



NICM
THE NATIONAL INSTITUTE OF
COMPLEMENTARY MEDICINE

University of
Western Sydney 

NICM ANNUAL REPORT

2014



NATIONAL INSTITUTE OF COMPLEMENTARY MEDICINE

Hosted by the University of Western Sydney, the National Institute of Complementary Medicine (NICM) has provided leadership and support for strategically directed research into complementary medicine since its establishment in 2007.

NICM advocates for the translation of scientific evidence into complementary medicines policy and practice to benefit the health of all Australians and beyond.

Objectives

- To build capacity, foster excellence and attract increased investment in complementary medicine research.
- To articulate national priorities in basic and translational research and promote national and international collaborations to support these, including between complementary and mainstream health and medical research.
- To facilitate translation of research effort into practice and policy, including appropriate integration with the mainstream health system.
- To work with national and international partners to identify and develop sources of accurate information and efficient mechanisms for sharing data and disseminating information about current research activity and evidence of safety, quality and efficacy of complementary medicine.
- To provide advice on opportunities relevant to and issues affecting the complementary medicine research sector to build a policy, regulatory and industry environment conducive to research.
- To collect data and communicate the strength and value of complementary medicine research.

Priorities

NICM focuses on supporting research that:

- Has the potential to impact positively on the health and wellbeing of all Australians. Emphasis will be given to those areas of high burden of disease where preliminary evidence is strong and demonstrates likelihood of positive impact.
- Elucidates safety, efficacy and cost effectiveness of complementary medicine and translates this into policy and practice.
- Investigates methodological issues relevant to the complex nature of complementary medicine. These include the development of methodological tools, such as measurement instruments, trial designs and pharmacological approaches which may impact on our understanding of the whole practice, concepts and mechanisms underpinning complementary medicine.

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About NICM

Founded in 2007 by the Australian and New South Wales Governments, the National Institute of Complementary Medicine (NICM) is Australia's leading policy and research institution in complementary medicine. NICM is committed to excellence in research and training and the development of scientific evidence to integrate traditional medicines into modern medicine. Our research enables effective choices for individuals to remain healthy at all stages of their lives. Our team of over 50 staff and students work across research divisions: integrative oncology, women's health, neurodegenerative diseases and cardiovascular health.

TRANSLATING ANCIENT WISDOM INTO MODERN MEDICINE

In Australia, more than 45,000 people die of cardiovascular disease every day. One in two Australian men and one in three Australian women will be diagnosed with cancer by the age of 85. Three in ten people over the age of 85 and almost one in ten people over 65 have dementia.

While modern medicine struggles to come up with new treatments for these and other diseases, complementary medicine builds on traditions of over a thousand years to provide safe and effective treatments for these diseases or their symptoms. Some 2,500 years ago, the Chinese were using treatments made of mouldy soybean curd to treat infections, however, it was not until 1942 that Howard Florey and Ernst Chain developed the manufacturing process for penicillin, enabling the first antibiotics to be sold as drugs.

Complementary medicine also focuses on the prevention of diseases and the maintenance of good health and wellbeing. For example,

Tai Chi and other forms of gentle exercise have been shown to be effective in the prevention of falls, as have fish oil supplements to prevent secondary cardiovascular mortality and morbidity.

Many modern pharmaceuticals are derived from plants used in complementary medicine. Common examples include aspirin (from willow bark), the cardiac drug digoxin (from foxglove), quinine (from cinchona bark) and ephedrine (from ma huang, a widely used Chinese medicine).

Researchers at NICM translate a thousand year old history of natural medicines and therapies into scientific evidence to enable the prevention and treatment of modern conditions and diseases. Our focus is the spectrum of complementary medicines including traditional Chinese medicine, Indigenous medicine, Ayurveda and Western herbal medicine, with a particular focus on Chinese medicine. Our priority is to provide patients with better – and safer – health choices.



From the Chair, NICM Advisory Board

PROFESSOR JOHN FUNDER



When Professor Bensoussan called me to ask if I would take up the role of Chair of the National Institute of Complementary Medicine's new Advisory Board I was delighted to accept.

NICM is Australia's premier research concentration for the translation of well-researched evidence on complementary medicines into modern healthcare, and the Advisory Board provides an important vehicle for this enterprise. The Board's membership comprises senior figures in medical research, clinical services delivery, industry and education and its work is supported by a Research Committee of experts in NICM's areas of clinical focus. Together we form a strong support network and a robust source of advice for the Institute to pursue its strategic objectives for the benefit of its stakeholders in complementary medicine research and development.

There were many highlights this year and the Board was pleased with NICM's performance on both the national and international fronts. NICM worked hand in hand with the Australian Self Medication Industry, Complementary Medicines Australia and key industry representatives to strengthen and focus the national agenda for complementary medicine research in two key areas: creating stronger incentives for industry to invest in complementary medicine research and development, and improving consumer access to information on the evidence supporting particular product claims. NICM was instrumental in having these initiatives brought forward for consideration by the National Health and Medical Research Council's Research Translation Faculty.

NICM's Australia-China Joint Research and Development Centre for Chinese Medicine between Xiyuan Hospital and NICM was designated as one of 38 Chinese National Level International Research Centres (across all industries). These Centres are selected through a rigorous and comprehensive evaluation process based on the recommendations of the provincial

and municipal governments in China. This program is part of the Ministry of Science and Technology (MOST) which is responsible for developing and implementing strategies to implement China's 12th Five Year Plan aiming to promote international cooperation in science and technology.

NICM's Memorandum of Understanding with the Beijing University of Chinese Medicine was incorporated within the signing ceremony for the Australia China Free Trade Agreement. The Memorandum was witnessed by Chinese President Xi Jinping and Australian Prime Minister Tony Abbott and commits both universities to collaborate in advancing a joint Chinese medicine clinical research program and facility. The program is the first to enliven the commitment, made in the free trade agreement by both countries, to advance Chinese medicine in the West.

A formal Memorandum of Understanding between the University of Western Sydney and the Korea Institute of Oriental Medicine was also signed this year. The Memorandum was established to enhance academic knowledge between the two institutions, providing a mechanism for increased academic and research collaboration. The KIOM, under the Ministry of Science, ICT and Future Planning, is the national hub of research and development of Traditional Korean Medicine (TKM) and has been in operation since 1994. It is vitally interested in introducing well-evidenced TKM to western clinical practice.

As 2014 draws to a close, I have been privileged to be involved in the strategic review of NICM. This has been led by Peter Wills AC. Peter chaired the NSW Health and Medical Research Review for the NSW Government in 2012 and prior to this undertook a review of health and medical research for the Commonwealth Government. I look forward to Peter presenting the outcomes of the NICM strategic review in 2015, to assisting in the implementation of these recommendations, and to the continued growth of NICM.

Emeritus Professor John Funder AO

From the Director, NICM

PROFESSOR ALAN BENSOUSSAN



What a year 2014 has been.

We now number over 50 professional staff, positioning us as one of the most substantial research concentrations in complementary medicine outside Asia.

The research we have undertaken is diverse, covering analytical chemistry, pharmacology, clinical trials and translation to practice across multiple complementary medicine modalities, and led to 61 scholarly publications in 2014. Clinical trials were progressed to investigate the use of complementary medicine in autism; for improving fertility outcomes for women undergoing IVF; and for memory, attention and learning. Protocols were developed for addressing a range of research questions for Australian complementary medicine producers and distributors and NICM researchers also provided technical assistance to other researchers on the specific challenges encountered when running complementary medicine trials.

NICM's enrolment of higher degree research students numbered 18 during 2014, and two students – Doctor Nerida Klupp and Doctor Debra Betts – were conferred their doctorates for innovative research focusing respectively on the efficacy of particular herbal medicines and the translation of complementary medicine evidence to practice.

NICM recommenced its professional workshops program for natural health practitioners in 2014, with its first workshop discussing ethical issues arising in clinical practice. The program has been named the Jacka Foundation Workshop Series in recognition of the significant and very welcome support we have received from the Foundation over the last three years. NICM also provided scientific advisory services to the Blackmores Institute's inaugural Research Symposium entitled "Integrating Natural Medicine into Community Pharmacy".

A number of high level delegations were hosted and speakers came to NICM from the United Kingdom, Canada, Korea, India, China and Indonesia. Our researchers were invited to speak at international conferences and think tanks in the United States, Hong Kong, India, New Zealand, China and Germany. Longstanding relationships received recognition for their significance in furthering international associations and new relationships and collaborations were founded.

In October, NICM researchers joined with oncology clinicians from Liverpool Hospital (one of Australia's largest general teaching and research hospitals) and clinical leaders from Beijing Cancer Hospital to discuss the potential for Chinese medicine in improving the health and wellbeing of patients with early or late stage cancer, and in particular those undergoing chemotherapy and radiotherapy treatments. The project, funded by the National Breast Cancer Foundation, represents the commencement of a long-term collaboration between Chinese and Australian oncologists facilitated by NICM.

Memoranda of Understanding were signed with two international companies to progress joint research and development programs. As Emeritus Professor John Funder noted, Memoranda of Understanding were also signed with the Beijing University of Chinese Medicine and the Korea Institute of Oriental Medicine – the first of these being advanced under the auspices of the Australia China Free Trade Agreement.

We end the year pleased with progress and excited about the future. Stay tuned for 2015!

Professor Alan Bensoussan

From the Managing Director, NICM

JANICE BESCH



This reporting period represents my first full year with NICM.

It has been a time of substantial organisational change, with the restructuring of the Institute to incorporate CompleMED – the University's complementary medicine research centre – into its operations. Prior to this, the Institute focussed on policy, advocacy and capacity building across the sector. In future, you will see the Institute maintaining these industry leadership roles while also building its research profile, with a particular focus on Chinese medicine.

I am pleased to report that during 2014 NICM has doubled its external income and substantially diversified its funding sources. New staff have been appointed to support our growing research program and we have had extraordinary interest in our work from international universities and industry organisations.

Operationally, it is in the area of strategic communications that we have made the most progress. Early in the year, we were fortunate to have Doctor Lesley Braun leading the development of our strategy to communicate the evidence base for complementary medicines to key stakeholder groups. Towards the end of the year, we began the recruitment process for a Strategic Communications Manager to work across the sector in communicating the growing evidence base on complementary medicine and we expect to make rapid progress on this front throughout 2015.

Also during the year the University of Western Sydney completed a major audit of our operations, providing us with a commendation for the quality of our processes.

We thank all of the team, including our associate members and adjunct fellows, for the extraordinary contribution they have made over the year. Particular thanks are extended to Ms Natalie McCarthy, NICM's Office Coordinator, and the administrative team for their patience and attention to detail in progressing our many and various initiatives.

In the coming year, we will see the handing down of recommendations from the University's NICM Strategic Review. With a strong mission and substantial stakeholder support, we anticipate a report that provides a bold roadmap for the future.

These are indeed exciting times!

