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NHAA postal address:

PO Box 696, Ashfield NSW 1800

Telephone +61 (0) 2 9797 2244

Fax +61 (0) 2 8765 0091

Email nhaa@nhaa.org.au

Website www.nhaa.org.au

Editor Susan Arentz

Email editorajhnm@nhaa.org.au

Design of electronic platform and layout
for hard copy Gordon McDade

Copy editing Rachel Hoare

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Susan Arentz PhD, BHSc(Hons)

Editor, *Australian Journal of Herbal and Naturopathic Medicine*

PO Box 696, Ashfield, NSW 2131

editorajhnm@nhaa.org.au

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Welcome to the 100-year-old NHAA: you are now part of a leading community of naturopaths and herbalists with far-sighted wisdom, connecting traditional naturopathy and herbalism to state-of-the-art Western science, health and medicine, from the ground up. Thank you all who participated and contributed to this landmark centenary volume. You are there in the abstracts, some louder than others and all contributing, supporting and leading. It exemplifies our consensus-driven profession, and celebrates naturopathy and herbal medicine as transparent, viable, credible and authoritative. In the words of Hope Foley: it signifies an “accomplished, replete health profession on the contemporary world stage”. How exciting is that!

Find evidence for traditional practice, illustrations of our shifting culture and inspiration for the future in the pages henceforth. It's all here, in this NHAA 2019 Conference Abstracts edition. I would like to take the opportunity to thank the collaborative leaders of our naturopathic and herbal medicine community, including the NHAA board and executive, and the academic practitioners driven by the need to know truth for the sake of knowledge in itself, their leadership facilitates progress so necessary for our success.

This edition obviously demonstrates our growth and maturity. It includes nearly 80 original abstracts, competitively selected following peer review. Themes include Traditional Naturopathy and Herbal Medicine; Public Health and Community Healthcare; Philosophy and Principles of Naturopathic Practice; Education; Herbal Pharmacology and a very hearty volume of clinically relevant Naturopathic and Herbal Clinical Practice, including abstracts of case taking and clinical assessment, clinical treatments and clinical practice management. Many authors are clinicians, undergraduates, higher degree candidates and early career researchers — they epitomise multi-skilled and concurrent roles and characterise the drive forward, doing whatever it takes for us to carve out our own profession, on our own terms and exactly how we need it to be. What an enormous privilege it is to be a part of this profession at this time.

At the risk of sounding cliché, we stand on the shoulders of giants; our success is due to the inspiration we inherit from those before. They taught us to be generous, to nurture philosophy, to nourish ourselves, to grow and flourish, and to seek and be excellent. Sadly, on the summer solstice of 2018, we lost one of our elders: Helen Stevensen, a dedicated and passionate NHAA advocate who contributed enormously to our profession. This edition begins with a poignant tribute to Helen by John Baxter; thank you John.

This issue includes a compelling argument for the removal of naturopathy and herbal medicine from the Private Health Insurance rebate removal list before 1 April 2019. An executive summary, titled ‘Naturopathic medicine in Australia: A brief overview of the effectiveness, utility, cost, safety and contribution to healthcare’ represents a coming together of super-bright minds, representing us and producing a sophisticated, strong, rational and defensible submission to the Australian Minister for Health. It is an example of excellence and a milestone testament. On behalf of our members, thank you to the authors; you really do us proud.

Our MedPlant and MedJourn author Wendy Maclean found sufficient CPE questions in the abstracts. We had enough original peer-reviewed research to support our own continuing education, which is yet another a hallmark of a sustainable and viable profession, holding its own. Many thanks, Wendy.

Thank you so much for your manuscript submissions to this journal; we currently have a backlog ready to go for next issue. Please continue to observe and research, write and submit your work. Our capacity for research communicates who we are and what we do, which is illuminated in your articles and great to have in print.

