Acupuncture and herbal medicine used to improve mental health (depression and anxiety)



## HEALTHY WOMEN:

**promoting sexual and  
reproductive health**

**Lead: Professor Caroline Smith**

The women's health program at NICM HRI covers menstrual health of young women, pregnancy, infertility, menopause and gynaecological disorders. Topics include:

- Antenatal and postnatal depression
- Integrative therapies for menstrual disorders, menopause, fertility and pregnancy
- Polycystic ovary syndrome and endometriosis







## **HEALTHY LIVES POST-CANCER:**

**staying healthy through the  
cancer journey**

**Lead: Professor Paul de Souza**

The cancer care program at NICM HRI focuses on understanding how integrative medicine may assist with cancer management and side effects of conventional cancer treatment. Topics include:

- **Management of cancer treatment related symptoms**
- **Chemotherapy and herbal medicine interaction**
- **Chinese herbal medicine for women with hot flushes during endocrine therapy for breast cancer**

## INTERESTED? NEXT STEPS

- Confirm eligibility at [www.westernsydney.edu.au/graduate\\_research\\_school/grs/higher\\_degree\\_research\\_students](http://www.westernsydney.edu.au/graduate_research_school/grs/higher_degree_research_students)
- Contact academics of interest to discuss potential research project opportunities
- Lodge an application through Western Sydney University Admissions
- There are two intakes for this program annually – please note the respective deadlines for these

## Further information

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