Janice Besch



GOVERNANCE

The Institute's Constitution and governance were comprehensively reviewed in 2014 and an independent Advisory Board and Research Committee were appointed, facilitating the incorporation of the CompleMED Research Centre as NICM's research arm.

NICM welcomed back to the chairing role Professor John Funder, who proceeded to provide oversight and guide the Advisory Board and its Research Committee through its foundation year. The NICM Advisory Board met three times and Research Committee met twice in 2014, considering matters of general governance, strategic direction and management, communications, research focus and fundraising.

NICM Advisory Board Members



PROFESSOR JOHN FUNDER (CHAIR)

Professor John Funder is a Senior Fellow at Prince Henry's Institute (PHI). He joined Prince Henry's Medical Research Centre in 1973 where he went from Senior Research Fellow to Senior Principal Research and Deputy Director. In 1990 he became Director of the Baker Institute in Melbourne and upon his 'retirement' in 2001 he became a Senior Fellow at Prince Henry's. Professor Funder's area of research has been in studying aldosterone, the salt-retaining (mineralocorticoid) hormone, and the role of the mineralocorticoid receptor in organs such as the heart and kidney. Over the past decade his clinical and basic studies at PHI, and elsewhere, have demonstrated the roles of both hormone and receptor in hypertension and heart failure. Professor Funder has served as a link between endocrinology and cardiology, and is internationally acknowledged as leading an exciting new era of hitherto unexpected roles for the mineralocorticoid receptors, across a spectrum of disease states.



CARL GIBSON

Carl Gibson started his career in the United Kingdom as a public servant before joining the Conservative Party as a media and political adviser (from 1990 to 1994). He served during John Major's term as the British Prime Minister. Carl's career spans nearly 30 years and he has specialised in regulation, public policy and campaign communications. He was part of the senior leadership team that transformed Misy and British Energy, and has extensive experience in campaigning for regulatory reform. He was most recently Head of Brand and Communications at Australia's leading natural health company, Blackmores.



JULIE HAMBLIN

Julie Hamblin is a consultant in the Health Group of HWL Ebsworth. She has more than 20 years' experience advising the public and private health sectors on health law, medical negligence, clinical risk, bioethics and public health, as well as providing specialist health regulatory advice. Julie has held a number of Government appointments in the health sector, including the Australian Research Integrity Committee, the NSW Clinical Ethics Advisory Panel, the Australian National Council on HIV/AIDS and Related Diseases, and the board of the former Central Sydney Area Health Service. She has a particular interest and expertise in public health and HIV/AIDS in developing countries, having undertaken consultancy work with the United Nations Development Program and other UN and non-governmental bodies in more than 20 countries in Asia, the Pacific, Africa and Eastern Europe. Julie is a director of Plan International Australia and Autism Spectrum Australia.

NICM Advisory Board Members



RHONDA HAWKINS

Rhonda Hawkins is the Deputy Vice-Chancellor and University Provost at University of Western Sydney (UWS). Rhonda is a member of the UWS Executive, Secretary to University's Board of Trustees and leads the Division which comprises finance, IT, campus and capital development, people and culture, strategy and quality, legal services, audit and risk, policy and governance, higher education policy and projects, equity and diversity, marketing and communications, the international office, engagement, student services, administration and support. She is Chair of the UWS College Board and a director on a number of Boards.



PROFESSOR SCOTT HOLMES

Professor Holmes joined UWS in March 2014 as Deputy Vice-Chancellor (Research and Development). Over the past 17 years, he has held various senior leadership roles at Newcastle University, including Pro Vice-Chancellor (Research), Foundation Dean of Graduate Studies, Head of the Graduate School of Business, and Professor of Public Policy. He is an Honorary Professor at the University of Queensland and a Life Member of the Small Enterprise Association of Australia and New Zealand reflecting almost three decades of research and support for the small firm sector.



JANE LYTTLETON

Jane Lyttleton began her studies in science in New Zealand and then at Guys Hospital in London with doctoral studies in genetics before applying herself to the study and practice of Chinese medicine (in Australia and China). She is author of the acclaimed *Treatment of Infertility with Chinese Medicine*, published in 2004 and 2013 by Elsevier Science and now in its 8th reprint in English, and several other languages. Jane has lectured at universities in Australia and the United Kingdom, and has taught courses and seminars in the treatment of infertility to doctors in Australia, Canada, China, Switzerland, Germany, New Zealand and the United Kingdom. She has presented at IVF conferences in California and Sydney. She has run TCM clinics in women's health centres and general medical centres since the early 1980s. In addition to her own practice she has established a number of clinics which work closely with IVF clinics and are providing a platform for data collection and clinical research.

NICM Advisory Board Members



PROFESSOR KERRY PHELPS

Professor Kerry Phelps AM is Adjunct Professor at Sydney University in the Faculty of Medicine in the School of General Practice and Conjoint Professor at the University of New South Wales in the faculty of Public Health and Community Services. Professor Phelps has been a familiar face to many Australians over the last twenty years during which time she has appeared regularly on television, radio and the print media informing the Australian public on health issues. She is a staunch advocate for Human Rights. Professor Phelps has been the health writer for the Australian Women's Weekly for nearly twenty years and writes political commentary for *Medical Observer* Magazine. She is a regular commentator on general practice, public health, medical politics and human rights issues. Professor Phelps has two medical clinics in Sydney and her particular interest is in the area of Integrative medicine.



DOCTOR DEON SCHOOMBIE

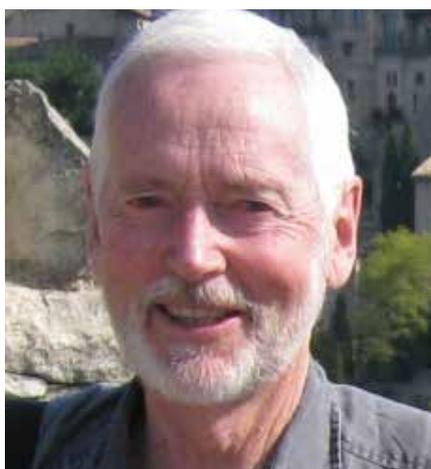
Doctor Deon Schoombie began his career working in various clinical settings from accident and emergency and general practice to psychiatric units in South Africa and London. Across a variety of career directions he has moved through the realms of Traditional Chinese Medicine, became a pharmaceuticals consumer advertising watch dog, reviewed major advertising controls and then re-joined the Australian Self Medication Industry (ASMI) team as Scientific Director. Now, as ASMI Executive director, Deon is a strong advocate of self-care and supports the greater personal responsibility in maintaining health and wellbeing. He believes that self-care should be formally acknowledged as an integral part of the public health system and that there should be greater recognition for self-medication, including complementary medicines, as an essential part of self-care.

NICM Research Committee Members



PROFESSOR RIC DAY (CHAIR)

Professor Ric Day AM is a Professor in the Faculty of Medicine at the University of New South Wales, Department of Clinical Pharmacology and Toxicology. His fields of research include: Clinical Pharmacology and Therapeutics, Rheumatology and Arthritis, Psychiatry, Endocrinology and Decision Support and Group Support Systems. At the Garvan Institute, he and his team are researching powerful techniques for individualising pharmacotherapy using pharmacokinetic/pharmacodynamic models. Their aim is safe yet effective therapy. Professor Day is a Fellow Royal Australian College of Physicians, Immediate past Chair Federal PHARM Committee (Pharmaceutical Health and Rational Use of Medicines Committee), Member of Australian Rheumatology Association (and its Therapeutics Committee) and Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists (Past President), Practising Clinical Pharmacologist and Rheumatologist at St Vincent's Hospital Sydney and St Vincent's Medical Centre, Darlinghurst, Director of Clinical Pharmacology and Toxicology, St Vincent's Hospital, and Director of Therapeutics Centre, St Vincent's Hospital.



PROFESSOR DAVID BRIGGS

Professor David Briggs was appointed an Adjunct Professor to NICM in 2006. He is a member of the International Advisory Board on Hong Kong Chinese Materia Medica Standards, and the World Health Organization (WHO) Expert Advisory Panel on Traditional Medicine. He is also a WHO Temporary Adviser for the development of monographs for herbal medicines. Professor Briggs has previously worked in a regulatory environment, most recently as Head of the Office of Complementary Medicines in the Australian Therapeutic Goods Administration and was an inaugural member of the Standing Committee of the Western Pacific Regional Forum for the Harmonization of Herbal Medicines. Before taking up his position in the Office of Complementary Medicines, he was Professor and Head of the School of Nutrition and Public Health at Deakin University in Victoria.



DOCTOR VICKI KOTSIRILOS

Doctor Vicki Kotsirilos is a respected General Practitioner (GP) with over 20 years' of clinical experience at the Whole Health Medical Clinic in Melbourne. Doctor Kotsirilos integrates evidence based holistic therapies such as acupuncture, nutritional and herbal medicine with mainstream healthcare. She keeps up to date with the research in these areas and authored the textbook, "A guide to evidence-based integrative and complementary medicine" (Elsevier, 2011). She is a regular writer for Medical Observer, publishing a monthly column on evidence based Integrative Medicine and circulates research updates for Australian doctors. She is a board member of the Faculty of Specific Interests of the RACGP and chairs the Integrative Medicine Working Group. Doctor Kotsirilos is an adjunct Senior lecturer at Monash University, Department of Preventive Medicine and regularly lectures to doctors and the community. She has served on a number of state and federal Government committees, such as the Therapeutic Goods Administration, Complementary Medicine Evaluation Committee for eight years and as the GP member on the Adverse Drug Reactions Advisory committee for five years. She also served on the Victorian Council of the AMA and worked for the Medical Panels, Victorian Workcover for a number of years.

NICM Research Committee Members



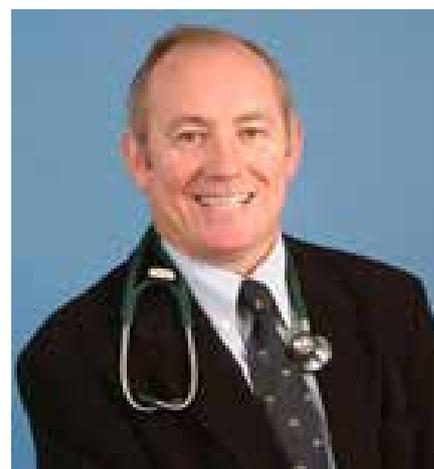
MR GAR JONES

Mr Gar Jones is Director of Research Services at the University of Western Sydney (UWS), a position he has held since 2000. He trained as an historian - studying at Monash University and Macquarie University. His everyday work focuses on research development and research strategy - working with individuals and teams on securing major external research funding, brokering relationships between external agencies and UWS. He also oversees the monitoring of research ethics, funding, outcomes and outputs. He has a passionate interest in the strategic use of research performance data and has published in the field of Higher Education Policy and Management, with reference to research development in newer universities and research policy in the Australian higher education sector. Gar is currently on the Members Advisory Committee for the Young and Well CRC.