I look forward to seeing you, or feeling your spirit at the NHAA Centenary Conference, with the World Naturopathic Federation in-the-house and with this mountainous abstract contribution, it will truly be a historical event.

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Vale Helen Frances Stevenson

1/9/1955 – 21/12/2018

John Baxter

Summer solstice 2018, Helen Stevenson passed away after a very long association with cancer. She was a herbalist, teacher, colleague, friend, daughter, wife, mother, sister, aunt, scientist, lawyer, activist, and naturopath. Yet she was not defined by any of these titles. Helen lived life by her own rules, guided by a strong moral compass.

Helen was well known among the herbal community. She was a teacher who has touched the lives of a generation of herbalists, not only with her vast knowledge of herbs and chemistry, but also her compassion and energy she channelled into everything associated with her life.

Before studying naturopathy, Helen had studied science, worked as a patent attorney and spent time living in Sri Lanka, working with Peace Brigade International. In this role she provided unarmed escorts to threatened people. Helen, happily acting as a human shield with only her Peace Brigade T-shirt for protection.

Helen had the heart of a warrior. Abhorring violence, she combated it using her weapons of love and courage.

No doubt she felt fear, yet her passion for justice and moral compass set her course and she never deviated from the paths her beliefs led her.

As a member of the association's board, Helen held us to a very high standard. The hard questions were always

asked, ensuring the decisions were in the best interest of the members and the profession.

Helen was also very human. She was stubborn, opinionated, competitive (just ask her niece Danni about playing board games!) outspoken and even had the odd bad habit.

She also had a wicked sense of humour. One day when I was out with Helen, my wife, Patricia, called me. Helen grabbed the phone, said "No, you can't talk to him, it's my time with him" and hung up. From that time on, Helen was known as "that woman" and Patricia as "the wife". This became a joke they shared often. With "Hello the wife" or "Hello that woman" frequently heard over the years.

Plants and especially herbs were another passion of Helen's. Wherever she lived she grew things or tended to growing things. She had no greater love than turning plants into medicines. This was a passion she shared with students in her manufacturing classes.

Helen's passing at the solstice was indeed appropriate. Her energy melding with that of the sun so her memory will always shine brightly into the future.

To encapsulate Helen's life in a few short paragraphs is a challenging task. All who knew Helen will hold a different memory, but for me it is one of friendship and love. I miss her.

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An evidence-based overview of naturopathic practice in Australia

Jon Wardle¹, Amie Steel^{1,2}, David Casteleijn^{1,3} and Diana Bowman^{1,3}

¹ Discipline of Public Health, Faculty of Health, University of Technology of Sydney, NSW, Australia

² Australian Register of Naturopaths and Herbalists (ARONAH)

PO Box 711, Fortitude Valley, Qld 4006

³ Naturopaths and Herbalists Association of Australia (NHAA) PO Box 696, Ashfield NSW 1800 Australia

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Executive summary

Naturopaths are consulted by 6.2% of the Australian adult population, which is comparable to the rates of consultations with acupuncturists (7.9%) and osteopaths (5.4%)¹.

The Review of the Australian Government Rebate on Natural Therapies for Private Health Insurance² ('the Natural Therapies Review') found there is evidence to suggest whole-system naturopathic practice is effective in improving patient health for a range of chronic health conditions. However, the Natural Therapies Review noted the unregulated nature of the workforce made it difficult to apply in the Australian context, particularly as most of the identified research was conducted in North America. Yet, Australian naturopathic education is comparable in both length and breadth to North American courses.

The Australian naturopathic profession has been calling for registration for many years³ and every government report in the last 20 years examining the need for registration of naturopathy has recommended this should occur⁴. Despite the continued exclusion of naturopaths from the prevailing Australian regulatory mode, the profession has grown in size, strength and professional status at a national and international level. For example, the regulatory model developed by the naturopathic profession in lieu of government registration⁵ is held up as a best-practice model for self-regulation that could be adopted by other unregistered health professions. Alongside this, Australian naturopathic education is recognised by the international peak body — the World Naturopathic Federation (WNF) — as aligning with the highest tier of professional qualification internationally⁶ and Australian naturopathic researchers attract more government research funding than other registered complementary medicine professions.