DOCTOR STUART BEHNCKEN

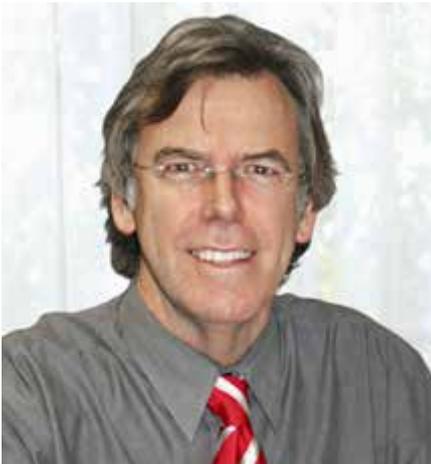
Doctor Stuart Behncken manages the scientific and technical aspects of the consumer healthcare business for Sanofi-Aventis Australia and is the head of the VMS Innovation centre for Asia, Pacific and Japan (Vitamin, Minerals and Supplements). He is responsible for regulatory affairs (nutraceuticals), R&D and innovation management, new product development and commercialisation for Australia, and managing new product development for the Asia Pacific Japan region. Doctor Behncken previously managed corporate strategy and planning at the Australian Red Cross Blood Service (ARCBS) and had three years in commercialising early stage technology at UniQuest Pty Ltd, focussing on biotechnology and pharmaceuticals. He was also Business Development Manager for a new contract research services business, TetraQ Preclinical, focussing on providing early stage services to the pharmaceutical and biotechnology industries (e.g., efficacy and toxicology). Prior to joining UniQuest, Doctor Behncken was a management consultant with Bain and Company working on major strategic advice, process re-engineering and cost minimisation cases for the financial services and food industries.



PROFESSOR STEPHEN CLARKE

Professor Stephen Clarke OAM is Professor of Cancer Research at the Kolling Institute of Medical Research at the University of Sydney, and was Convenor of Medical Oncology Group of Australia's Sciences of Oncology Program for 2012-13. He has been awarded the Eric Susman Award by the RACGP which is awarded annually to a Fellow of the College for the most outstanding contribution to the knowledge of any branch of internal medicine. The prize is one of the College's most prestigious and important awards, with the inaugural award made in 1962. Professor Clarke is a world renowned cancer pharmacologist, and has been recognised for his work on cancer-associated inflammation. His clinical research focuses on colorectal cancer (CRC), in particular the relationship between inflammation, impaired outcomes in CRC, and malignant mesothelioma.

NICM Research Committee Members



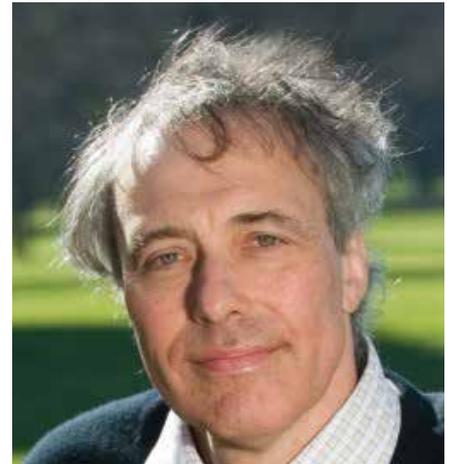
ASSOCIATE PROFESSOR DAVID COLQUHOUN

Associate Professor David Colquhoun is a Cardiologist in Private Practice in Brisbane. He has been extensively involved in research for the last 25 years, and has a private research group - Core Research. His group is involved in multi-centre international trials and investigator initiated trials in the area of lipids, nutrition, nutraceuticals and psychological aspects of heart disease, diabetes and obesity. Currently, his research group is involved in 20 ongoing trials. Associate Professor Colquhoun is the Australian Co-ordinator of the SCOUT Trial: 13 Sites and over 900 patients in Australia and 9,000 patients worldwide. This trial will establish whether deliberate weight reduction reduces cardiovascular events. He was a member of the National Heart Foundation's Nutrition and Metabolism Committee and Psycho-Social Working Group and chief author of a Review of Fish and Omega 3 PUFA and position statement. Associate Professor Colquhoun was the Chairman of the organising Committee of the Foundation's 2nd Scientific Committee, Brisbane 2009 - the 50th Anniversary of the Foundation.



DOCTOR JENNIFER HUNTER

Doctor Jennifer Hunter is a General Practitioner who practices integrative medicine (IM). Her natural therapy training includes traditional Japanese therapies, Western naturopathic practices and she holds a certificate in Integrative Medicine from the School of Medicine, University of Queensland. For the past 10 years, she has worked in multidisciplinary IM primary care clinics in New South Wales. Her background also includes public health training from the United Kingdom where she worked in an inner London Health Authority and completed a Master of Science in Public Health. Currently, Doctor Hunter is working closely with NICM to explore options for establishing and researching integrative medicine health services in south-western and western Sydney.



PROFESSOR PAUL KOMESAROFF

Professor Paul Komesaroff is a practising physician and Professor of Medicine at Monash University and Executive Director of the international NGO Global Reconciliation. He has a PhD in philosophy and an international reputation in health care ethics, and has made a major impact on the field of clinical ethics in Australia. He has developed expertise in both qualitative and quantitative investigations of the social and cultural dimensions of health and healthcare, which has led to numerous peer reviewed articles and extensive national and international collaborations. Professor Komesaroff's work is interdisciplinary: spanning clinical medicine, biomedical research, social research, philosophy and ethical theory, clinical ethics and policy development with respect to ethics and clinical practice. As a physician, his field of specialty is endocrinology. He is Director of the international ethics centre, the Centre for Ethics in Medicine and Society and a member and convener of numerous scientific and research committees. In these practical settings he has been extensively involved in the education of medical students, medical practitioners, nurses and other health professionals and has contributed to the development of policy and practice guidelines in a wide range of areas.

NICM Research Committee Members



PROFESSOR STEPHEN MYERS

Professor Stephen Myers is a complementary medicine expert and commentator, a research consultant to the Blackmores Institute and recently the Director of the NatMed Research Unit within Southern Cross Plant Science at Southern Cross University. He was the Foundation Director of the Australian Centre for Complementary Medicine Education and Research (ACCMER) (2001-2006) and the Foundation Head of the School of Natural and Complementary Medicine at Southern Cross University (1996-2001). Professor Myers has been a leading academic in the development of complementary medicine as a university academic discipline. He has qualifications in naturopathy (ND), western medicine (BMed) and basic and clinical pharmacology (PhD).

RESEARCH

The National Institute of Complementary Medicine is an international leader in complementary medicine research, recognised in particular for our contributions to Australian regulation and policy in complementary medicine and for developing the evidence base for Chinese medicine.

We have undertaken the research that led to the government's decision to regulate Chinese medicine practitioners throughout Australia from July 2012. We are the first western nation to provide this recognition.

At the Institute, we actively participate in the design of our regulatory approaches to herbal medicine products through both the Australian Therapeutic Goods Administration (TGA) and the National Medicines Policy Committee.

Since 1998, we have led strong undergraduate and postgraduate teaching programs in Chinese medicine. We have undertaken successful and pivotal clinical trials in Chinese medicine.

Our track record speaks clearly to our commitment and belief in the importance of these research opportunities, and their importance in contributing to improved health outcomes.

The University of Western Sydney is the only Australian university with strong education and research programs in Traditional Chinese Medicine sitting alongside conventional medical education and research. This leads to opportunities and collaborations for the best science and integrative care to be developed.

At NICM we are committed to:

- Leadership in policy and regulations for complementary medicine
- Rigorous research into the safety and efficacy of complementary medicine
- Building sector capacity and meeting industry needs
- Translation of research evidence into clinical practice
- High quality practitioner education and research training

2014 Research Highlights

- NICM Director Professor Alan Bensoussan received the Complementary Medicine Industry's most prestigious award, the Lady Cilento Award, recognising his life-time achievements and outstanding contribution to the industry and community through research.
- NICM Associate Professor Chun Guang Li was elected as Vice-Chairperson of the third board of Specialty Committee of Cardiovascular Disease of the World Federation of Chinese Medicine Societies.
- NICM's Australia-China Joint Research and Development Centre for Chinese Medicine between Xiyuan Hospital and NICM was designated as one of 38 Chinese National Level International Research Centres (across all industries).
- NICM's Memorandum of Understanding with the Beijing University of Chinese Medicine was incorporated within the signing ceremony for the Australia China Free Trade Agreement. The Memorandum was witnessed by Chinese President Xi Jinping and Australian Prime Minister Tony Abbott and commits both universities to collaborate in advancing a joint Chinese medicine clinical research program and facility.
- NICM was instrumental in having two key industry challenges - incentivising complementary medicine innovation and communicating the evidence about complementary medicine products - brought forward for consideration by the National Health and Medical Research Council as a targeted area for research in the NHMRC's funding programs.
- NICM substantially increased its external research income and NICM researchers produced 89 new scholarly publications.
- Visits by key NICM staff to China have led to the advancement of a range of research programs and student exchanges. Potential academic and research partners are looking to:
 - Lead the modernisation and integration of Chinese Medicine in the West through the development of an effective Integrative Medicine Facility or Traditional Chinese Medicine Hospital
 - Provide opportunities for R&D collaboration that will lead to significant trade, research and investment opportunities with Australia, including in medical research and herbal farming
- Foster strong cultural ties between China and Australia, strengthening two-way exchanges of people, knowledge, education and institutional relationships
- Deliver sound investment opportunities and growth for partners



Research Funding Awarded



CAROLINE



ALAN



DENNIS



CHUN GUANG



JO

LARGE GRANTS

Acupuncture to improve live birth rates for women undergoing IVF: A randomised controlled trial 2011-2016

NICM Lead Investigator: Professor Caroline Smith

Other Investigators: Associate Professor Sheryl de Lacey, Professor Michael Chapman, Professor Julie Ratcliffe

Funding Body: National Health and Medical Research Council (Commonwealth)

RESEARCH FELLOWSHIPS

Mechanisms of Action of herbal medicine used in Cardio and cerebrovascular diseases

NICM Lead Investigator: Associate Professor Dennis Chang

Other Investigators: Professor Hosen Kiat and Professor Alan Bensoussan

Funders: Cardiac Health Institute; University of Western Sydney and NICM

CHI Research Fellow: Dr Sai Seto

RESEARCH PROJECTS

Bioactivity of medicinal plants of the Mbabaram Peoples

NICM Lead Investigator: Dr Joanne Packer

Other Investigators: Gerry Turpin, Australian Tropical Herbarium; @JCU Mbabaram Traditional Owners

Funders: CSIRO (through JCU)

What can Chinese medicine offer in the management of breast cancer?

NICM Lead Investigator: Dr Xiaoshu Zhu

Other Investigators: Professor Alan Bensoussan, Geoff Delaney, Patsy Soon, Eugene Moylan, Bavanthi Balakrishnar, Belinda Kiely, Diana Adams

Funder: National Breast Cancer Foundation

ONGOING PROJECTS

Joint Chair in Traditional Chinese Medicine (2009-14)

NICM Lead: Professor Alan Bensoussan, Associate Professor Dennis Chang

Funder: Department of State and Regional Development, University of Sydney, University of Western Sydney

Synergistic activity of herbal medicines in stroke (2012-14)

NICM Lead: Professor Kelvin Chan, Dr Valentina Naumovski

Funder: University of Western Sydney Research Grant Scheme

Pharmacological interactions of Oncozac (Coriolus versicolor, Yunzhi) and chemotherapy medications (2013-15)

NICM Lead: Professor Kelvin Chan, Dr Valentina Naumovski, Dr Srinivas Nammi

Funder: PuraPharm Australia Pty Ltd, University of Western Sydney

A Multicentre, Randomised, Double-Blind, Placebo Controlled Trial to Evaluate the Effectiveness and Safety of Sailuotong (SLT), a Standardised Chinese Herbal Medicine (2012-19)

NICM Lead: Associate Professor Dennis Chang, Professor Alan Bensoussan

Funder: Australia Shineway Technology Pty Ltd

Naoxinqing Pian Research Program Phase I - pharmacokinetic study of Nao Xin Qing for treatment of Ischemic Stroke (2011-14)

NICM Lead: Associate Professor Dennis Chang, Professor Kelvin Chan

Funder: Hutchison Whampoa Guangzhou Baiyunshan Chinese Medicine Co. Ltd

Research Funding Awarded

NEW IN 2014

NEW RESEARCH PROJECTS

Synthesis and testing of novel tanshinone analogues

NICM Lead Investigator: Associate Professor Chun Guang Li

Funder: University of Western Sydney Research Grant Scheme

A Pilot Randomised, Double-Blind, Placebo Controlled Trial to Evaluate the Effectiveness and Safety of Nao Xin Qing Pian (NXQ), in Patients with Ischemic Stroke

Lead NICM Investigator: Associate Professor Dennis Chang, Professor Alan Bensoussan

Funder: Hutchison Whampoa Guangzhou Baiyunshan Chinese Medicine Co. Ltd

Assessing health literacy in a population of complementary medicine users.

NICM Lead Investigator: Professor Caroline Smith and Professor Esther Chang

Funder: University of Western Sydney. Research Grants Scheme (Science, Technology, Engineering and Medicine), University Western Sydney.

Catalysing Innovative Learning and Teaching in TCM: building up clinical protocol library for clinical training and operation

NICM Lead Investigator: Dr Xiaoshu Zhu

Funder: University of Western Sydney School of Science and Health - Catalysing Innovative Learning and Teaching 2014

Catalysing Innovative Learning and Teaching in TCM: building up visual library for foundations

NICM Lead Investigator: Dr Xiaoshu Zhu

Funder: University of Western Sydney School of Science and Health - Catalysing Innovative Learning and Teaching 2014

Development of International Blended Learning and Teaching Initiative in TCM

NICM Lead Investigator: Dr Xiaoshu Zhu, Ros Priest

Funder: University of Western Sydney School of Science and Health - Catalysing Innovative Learning and Teaching 2014

Novel insecticides and synergists from endemic and exotic flora

NICM Lead: Dr Frank van der Kooy (lead by Robert Spooner Hart - Hawkesbury Institute of the Environment)

Funder: Cotton Research and Development Project

Optimising flowering and yield of bioactives from *Centipeda cunninghamii*

NICM Lead: Dr Frank van der Kooy (lead by Tony Haigh - School of Science and Health)

Funder: Cotton Research and Development Project

INDUSTRY PARTNERSHIPS

Developing an industry standard for propolis activity

NICM Lead Investigator: Associate Professor Chun Guang Li

Other Investigators: Dr Joanne Packer, Beatrice Venkataya, Mariam Jarouche

Funders: Homart Pty Ltd; Researcher in Business Program, NSW Department of Trade and Investment

SPONSORSHIPS AND DONATIONS

Jacka Foundation Chair in Complementary Medicine

NICM Lead Investigator: Professor Alan Bensoussan

Funder: The Jacka Foundation of Natural Therapies

SFI Flordis Industry Sponsorship

NICM Lead Investigator: Professor Alan Bensoussan

Funder: SFI Flordis Pty Ltd

Catalent Industry Sponsorship

NICM Lead Investigator: Professor Alan Bensoussan

Funder: Catalent Pty Ltd

Blackmores Industry Sponsorship

NICM Lead Investigator: Professor Alan Bensoussan

Funder: Blackmores Pty Ltd

Nongs Dispensing software

NICM Lead Investigator: Professor Alan Bensoussan

Funder: Purapharm International Ltd

Development and evaluation of an online comprehensive lifestyle change intervention for common risk factor reduction in the prevention and management of type 2 diabetes, metabolic syndrome and cardiovascular disease

NICM Lead Investigator: Stephen Penman

Other Investigators: Professor Alan Bensoussan

Funder: Vic and Nancy Allen Stroke Prevention Foundation Donation

Marcus Blackmore Donation

Untied donation for furthering the NICM research program

NICM Lead Investigator: Professor Alan Bensoussan

Funder: Marcus Blackmore

Research Funding Awarded

Anticancer herbs screening and underlying mechanism studies

NICM Lead Investigator: Associate Professor Chun Guang Li and Dr Henry Liang

Funder: Tony Maxwell and Co.

Evidence base complementary medicines and therapies for autism spectrum disorders: a foundation for parents and health professionals education and decision making

NICM Lead Investigator: Professor Caroline Smith

Other Investigators: Giselle Gallege

Funder: University of Western Sydney School of Science and Health Seed Grant, NICM

NICM-Initiated Industry Analysis

NICM SURVEY OF AUSTRALIAN COMPLEMENTARY MEDICINE RESEARCH

The NICM Survey of complementary medicine research seeks to build a deeper understanding of who is doing what around the country, with what resources, and to what extent the complementary medicine research sector is changing. Currently there is no such comprehensive data available for Australia.

This survey was initially distributed directly to over 1,000 potential researchers in the area of complementary medicine. With researchers appreciating the value of this information, the audit was further distributed to colleagues, collaborators and associates either directly or at the suggestion of the respondents. Over 300 researchers responded to the survey, detailing their involvement in research into complementary medicines and therapies during the period since 2008.

Commercial Work

Our TGA-certified Analytical and Pharmacology Laboratories conducted a range of commissioned research and development work and product testing, including stability studies, safety and efficacy studies and associated method development. Clients for this work included major international pharmaceutical companies, rural and regional research and development bodies, and new Australian complementary medicine companies.

Our clinical trials team prepared a number of clinical trial protocols for advancement by Australian industry. Herbs to be trialled were for their potential to:

- Enhance quality of life for palliative cancer patients
- Improve fertility
- Treat colds and flu



Higher Degree Research Program

With 22 higher degree research students currently enrolled, NICM is involved in an expanding program of postgraduate studies offered by supervised research, and our students create a vibrant core of activity, comprehensive of all aspects of our research program from pre-clinical studies through to the translation of research evidence and application within clinical practice.

This year, Nerida Klupp and Debra Betts were awarded their doctorates for innovative research focusing on the efficacy of particular herbal medicines and the translation of complementary medicine to practice.

HONOURS



KYLIE BARR

The patient practitioner relationship

Supervisor: Professor Caroline Smith

Acupuncture is now emerging as a complementary medicine used as an adjunct to in vitro fertilization (IVF). The aim of Kylie's study was to examine trial participation from the perspective of infertility patients and practitioners the therapeutic relationship in an ongoing randomised controlled trial. Kylie was awarded a First Class Honours.



AMANDA HAYES

Adverse events associated with osteopathic treatment. A pilot study

Supervisor: Dr Anthony Good

Amanda's project seeks to prospectively explore the incidence and nature of adverse events following osteopathic treatment in Australia in June and July 2014, and then to describe these events qualitatively and quantitatively.

Higher Degree Research Program

MASTER OF SCIENCE (HONS)



CHRIS MCKEON

Electroacupuncture for chemotherapy induced nausea and vomiting

Supervisor: Professor Caroline Smith

Chris' study aims to determine whether electroacupuncture or sham acupuncture gives better control of acute and delayed chemotherapy induced nausea and vomiting than standard antiemetic treatment and the evaluation of an acupuncture service for cancer patients.



SWASTIKA (SIMI) SINGH

A study of possible interactions (synergistic or antagonistic) between different herbs of a herbal formulation used for the treatment of cancer

Supervisor: Dr Cheang Khoo

This study seeks to determine the variability of selected bio-active components (oridonin, rosmarinic acid, ursolic acid, matrine, oxymatrine, sophoridine, curcumin, demethoxycurcumin, bisdemethoxycurcumin, scutellarin, scutellarein and apigenin) and an analytical method will be developed to characterise these bio-actives in individual herbs and in formulation as well. LC-PDA and LC-ESI-MS/MS will be employed for bio-active confirmations.



JOHN TRUONG

Quality control of traditional Chinese medicine products

Supervisor: Professor Kelvin Chan

John's Masters project aims to provide clear distinction between unprocessed/processed raw materials and finished products by implementing analytical and biological approaches. Three selected Chinese Materia Medica, Zingiberis Rhizoma, Crataegi Fructus and Scutellariae Radix, were examined using thin-layer chromatography fingerprinting to qualitatively assess herbal quality, and ultra-performance liquid chromatography was applied to quantitatively determine active constituents. The pharmacological activity were assessed by non-cellular based antioxidant assays and *in vitro* anti-inflammatory assays. It was found that the processed forms of the three selected Chinese Materia Medica were chemically and pharmacologically different from their raw materials. The observed changes supported the traditional Chinese Medicine practice that used processed form of herbs for treating different ailments.

Higher Degree Research Program

DOCTOR OF PHILOSOPHY



SUSAN ARENTZ

Investigation into the role of naturopathic medicine in the management of women with polycystic ovary syndrome (PCOS)

Supervisor: Professor Caroline Smith

The main aim of Susan's research program is to examine the use of complementary medicine and therapy use among women with PCOS, to systematically review the evidence of Western Herbal Medicine and nutritional supplements with the management of PCOS and a clinical trial to evaluate the effectiveness and safety of naturopathy to improve reproductive outcomes for women with PCOS.