Even so, since the Natural Therapies Review in 2013 the evidence for whole-system naturopathic practice has continued to increase: Whereas the Natural Therapies Review found only one systematic review for naturopathy containing 6 RCTs with 692 patients, a more recent review has identified 31 RCTs comprising 9,798 patients, which provide evidence for an increased number of chronic conditions improved by naturopathic care⁷.

Role of naturopathy in the Australian health system

Approximately 6.2% of Australians have consulted with a naturopath in the previous 12 months¹ and 75% of these users have a chronic illness⁸. Furthermore, approximately 1 in 10 Australians with chronic diseases such as sleep disorders (13.6%), type 1 and 2 diabetes (11.9%), mental health disorders (9.0%) and asthma (8.7%) consult with a naturopath (Table 1)⁹. Based on unpublished data collected through the Practitioner Research and Collaboration Initiative (PRACI) — a world-first, practice-based research network for complementary medicine professions including naturopathy¹⁰ — Australian naturopaths also report frequently treating patients with diagnosed illness of national importance such as insomnia, depression/anxiety, menstrual disorders, and arthritis (among others). Half of naturopathic patients visit their naturopath for most of their health issues and 59.6% use their naturopath as their primary provider, with 22.2% as their sole primary care provider and 37.1% as the primary provider in conjunction with other health providers (for example, GPs) used in a secondary capacity¹¹.

Table 1: Prevalence of consultations with a naturopath based on diagnosis with nationally important chronic diseases

Disorder diagnosis	% of population who visited naturopath
Sleep disorder	13.6
Diabetes (type 1 and 2)	11.9
Mental health disorder	9.0
Asthma	8.7
Respiratory disorder	8.5
Cancer	8.3
Gastrointestinal disorder	7.2
Musculoskeletal disorder	6.6
Osteoarthritis	6.0
Cardiovascular disease	5.8
Any chronic disease diagnosis	7.2

The total rate of naturopathic consultations in the general population is comparable to other registered health professions, such as acupuncturists (7.9%) and osteopaths (5.4%)¹ and demonstrates a 5% increase over 10 years¹². Australian naturopaths see an average of 13 to 14 patients per week and 20 to 21 new patients per month¹³, often practising in rural and remote areas where there are shortages of other health services¹⁴. Australian naturopaths are also relatively integrated into the Australian health system, with one-quarter (25.8%) of GPs referring to a naturopath at least a few times per year¹⁵.

This same research also indicates the focus naturopaths place on factors important to population health and prevention of chronic illness such as sleep, dietary habits, substance use, and physical activity (Table 2). The naturopaths' self-reported practice behaviours align with national data collected from patients of naturopaths, indicating they were prescribed dietary changes (96.3%), lifestyle changes (mainly exercise) (92.6%) and self-care techniques (such as stress-reduction and pain-reduction techniques) (70.4%), many of which directly support the national Australian guidelines for health promotion and disease prevention¹¹.

Table 2: Self-reported prescriptions of naturopathic practitioners in Australia (source: PRACI)

Self-reported practice behaviours	% of practitioners prescribing
Lifestyle recommendations	98
Dietary modification	90
Herbal medicine	90
Meditation	88
Exercise prescription	83
Yoga	75
Nutritional supplementation	65
Homoeopathy	36

The naturopathic education and research landscape

Australian education for naturopaths is considered by the WNF to be in the top tier of education globally (along with Canada, India, South Africa and the United States)⁶. The professional standard for graduation as a naturopath in Australia is a four-year bachelor degree program (though lack of regulation means that untrained practitioners have historically co-opted the title). A comparison of the leading Australian four-year program and the leading accredited Canadian four-year program can be found in Figure 1. It shows the Australian and Canadian courses being of comparable breadth, with the Australian courses containing significantly more nutrition, herbal medicine and physical medicine content, while the Canadian course contains more content on homeopathy and more student clinic training hours.