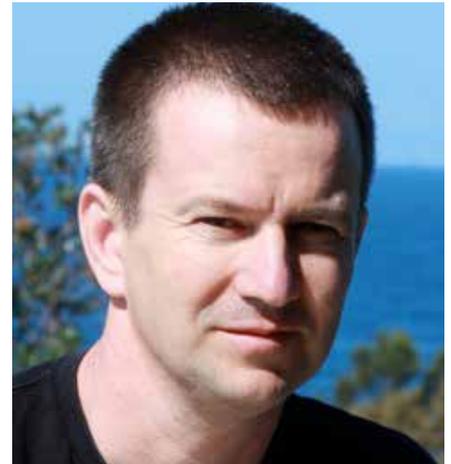
MICHAEL (MIKE) ARMOUR

The effectiveness of acupuncture in the treatment of primary dysmenorrhea: A mixed methods study

Supervisor: Professor Caroline Smith

Mike is examining how acupuncture treatment for primary dysmenorrhea is delivered in the community and investigating how changing different components of acupuncture dosage effects pain and dysfunction in primary dysmenorrhea.

What is the effect of dose and timing? This research looks to examine the effect of changing the type of acupuncture stimulation and the timing of the treatments on the severity of period pain as well as the other common symptoms women with primary dysmenorrhea experience (such as bloating, nausea and headaches). This study has been running in Auckland and Wellington since July 2013 and is currently about half-way to completion.



MICHAEL DE MANINCOR

Evaluation of yoga-based interventions for depression, anxiety and subjective wellbeing

Supervisor: Professor Alan Bensoussan

The aim of Mike's study is to investigate the benefits of a six week yoga-based intervention in the reduction of symptoms of depression and anxiety, and associated increases in subjective wellbeing.

Higher Degree Research Program



MARIAM JAROUCHE

A study of the variation in the chemical profile of Qi Ju Huang Wan in the marketplace

Supervisor: Professor Alan Bensoussan

Mariam's thesis and project involves developing and validating a practical method for the quality assessment of a complex herbal formulation described in the Chinese Pharmacopeia, in addition to evaluating variations observed in the concentration of monitored bioactive components.



KATHERINE (KATE) LEVETT

Utilisation of complementary medicine techniques to reduce usage of pharmacological pain relief during labour and childbirth

Supervisor: Professor Caroline Smith

Kate has been conducting a randomised controlled trial to evaluate the effectiveness of a complementary medicine antenatal education programme (incorporating the 'She Births' and 'Acu Birth' programmes) delivered to women and their birth partners, compared with women receiving standard care alone, to reduce the incidence of epidural use during labour.



MITCHELL LOW

Phytoequivalence of standardized Andrographis Paniculata extracts: An in-depth study of molecular immunodulator effects

Supervisor: Dr Frank van der Kooy

Mitchell's current PhD research is focused on the anti-inflammatory effects of Andrographis paniculata. His team are using 2 cell lines, THP-1 cells which are human monocytes and RAW 264.7 cells which are murine macrophages. They are currently evaluating the effectiveness of A. paniculata and its components on inhibiting TNF- α , Nitric oxide, PGE2 and LTB4 production and NF- κ B activity.

Higher Degree Research Program



TAQDEES MUKADDAM

Understanding the molecular mechanisms underlying the effect of calorie-restriction and rapamycin on the chronological lifespan of yeast

Supervisor: Associate Professor Dennis Chang

Taqdee's project aims at the characterization of the molecular events specifically phosphorylation of certain key enzymes and gene expression changes in yeast, that occur under the influence of CR and rapamycin. The phosphopeptides will be detected using Mass Spectrometry analyses while the gene expression levels will be measured by real time reverse transcription polymerase chain reaction



SIMONE ORMSBY

Evaluation of the effectiveness of acupuncture treatment for antenatal and postnatal depression

Supervisor: Professor Caroline Smith

Simone is investigating whether acupuncture treatment of mild to moderately depressed primagravida will result in a reduction in the severity and duration of symptoms when compared to a usual care group. In addition, post-partum follow up will assess whether the treatment strategy was also successful in preventing postnatal depression. Results will be assessed qualitatively via questionnaires and quantitatively via the monitoring of both blood oxytocin levels as well as expression analysis of the Oxytocin Receptor gene.

Simone is running a Clinical Trial at Camden and Campbelltown Hospitals.



JARRYD PEARSON

Detection and analysis of selected analytes in *Curcuma Xanthorrhiza*

Supervisor: Dr Cheang Khoo

Jarryd's analytical research project involves method development and validation of *Curcuma* herbal extracts, using LC-MS and GC-MS during the method development and validation. Recovery studies on the methods will be conducted, as well as precision and stability studies. The validated methods will then be used to conduct studies on the phytochemical variability between selected *Curcuma* species. The relationship between pharmacological properties and phytochemical composition of the extracts will also be investigated.

Jarryd says "Analytical chemistry is of great interest to me and applying it to herbal medicine will help contribute towards the growing knowledge of the chemical and pharmacological effects of herbal medicine."

Higher Degree Research Program



STEPHEN PENMAN

Development and evaluation of an online comprehensive lifestyle change intervention for common risk factor reduction in the prevention and management of type 2 diabetes, metabolic syndrome and cardiovascular disease

Supervisor: Professor Alan Bensoussan

This research aims to develop and evaluate the potential for clinical effectiveness of a web-based multiple health behaviour change intervention, intended to be utilised in the doctor/patient relationship adjunct to standard care, to assist people to make and maintain lifestyle change for risk factor reduction in chronic and lifestyle-related conditions, specifically in type 2 diabetes, cardiovascular disease and metabolic syndrome.



YU TING SUN

The pharmacological and clinical effects of a standardised herbal extract, Nao Xin Qing for ischaemic stroke

Supervisor: Associate Professor Dennis Chang

Assessing the neuro-protective effects of Nao Xin Qing, a standardised herbal extract which was used for ischemic stroke. Developing zebrafish testing models for assessing angiogenesis development and hypoxia prototype.



ALAN (HUNG YIU) YEUNG

Randomised controlled trial of a 12 week yoga intervention on negative affective states, cardiovascular and cognitive function in post-cardiac rehabilitation patients

Supervisor: Associate Professor Dennis Chang

Alan is working on a yoga based intervention in post-cardiac rehabilitation in the hopes that such mind-body interventions demonstrate progressive health improvements and potential as an adjunct to existing cardiac rehabilitation programs. This study aims to determine if yoga is a suitable intervention in reducing psychosocial symptoms, improving cardiovascular function, cognition and quality of life. If yoga is suitable, it may be incorporated as an adjunctive therapy to existing post-cardiac rehabilitation to further reduce CVD risk and occurrence.

Higher Degree Research Program



LIN ZHANG

Immunomodulatory and anti-cancer activities of polysaccharides isolated from medicinal plants

Supervisor: Dr Cheang Khoo

In this project, the extracts of several Traditional Chinese Medicinal (TCM) herbs have been subjected to preliminary screening to evaluate the immunomodulatory and anticancer potential of their polysaccharides. Three TCM herbs have been selected based on these results. Polysaccharides have been extracted from these selected herbs and size exclusion chromatographic fractionation has been conducted to obtain pure fractions. Antioxidant, immunomodulatory and anticancer activities of these purified polysaccharide fractions are currently being evaluated. The next stage of the project is to structurally characterise the active polysaccharides using a combination of spectroscopic techniques (Mass, IR, UV, 1D- & 2 D-NMR spectroscopic techniques).



XIAN (PHOEBE) ZHOU

Mechanistic studies of two-herb combination of vascular disease

Supervisor: Professor Alan Bensoussan

Traditional Chinese Medicine (TCM) is a holistic approach to maintaining good health through the harmonious interaction of the body with the environment. A defining characteristic of TCM is the use of several medicinal herbs to produce 'composite formulae' (called 'Fufang' in TCM) to target multiple symptoms which define a disease or several diseases. It is thought that combinational herbal therapy can exert greater therapeutic efficacy than single herbs and/or chemicals. This could be explained by the interaction between the constituents of a mixture of herbs known as synergism. Although many of these herbal combinations have known or purported therapeutic activity, the underlying mechanisms have yet to be fully explored. The overall aim of this study will characterise one popular herbal combination, namely *Salvia miltiorrhiza* (Danshen) and *Panax notoginseng* (Sanqi), by determining its molecular mode of action and synergistic contributions in vitro. This project will advance the knowledge and expand our understanding of TCM, and support TCM's acceptance into integrative medicine.

2014 PUBLICATIONS



2014 Publications

BOOKS AND BOOK CHAPTERS

- Fogarty S, Madden S. A review of the use of acupuncture in the treatment of Anorexia Nervosa. In: Gramaglia C, Zeppegnio P, editors. *New developments in Anorexia Nervosa research*. New York: Nova Science Publishers Inc; 2014. p. 141-50.
- Gunawardena D, Govindaraghavan S, Muench G. Anti-inflammatory properties of cinnamon polyphenols and their monomeric precursors. In: Watson RR, Preedy VR, Zibadi S, editors. *Polyphenols in human health and disease*. The Netherlands: Elsevier Inc; 2014. p. 409-25.
- Madden S, Fogarty S, Smith C. Alternative and complementary therapies in the treatment of eating disorders, addictions and substance use disorders. In: Brewerton TD, Dennis AB, editors. *Eating disorders, addictions and substance use disorders: Research, clinical and treatment perspectives*. Berlin; Heidelberg: Springer; 2014. p. 625-47.
- van der Kooy F. Reverse pharmacology and drug discovery: *Artemisia annua* and its anti-HIV activity. In: Aftab T, Ferreira JFS, Khan MMA, Naeem M, editors. *Artemisia annua - Pharmacology and biotechnology*. Berlin, Heidelberg: Springer-Verlag; 2014. p. 249-67.
- JOURNAL ARTICLES**
- Arentz S, Abbott JA, Smith CA, Bensoussan A. Herbal medicine for the management of polycystic ovary syndrome (PCOS) and associated oligo/amenorrhoea and hyperandrogenism: A review of the laboratory evidence for effects with corroborative clinical findings. *BMC Complem Altern M*. 2014;14:511. DOI: 10.1186/1472-6882-14-511.
- Arentz S, Smith CA, Abbott JA, Bensoussan A. A survey of the use of complementary medicine by a self-selected community group of Australian women with polycystic ovary syndrome. *BMC Complem Altern M*. 2014;14:472. DOI: 10.1186/1472-6882-14-472.
- Besch J. Using a client survey to support continuous improvement: An Australian case study in managing change. *Research Management Review*. 2014;20(1):1-10.
- Besch J, Boon S, Bensoussan A. The National Institute of Complementary Medicine: Past, present, future. *Australian Journal of Herbal Medicine*. 2014;26(4):141-3.
- Betts D, Dahlen HG, Smith CA. A search for hope and understanding: An analysis of threatened miscarriage internet forums. *Midwifery*. 2014 30(2014):650-6. DOI: 10.1016/j.midw.2013.12.011.
- Betts D, Smith C, Dahlen H. "Well I'm safe because..."—Acupuncturists managing conflicting treatment recommendations when treating threatened miscarriage: A mixed-methods study. *J Altern Complem Med*. 2014;20(11):838-45. DOI: 10.1089/acm.2014.0139.
- Braun L. Complementary medicine: Show us the money. *Australian Journal of Pharmacy*. 2014;95(1127):16-8.
- Braun L, Harris J, Katris P, Cain M, Dhillon H, Koczwara B, Olver I, Robotin M. Clinical Oncology Society of Australia position statement on the use of complementary and alternative medicine by cancer patients. *Asia-Pac J Clin Onco*. 2014.
- Braun L. Risky business—Or is it? Risk perception and integrative medicine. *Advances in Integrative Medicine*. 2014;1(1):48-51.
- Cao H, Li X, Yan X, Wang NS, Bensoussan A, Liu J. Cupping therapy for acute and chronic pain management: A systematic review of randomized clinical trials. *Journal of Traditional Chinese Medical Sciences*. 2014;1(1):49-61. DOI: 10.1016/j.jtcms.2014.11.003.
- Chan K. Understanding interactions between Chinese medicines and pharmaceutical drugs in integrative healthcare. *Chin J Integr Med*. 2014;21(2):83-9. DOI: 10.1007/s11655-014-1794-y.
- Chan K, Poon J, Poon SK, Jiang M, Lu A. An Overview on Evidence-Based Medicine and Medical Informatics in Traditional Chinese Medicine Practice. *Data Analytics for Traditional Chinese Medicine Research*: Springer; 2014. p. 227-48.
- Chan K, Zhang HW, Lin ZX. Treatments used in complementary and alternative medicine. *Side Effects of Drugs Annual 2014*. p. 889-98.
- Chang D, Bensoussan A. Pharmacokinetics and brain distribution of ginkgolides after administration of Sai-Lao-Tong. *Modernization of Traditional Medicine and Materia Materia*. 2014;16(7):1458-64. DOI: 10.11842/wst.2014.07.003.
- Cheema BS, Chan D, Fahey P, Atlantis E. Effect of progressive resistance training on measures of skeletal muscle hypertrophy, muscular strength and health-related quality of life in patients with chronic kidney disease: A systematic review and meta-analysis. *Sports Med*. 2014;44(8):1125-38. DOI: 10.1007/s40279-014-0176-8.
- Cheema BS, Kilbreath SL, Fahey PP, Delaney GP, Atlantis E. Safety and efficacy of progressive resistance training in breast cancer: a systematic review and meta-analysis. *Breast Cancer Res Treat*. 2014;148:249-68. DOI: 10.1007/s10549-014-3162-9.
- Cheema BS, Robergs RA, Askew CD. Exercise physiologists emerge as allied healthcare professionals in the era of non-communicable disease pandemics: A report from Australia, 2006-2012. *Sports Med*. 2014;44(7):869-77. DOI: 10.1007/s40279-014-0173-y.
- Cheema BS, Vizza L, Swaraj S. Progressive resistance training in polycystic ovary syndrome: Can pumping iron improve clinical outcomes? *Sports Med*. 2014;44(9):1197-207. DOI: 10.1007/s40279-014-0206-6.
- Chui SH, Chow FC, Szeto YT, Chan K, Lam CWK. A case series of acupuncture treatment for female infertility with some cases supplemented with Chinese medicines. *Eur J Integr Med*. 2014;6(3):337-41. DOI: 10.1016/j.eujim.2014.03.007.
- Chui SH, Chow FC, Szeto YT, Chan K, Lam CWK. A case series of acupuncture treatment for female infertility with some cases supplemented with Chinese medicines. *Eur J Integr Med*. 2014;6(3):337-41. DOI: 10.1016/j.eujim.2014.03.007.

2014 Publications

- Cochrane S, Smith CA, Possamai-Inesedy A, Bensoussan A. Acupuncture and women's health: An overview of the role of acupuncture and its clinical management in women's reproductive health. *Int J Womens Health*. 2014;6:313-25. DOI: 10.2147/IJWH.S38969.
- Fogarty S. Massage treatment and medial tibial stress syndrome; A commentary to provoke thought about the way massage therapy is used in the treatment of MTSS. *Journal of Bodywork & Movement Therapies*. 2014. DOI: 10.1016/j.jbmt.2014.11.003.
- Fogarty S, Waldron DC, McIntire N. A case series: How do patients with an eating disorder, seeking acupuncture treatment present (patterns of disharmony), and how are they treated? *Acupuncture and Related Therapies*. 2014;2(4):59-65. DOI: 10.1016/j.arthe.2014.08.002.
- Grant LE, Cochrane S. Acupuncture for the mental and emotional health of women undergoing IVF treatment: A comprehensive review. *AJACM*. 2014;9(1):5-12.
- Grant S, Bensoussan A. The process of care in integrative health care settings - a qualitative study of US practices *BMC Complement Altern M*. 2014;14 410. DOI: 10.1186/1472-6882-14-410.
- Gu S, Yang AW, Li CG, Lu CL, Xue CC. Topical application of Chinese herbal medicine for Atopic Eczema: A systematic review with a meta-analysis. *Dermatology*. 2014;228(4):294-302. DOI: 10.1159/000360526.
- Gunawardena D, Bennett L, Shanmugam K, King K, Williams R, Zabarás D, Head R, Ooi L, Gyengesi E, Munch G. Anti-inflammatory effects of five commercially available mushroom species determined in lipopolysaccharide and interferon- γ activated murine macrophages. *Food Chem*. 2014;148(2014):92-6. DOI: 10.1016/j.foodchem.2013.10.015.
- Ip PSP, Tsim KWK, Chan K, Bauer R. Application of complementary and alternative medicine on neurodegenerative disorders 2013 (Editorial). *Evid-based Compl Alt*. [Editorial]. 2014;2014:1-2. DOI: 10.1155/2014/463929.
- Jadeja R, Devkar RV, Nammi S. Herbal medicines for the treatment of nonalcoholic steatohepatitis: Current scenario and future prospects. *Evid-Based Compl Alt*. 2014. DOI: 10.1155/2014/648308.
- Kam A, Li KM, Razmovski-Naumovski V, Nammi S, Chan K, Li GQ. Gallic acid protects against endothelial injury by restoring the depletion of DNA methyltransferase 1 and inhibiting proteasome activities. *Int J Cardiol*. 2014;171(2):231-42. DOI: 10.1016/j.ijcard.2013.12.020.
- Levett K, Roberts C, Simpson J, Morris J. Site specific predictors of successful recruitment to a perinatal clinical trial. *Clin Trials*. 2014 DOI: 10.1177/1740774514543539.
- Levett K, Smith C, Dahlen H, Bensoussan A. Acupuncture and acupressure for pain management in labour and birth: A critical narrative review of current systematic review evidence. *Complement Ther Med*. 2014 22;22(3):523-40. DOI: 10.1016/j.ctim.2014.03.011.
- Li Y, Tran VH, Kota BP, Nammi S, Duke CC, Roufogalis BD. Preventative effect of zingiber officinale on insulin resistance in a high-fat high-carbohydrate diet-fed rat model and its mechanism of action. *Basic Clin Pharmacol*. 2014;115(2):209-15. DOI: 10.1111/bcpt.12196
- Mouton J, van der Kooy F. Identification of cis- and trans- melilotoside within an Artemisia annua tea infusion. *European Journal of Medicinal Plants*. 2014;4(1):52-63.
- Pearson JL, Lee S, Suresh H, Low M, Nang M, Singh S, Lamin F, Kazzem M, Sullivan S, Khoo CS. The liquid chromatographic determination of chlorogenic and caffeic acids in Xu Duan (*Dipsacus asperoides*) raw herb. *ISRN Analytical Chemistry*. 2014;2014. DOI: 10.1155/2014/968314.
- Pumpa KL, Fallon KE, Bensoussan A, Papalia S. The effects of topical Arnica on performance, pain and muscle damage after intense eccentric exercise. *Eur J Sport Sci*. 2014;14(3):1-7. DOI: 10.1080/17461391
- Reichel F, Clegg JK, Gloe K, Gloe K, Weigand JJ, Reynolds JK, Li CG, Aldrich-Wright JR, Keper CJ, Lindoy LF, Yao HC, Li F. Self-assembly of an imidazolate-bridged ferric/cull heterometallic cage. *Inorg Chem*. 2014;53(2):688-90. DOI: 10.1021/ic402686s.
- Rowlands DS, Page RA, Sukala WR, Giri M, Ghimbovschi SD, Hayat I, Cheema BS, Lys I, Leikis M, Sheard PW, Wakefield S, Breier B, Hathout Y, Brown K, Marathi R, Orkunoglu-Suer FE, Devaney JM, Leiken B, Many G, Krebs J, Hopkins WG, Hoffman EP. Multi-omic integrated networks connect DNA methylation and miRNA with skeletal muscle plasticity to chronic exercise in Type 2 diabetic obesity. *Physiol Genomics*. 2014;46(20):747-65. DOI: 10.1152/physiolgenomics.00024.2014
- Smith C, Armour M, Betts D. Treatment of women's reproductive health conditions by Australian and New Zealand acupuncturists. *Complementary Ther Med*. 2014 8//;22(4):710-8. DOI: <http://dx.doi.org/10.1016/j.ctim.2014.06.001>.
- Smith C, Fogarty S, Touyz S, Madden S, Buckett G, Hay P. Acupuncture and acupressure and massage health outcomes for patients with Anorexia Nervosa: Findings from a pilot randomized controlled trial and patient interviews. *J Altern Complement Med*. 2014;20(2):103-12. DOI: 10.1089/acm.2013.0142.
- Smith CA, Armour M, Betts D. Treatment of women's reproductive health conditions by Australian and New Zealand acupuncturists. *Complement Ther Med*. 2014;22(4):710-8. DOI: 10.1016/j.ctim.2014.06.001.
- Smith CA, Betts D. The practice of acupuncture and moxibustion to promote cephalic version for women with a breech presentation: Implications for clinical practice and research. *Complement Ther Med*. 2014;22(1):75-80. DOI: 10.1016/j.ctim.2013.12.005.
- Smith CA, Coyle ME, de Lacey S, Johnson NP. Evidence-based research and practice: attitudes of reproduction nurses, counsellors and doctors. *Reprod Biomed Online*. 2014;29:3-9. DOI: 10.1016/j.rbmo.2014.03.014.