The commitment to professionalism in education and training in the naturopathic community can also be demonstrated through other initiatives of the Australian naturopathic profession. The *Australian Journal of Herbal and Naturopathic Medicine* (the official journal of the Naturopaths and Herbalists Association of Australia — NHAA), for example, is Australia's highest-ranked complementary medicine profession journal in the Scopus database*.

The Australian naturopathic education sector has also embraced research-led teaching more than any other complementary medicine (CM) profession. Southern Cross University developed the first CM research higher degree program (in naturopathy) in 1996 and the Endeavour College of Natural Health (ECNH) developed Australia's first research higher degree program in a private CM college in 2016, by offering an honours program in naturopathy. In only two years, graduates of Endeavour's honours program have produced 15 publications in international peer-reviewed journals from their original research projects¹⁶.

ECNH also leads research initiatives such as the *International Research Consortium of Naturopathic*

Course area	Australian college (ECNH)	Canadian college (CCNM)
Biosciences (e.g. Anatomy, Physiology, Pathology, Pharmacology)	468	463
Social Science (e.g. Psychology, Public Health, Critical Research Skills)	312	260
Naturopathic Theory (e.g. Naturopathic Principles and Philosophies)	78	24
Naturopathic Clinic (e.g. student clinic hours)	624	1280
Homoeopathy	0*	119
Physical Medicine (e.g. massage, manipulation, hydrotherapy)	156	48
Electives (e.g. sports specialisation, community education, advanced physical skills)	195	24
Herbal Medicine (e.g. herbal medicine practice, integrated pharmacology)	390	147
Nutrition and dietetics (e.g. clinical nutrition, dietary planning)	429	182
TOTAL HOURS	2496	2537

Figure 1: Course hours in the leading Australian program versus the leading Canadian naturopathic program (note: course hours have been converted into Australian course hours). Homoeopathy is available as an elective in Australian courses.

Academic Clinics (IRCNA), a collaboration (based on homogeneity of education standards) of college clinics in Australia, Canada, New Zealand and the United States, which is now being used for multiple projects, including several funded by the US *National Institutes of Health*¹⁷. The Australian naturopathic profession is also the only Australian CM profession conducting research into critical assessment in education¹⁸. Ironically this internal self-critique — a recognised essential element of professionalisation but absent in most CM professions — was used by the NHMRC Review to dismiss the evidence base for naturopathy¹⁹.

Regulation of naturopathic practice in Australia

Registration focuses on providing several safeguards to ensure the public are accessing safe and effective health care from appropriately qualified health practitioners. Every evaluation under these criteria has recommended that naturopaths warrant registration^{20,21}.

Naturopathic practitioners have consistently identified regulation of the profession as the major challenge the profession faces and support the implementation of regulation to ensure practice standards and promote public safety³.

Our concerns are that untrained and unethical practitioners are also able to practise using the title of ‘naturopath’ — the professional naturopathic community in Australia and globally does not consider these practitioners as part of the profession. For the last 20 years, the industry standard of naturopathic education has been a 4-year bachelor degree in Australia. Since 2015, government legislation and accreditation have mandated requirements that naturopathic education must be delivered within a degree model.

The Australian naturopathic profession has demonstrated an understanding of the need for registration through the establishment of Australian Register of Naturopaths and Herbalists (ARONAH) to mirror the regulatory framework of the National Registration and Accreditation Scheme (NRAS). ARONAH’s standards were developed through benchmarking against the Association of Accredited Naturopathic Medical Colleges (AANMC)[†] standards in North America as part of their development and the ARONAH model is recommended by the WNF to countries seeking to further professionalise naturopathy in the absence of government registration. Equally in Australia, the ARONAH model has been mentioned in the Australian Health Ministers’ Advisory Council report on *Options for Unregistered Health Practitioners*²² as an ideal model for professions not included in the NRAS. ARONAH and the NHAA — recognised by the WNF as the pre-eminent naturopathic association representing naturopaths in Australia — are actively lobbying for the inclusion of naturopaths and Western herbalists in the NRAS.