2014 Publications

- Smith CA, Pirotta M, Kilbreath S. A feasibility study to examine the role of acupuncture to reduce symptoms of lymphoedema after breast cancer: a randomised controlled trial. *Acupunct Med.* 2014;32 (5):387-93. DOI: 10.1136/acupmed-2014-010593.
- Steiner GZ, Barry RJ. The mechanism of dishabituation. *Front Integr Neurosci.* 2014;8:1-8. DOI: 10.3389/fnint.2014.00014.
- Steiner GZ, Barry RJ, Gonsalvez CJ. Stimulus-to-matching-stimulus interval influences N1, P2, and P3b in an equiprobable Go/NoGo task. *Int J Psychophysiol.* 2014;94(1):59-68. DOI: 10.1016/j.ijpsycho.2014.07.003.
- Steiner GZ, Barry RJ, Gonsalvez CJ. Nontarget-to-nontarget interval determines the nontarget P300 in an auditory equiprobable Go/NoGo task. *Int J Psychophysiol.* 2014;92:113-21. DOI: 10.1016/j.ijpsycho.2014.03.010.
- Su CX, Wang LQ, Grant SJ, Liu JP. Chinese herbal medicine for cancer-related fatigue: A systematic review of randomized clinical trials. *J Altern Complement Med.* 2014;20(5):A63-A. DOI: 10.1089/acm.2014.5164.abstract.
- Su Y, Wang Q, Wang C, Chan K, Sun Y, Kuang H. The treatment of Alzheimer's disease using Chinese medicinal plants: From disease models to potential clinical applications. *J Ethnopharmacol.* 2014;152(3):403-23. DOI: 10.1016/j.jep.2013.12.053.
- Taylor P, Pezzullo L, Grant SJ, Bensoussan A. Cost-effectiveness of acupuncture for chronic nonspecific low back pain. *Pain Pract.* [Systematic Review]. 2014;14(7):599-606. DOI: 10.1111/papr.12116.
- Wang P, Li CG, Qi ZT, Ding SZ. Roles of c-microRNAs in exercised-induced phenotype change of skeletal muscle. *China Sport Science.* 2014;9:66-71. DOI: 10.3969/j.issn.1000-677X.2014.09.010.
- Wang Q, Wang C, Shu Z, Chan K, Huang S, Li Y, Yang X, Wu L, Kuang H, Sun X. Valeriana amurensis improves Amyloid-beta 1.42 induced cognitive deficit by enhancing cerebral cholinergic function and protecting the brain neurones from apoptosis in mice. *J Ethnopharmacol.* 2014;153(2):318-25. DOI: 10.1016/j.jep.2013.11.017.
- Witt CM, Shelly RW, Grant S, Lauer MS, Tunis S, Berman BM. What can comparative effectiveness research contribute to integrative health in international perspective? *2014;20(11):874-80.* DOI: 10.1089/acm.2014.0073.
- Wong KH, Razmovski-Naumovski V, Li KM, Li GQ, Chan K. Differentiating Puerariae Lobatae Radix and Puerariae Thomsonii Radix using HPTLC coupled with multivariate classification analyses. *J Pharmaceut Biomed.* 2014;95:11-9. DOI: 10.1016/j.jpba.2014.02.007.
- Yao MJ, Zhang P, Song WT, Xu L, Bensoussan A, Chang D, Liu JX. Effect of Tongluo Qingnao injection on Glutamate and GABA in cerebral microdialysis samples of ischemia/reperfusion on rats *Chinese Journal of Experimental Traditional Medical Formulae.* 2014;20(12):136-40.
- Yeung A, Kiat H, Denniss A, Cheema B, Bensoussan A, Machliss B, Colagiuri B, Chang D. Randomised controlled trial of a 12 week yoga intervention on negative affective states, cardiovascular and cognitive function in post-cardiac rehabilitation patients. *BMC Complement Altern M.* 2014;14(1):411. DOI: 10.1186/1472-6882-14-411.
- Zhang Y, Lin L, Ren C, Lin C, Liu J, Chang D, Bensoussan A. Pharmacokinetics and brain distribution of ginkgolides after administration of Sai-Luo-Tong. *Modernization of Traditional Medicine and Materia Materia.* 2014;16(7):1458-64. DOI: 10.11842/wst.2014.07.003.
- Zhang Z, Liang Y, Peishan X, Chau F, Chan K. Chromatographic fingerprinting and chemometric techniques for quality control of herb medicines. *Data Analytics for Traditional Chinese Medicine Research: Springer;* 2014. p. 133-53.
- Alqahtani A, K.M. L, Razmovski-Naumovski V, Chan K, Li G. Evaluation of genetic and chemical diversity of Australian Centella species (Poster). 35th Annual Genome Conference 2014; 16 -18 February, 2014; Mantra Lorne, Victoria, Australia 2014.
- Arentz S, Smith C, Abbott J, Bensoussan A. The effectiveness of herbal medicine plus a lifestyle intervention for oligo/amenorrhoea in women with PCOS: A randomised controlled trial. *ASPIRE (Asia Pacific Initiative on Reproductive Endocrinology);* 4-6 April 2014; Brisbane, Australia: Fertility Society of Australia; 2014.
- Bensoussan A. Building an integrative medicine research environment. The International Research Congress on Integrative Medicine and Health (IRCIHM); 13-16 May 2014; Miami, Florida 2014. (Keynote speaker)
- Briggs D. Regulation of herbal medicines: challenges and opportunities. The Second Hong Kong Polytechnic University Botanical Symposium 13-14 October, 2014; Hong Kong SAR, China 2014.
- Briggs D. Issues in the regulation of herbal medicines: an Australian perspective. 2014 Shanghai International Conference on Traditional Chinese Medicine and Natural medicine.; 16-17 October 2014; Shanghai, China 2014.
- Grant S, Chang D, Schnyer R, Fahey P, Bensoussan A. Improving inter-rater reliability of TCM diagnosis through the use of biomarkers and other methods (Poster). The International Research Congress on Integrative Medicine and Health (IRCIHM); 13-16 May 2014; Miami, Florida 2014.
- Hunter J, Bensoussan A. Developing a decision matrix for integrating traditional and complementary medicines. *Emerging Health Policy Research Conference Program;* 2 October, 2014; Menzies Centre for Health Policy, University of Sydney 2014.
- Li X, Zhu X, Ren J, Zhou X, Liu J, Bensoussan A. Impact of Chinese herbal medicine on survival relapse and metastasis in women with breast cancer: A systematic review of randomised controlled trial (Poster). The International Research Congress on Integrative Medicine and Health (IRCIHM); 13-16 May 2014 Miami, Florida 2014.

CONFERENCE PAPERS

2014 Publications

- Levett K, Smith C, Dahlen H, Bensoussan A. The Complete Birth Study. Results from a mixed methods study (Extended oral presentation). 19th Annual Conference of the Perinatal Society of Australia and New Zealand; Perth, Australia 2014.
- Levett KM, Smith CA, Dahlen HG, Bensoussan A. Complementary therapies for labour and birth: Results from a mixed methods study. PSANZ Annual Conference 2014; Perth, Australia 2014.
- Low MN, Chang D, Khoo C, Li CG, Chan K, Nang M, et al. Pharmacokinetic study of a standardised herbal extract of *Diospyros kaki* Leaves in rats. RACI Natural Products Chemistry Group Annual One Day Symposium; 3rd October 2014; Charles Sturt University Convention Centre, Wagga Wagga 2014.
- Penman S. Lifestyle medicine: Writing and supporting a lifestyle prescription. Australian Disease Management Association Seminar 'Primary and Secondary Prevention of Chronic Disease'; 28 March 2014; Alfred Hospital, Melbourne 2014.
- Penman S, Bensoussan A, Christensen H, Molodysky E. Development and evaluation of an online comprehensive lifestyle change intervention for common risk factor reduction in the prevention and management of Type 2 Diabetes, Metabolic Syndrome and Cardiovascular Disease (Poster). Australian Disease Management Association 10th Annual National Conference; 11-12 September 2014; Melbourne Convention Centre 2014.
- Razmovski-Naumovski V, Chan K. The quality, safety and efficacy of Traditional Chinese Medicine in Australia- the JCTCM program. World Congress on Aromatic and Medicinal Plants (WOCMAP)/29th International Horticultural Congress; 17-20 August, 2014; Brisbane, Australia 2014.
- Singh A, Gaborieau M, Castignolles P, Chan K, Razmovski-Naumovski V. Molecular characterisation of konjac glucomannan (Oral poster). World Congress on Aromatic and Medicinal Plants (WOCMAP)/29th International Horticultural Congress; 17-20 August, 2014; Brisbane, Australia 2014.
- Steiner, G.Z., Yeung, A., Camfield, D.A., De Blasio, F.M., Pipingas, A., Scholey, A.B., Stough, C., Chang, D.H., 2014. The effect of a standardised Chinese herbal medicine formula (Sailuotong) on N1, PN, P2, MMN, P3a, and P3b amplitudes: a pilot study. *Front. Hum. Neurosci.* Conference Abstract: Australasian Society for Psychophysiology, Inc. doi: 10.3389/conf.fnhum.2014.216.00025
- Steiner, G.Z., Fernandez-Enright, F.Z., Barkus, E., Barry, R.J., 2014. The effects of catechol-O-methyltransferase polymorphism Val158Met on resting EEG spectral activity in healthy adults. *Front. Hum. Neurosci.* Conference Abstract: Australasian Society for Psychophysiology, Inc. doi: 10.3389/conf.fnhum.2014.216.00016
- Steiner, G.Z., Barry, R.J., Gonsalvez, C.J., 2014. Sequential processing and the matching-stimulus interval effect in ERP components: An exploration of the mechanism. *Front. Hum. Neurosci.* Conference Abstract: Australasian Society for Psychophysiology, Inc. doi: 10.3389/conf.fnhum.2014.216.00031
- Lum, M., Fernando, T., Karamacoska, D., Barry, R.J., Steiner, G.Z., 2014. EEG Topographies in High and Low Extraverts. *Front. Hum. Neurosci.* Conference Abstract: Australasian Society for Psychophysiology, Inc. doi: 10.3389/conf.fnhum.2014.216.00019
- Camfield, D.A., Boyall, S., Kornfeld, E.J., Taylor, M., Wesnes, K.A., Barry, R.J., Steiner, G.Z., De Blasio, F.M., Croft, R., 2014. Exploring individual differences in Affective processing using psychophysiology. *Front. Hum. Neurosci.* Conference Abstract: Australasian Society for Psychophysiology, Inc. doi: 10.3389/conf.fnhum.2014.216.00023
- Steiner, G.Z., Barry, R.J., De Blasio, F.M., 2014. ERPs in Long and Short ISI Dishabituation Tasks: A Comparison Using PCA. *International Journal of Psychophysiology*, 94, 169. doi:10.1016/j.ijpsycho.2014.08.730
- De Blasio, F.M., Barry, R.J., Bernat, E.M., Steiner, G.Z., 2014. Time-frequency PCA of event-related EEG changes in the orienting reflex. *International Journal of Psychophysiology*, 94, 169-170. doi:10.1016/j.ijpsycho.2014.08.731
- Truong J, Razmovski-Naumovski V, Khoo C, Chan K. Quality control of processed Chinese Materia Medica using *Zingiberis Rhizoma* as a case study (Poster). 5th FIP Pharmaceutical Sciences World Congress 2014; 13-16 April, 2014; Melbourne, Australia 2014.
- Truong J, Razmovski-Naumovski V, Zhou X, Khoo C, Chan K. A comparative study on the antioxidant activity of *Zingiberis Rhizoma* raw herb and granule (Poster). 3rd Annual Meeting of The Good Practice in TCM Research (GPTCM) Association 18-19 July, 2014; Nanjing, China 2014.
- Zhou X, Kam A, Razmovski-Naumovski V, Chan K. Aqueous extracts of *Danshen-Sanqi* herb-pair inhibit lipopolysaccharide- induced nitric oxide release in RAW264.7 macrophage cells through the PI3K pathway (Poster). 13th Meeting of Consortium for Globalization of Chinese Medicine (CGCM) 27-29 August, 2014; Beijing, China 2014.
- Zhou X, Razmovski-Naumovski V, Chan K. Synergistic study of *Salvia Miltiorrhizae Radix* & *Rhizoma* (Danshen) and *Notoginseng Radix* (Sanqi) combinations for inhibiting nitric oxide production in RAW 264.7 cells (Poster). 5th FIP Pharmaceutical Sciences World Congress 2014; 13-16 April, 2014; Melbourne, Australia 2014.
- Zhou X, Razmovski-Naumovski V, Kam A, Chan K. Synergistic activity of Dihydrotanshinone I and Ginsenoside Rd combinations in inhibiting tumour necrosis factor-alpha production in RAW264.7 cells (Poster). 3rd Annual Meeting of The Good Practice in TCM Research (GPTCM) Association; 18-19 July, 2014; Nanjing, China 2014.



Delegations and Scholarly Visits

NICM CHINA DELEGATION

In March, the University of Western Sydney's Vice-Chancellor, Professor Barney Glover, joined Professor Bensoussan and senior staff in visits to NICM partners and collaborators in Guangzhou and Beijing. The Institute has been working with its Chinese partners on the chemical characterization and pharmacokinetic profiling of various Chinese medicines, pilot clinical trials and the developing of scientific evidence packages. Chronic conditions addressed by medicines under investigation include rheumatoid arthritis, respiratory problems, cardiovascular and cerebrovascular conditions and more.



PROFESSOR PREMAIAH BRINDHA

In July, Professor Premaiah Brindha, Associate Dean and Coordinator, Centre for Advanced Research in Indian System of Medicine (CARISM), SASTRA University, Tanjore, Tamilnadu, India, spoke with staff and friends on the topic of "Studies on Anti-inflammatory plant drugs used in Traditional Systems of India - *In vitro* and *In silico* approaches".

Professor Brindha's research interests include the standardisation and validation of *Ayurveda* and *Siddha* single drugs as well as formulations. She has contributed to knowledge of the mechanisms of action of these traditional drugs and has developed new scientifically validated herbal products such as health drinks, nutraceuticals and facial creams. Professor Brindha has also developed micro propagation methods for enhancing bioactive principles in commercially used medicinal plants.



PROFESSOR PINGPING LI

In December, NICM hosted Professor Pingping Li, Director of Integrative Oncology, Beijing University Cancer Hospital, and her colleagues and we were pleased to welcome Dr Yuanqing Li from this group as a visiting scholar at NICM for a one year period.

Memoranda of Understanding

AUSTRALIAN SELF MEDICATION INDUSTRY (ASMI)

ASMI is an industry association that has as part of its brief the promotion of an increasing role for responsible self-care and self-medication as part of an overall Australian health strategy. The concept of self-care entails greater personal responsibility for maintaining health, preventing disease and taking an active role in managing disease.

The agreement creates a framework for partnerships in health research, education and advocacy on the use of complementary medicine products by the Australian community. The parties have agreed to:

- Share information, as appropriate, relation to regulatory and political issues and research outcomes
- Provide support to each other in relation to progressing matters of mutual interest
- Develop and implement communications activities as appropriate to each party's focus and strength
- Develop and implement activities to support industry growth and promote industry reform where needed

BEIJING TONG REN TANG CHINESE MEDICINE COMPANY (TRT)

Beijing Tong Ren Tang (TRT) is a subsidiary of China Beijing Tong Ren Tang Group, is based in Hong Kong and oversees the group's international business. TRT is China's oldest Chinese medicine company, with a reputation for quality products and a prestigious brand for over 300 years. Its philosophy is "there is no compromise on quality or standard." TRT is involved in manufacture, wholesale, retail, as well as GAP plantation (good agricultural practice), R&D, clinical and hospital services. In 2006, TRT was the first company listed as one of the 'National Intangible Culture Heritages' by the Chinese Central Government.

NICM has known TRT for many years. This is the first MOU to be signed between NICM and TRT, although there have been prior discussions on research and clinical placements. Mr Max Ma (Managing Director, TRT Sydney) is also President of the Chinese Medicine Industry Council (CMIC) in Australia.

The MOU provides a framework for a research program on the safety of Chinese medicine ingredients, and research and development of Chinese medicine products.

GUANDONG AUTHENTEA BIOENGINEERING COMPANY (ABE)

Under the Memorandum, signed in Sydney in December 2014, the parties acknowledged a common desire to promote research into traditional Chinese medicine based on cooperation and mutually supportive activities, and agreed to develop collaborations in traditional Chinese medicine, including product research and development and the establishment of postgraduate research scholarships for investigations into areas such as quality control, and pre-clinical and clinical research investigations.



Memoranda of Understanding

BEIJING UNIVERSITY OF CHINESE MEDICINE (BUCM)

The Memorandum, signed at the signing ceremony for the Australia – China Free Trade Agreement in Canberra in December, establishes a framework by which the parties will work collaboratively towards the development of a comprehensive platform for medical research, education and clinical treatment services. The platform will be designed to support the validation and translation of Chinese medicines, support student and academic exchange, facilitate multicentre clinical trials and clinical research training, and deliver specialist clinical treatment services in an integrative medicine setting.

KOREA INSTITUTE OF ORIENTAL MEDICINE (KIOM)

The Memorandum, signed in Miami, Florida in May 2014, establishes a basic framework for conducting cooperative activities between NICM and KIOM which will be beneficial to the respective institutions. Such cooperation is expected to result in synergistic augmentation of the scope and expertise of each institution and in enhancement of academic knowledge that resides in the two institutions.

The agreement's scope includes:

- Promotion of joint research activities and clinical trials in health priorities
- Visits by and exchange of staffs for the purposes of study and research
- Exchange of academic publications and information
- Cooperation in holding joint symposiums, seminars, and workshops



Events and Continuing Education Offerings

BLACKMORES INSTITUTE INAUGURAL SYMPOSIUM: NICM RESEARCH ADVISORY ROLE

NICM assisted the Blackmores Institute by developing a Toolkit for attendees of the first annual Blackmores Institute Symposium held in Sydney.

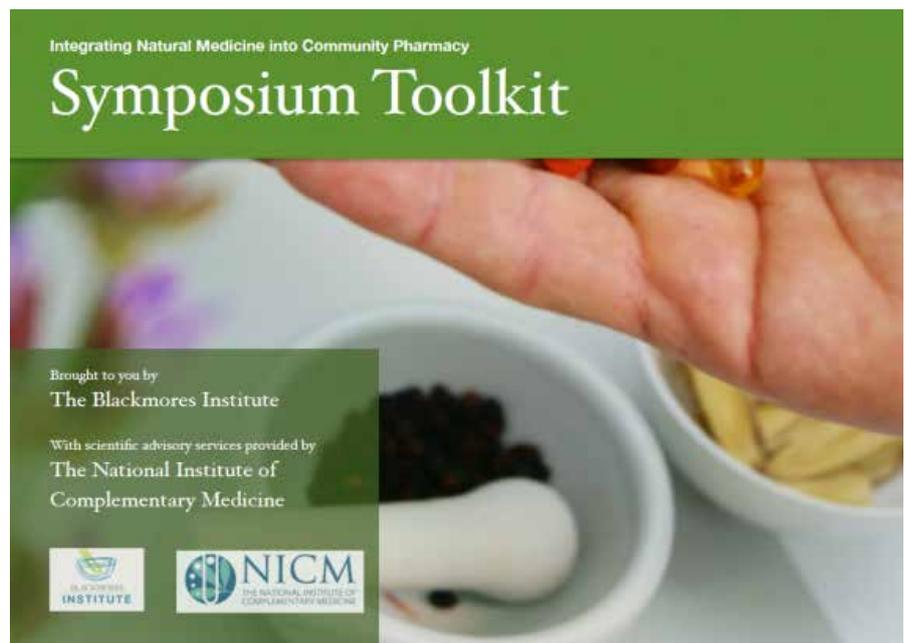
The Toolkit provided attendees with resources and advice on how to source information on the evidence base for a range of common dietary supplements. Produced in both hard copy and electronic form, it included links to a range of authoritative databases and could be used in the pharmacy to inform customers of supplement indications and interactions.

JACKA FOUNDATION WORKSHOP: ETHICAL PRINCIPLES IN HEALTH PRACTICE

In November, NICM's Professor Caroline Smith was joined by Associate Professor Sheryl de Lacey, Flinders University to present a one day workshop on ethical principles of health practice in the complementary medicine field.

This practical workshop provided guidance to healthcare practitioners in:

- Advising patients on appropriate healthcare choices
- Directing patients to safe and effective treatment options
- Promoting good and acting in the patient's best interests
- Avoiding harm



Collaborators and Supporters

NICM SUPPORTERS

- Blackmores
- Catalent
- SFI
- Jacka Foundation of Natural Therapies
- Australian Government
- NSW Government

NICM COLLABORATORS

- Australian Self Medication Industry
- Complementary Medicines Australia
- Australian Integrative Medicine Association
- Beijing University of Chinese Medicine, China
- China Academy of Chinese Medical Sciences
- Guanzhou Pharmaceutical Holdings Limited
- Healthpac International (Australia) Medical Corporation Pty Ltd
- Lipa Pharmaceuticals Limited
- SoHo Group Indonesia
- Sun Yat-Sen University, China
- The School of Chinese Medicine, University of Hong Kong
- University of Illinois
- Xiyuan Hospital
- Shineway Pharmaceuticals
- Liverpool Hospital
- RPA Lifehouse
- University of Sydney
- Monash University
- RMIT
- University of New South Wales
- University of Melbourne
- Royal North Shore Hospital
- Macarthur Cancer Therapy Centre
- National Breast Cancer Foundation
- Purapharm Australia Pty Ltd
- Concord Trading Pty Ltd
- Cardiac Health Institute
- Camden Hospital
- Bai Yun Shan Company
- Concord Hospital
- Alzheimer's Australia
- University of Wollongong
- Flinders University
- Abbott Pharmaceuticals
- University of Maryland
- John Hunter Hospital
- James Cook University
- Griffith University
- Macquarie University
- AIATSIS
- Korean Institute of Oriental Medicine



National Institute of Complementary Medicine
University of Western Sydney
Locked Bag 1797 Penrith NSW 2751 Australia

+61 2 4620 3284
nicm@uws.edu.au
nicm.edu.au