Evidence for the safety, effectiveness and cost-effectiveness of naturopathic treatments

The Natural Therapies Review limited its search for evidence of the safety, effectiveness and cost-effectiveness of naturopathy to “whole practice” studies only (meaning specific treatments commonly used by naturopaths were not considered). Even with this limited inclusion criteria, the Review found 6 RCTs (comprising 692 patients) which suggested naturopathy may be effective for a range of chronic conditions, including anxiety, multiple sclerosis, cardiovascular disease and musculoskeletal conditions. Since the Natural Therapies Review was conducted (in 2013) a more recent review has identified 31 RCTs with 9798 patients, adding type 2 diabetes, polycystic ovarian syndrome, depression, anxiety and a range of complex chronic conditions to the evidence base⁷. Where economic analyses have been conducted, naturopathy has also shown cost-benefit: a systematic review of cost-effectiveness studies, conducted in complementary therapies with research evidence suggesting cost-effectiveness (specifically for treatment of low-back pain and anxiety)²³.

However, a sole focus on “whole practice” research is not likely to capture the full extent of naturopathic evidence. There are numerous trials registered as evaluating naturopathy practice in the *Australian and New Zealand Clinical Trials Registry* (ANZCTR), yet none of them identify “whole-practice” research. Even when trials explicitly evaluate the intervention of a naturopathic practitioner, they may identify as other interventions. For example, an ANZCTR-listed naturopathic trial of 122 women with polycystic ovarian syndrome (which reported improvements in symptoms and risk factors) did not report as a “whole-practice” naturopathic intervention, but rather a “combined lifestyle and herbal medicine intervention”, even though this intervention was delivered by naturopathic practitioners²⁴. Where naturopathic care is integrated into conventional health settings it may also be obscured. For example, a trial of naturopathic care for 922 cardiac post-surgical patients at the Alfred Hospital found naturopathic care improved post-operative heart function, reduced post-surgical complications and improved adherence and compliance to hospital rehabilitation services, yet was reported as a nutritional wellness intervention rather than a naturopathic intervention, despite the intervention being developed and implemented by naturopathic practitioners²⁵.

Australia and Canada are recognised as the two global centres of naturopathic research by the WNF, which is currently conducting an audit of global naturopathic research. This audit has already identified 2150 research articles published by naturopathic researchers in peer-reviewed medical journals, of which 623 (28.9%) are by Australian authors, and 596 (27.7%) are conducted in Australian settings. Of the 10 most published naturopathic authors in peer-reviewed medical journals, Australia is the most represented country with four[‡]. However, despite this audit identifying naturopathic researchers

conducting research into naturopathic treatments or topics, only 157 articles (7.3%) explicitly acknowledge naturopathy as a whole-practice system of medicine. This is primarily because research in specific naturopathic modalities (for example, herbal medicine, hydrotherapy) or approaches (for example, dietary or lifestyle care recommended by naturopaths) may be rebadged under these specific categories. Even in the absence of having specific university departments, naturopaths are the most active CM profession involved in research in Australia, with more naturopaths undertaking research higher degree programs at Australian universities than any other CM profession²⁶. Naturopathic researchers have successfully secured more *National Health and Medical Research Council* grants than all other CM professions (TCM, chiropractors, osteopaths, massage — Figure 2)²⁷. However, as noted earlier, it is unlikely that naturopathic research funded by the NHMRC would be captured as “whole-practice” naturopathic research. Funding for Australian naturopathic research can also be seen through PhD scholarships. For example, every naturopath graduating from the Endeavour honours program has not only continued on to enrol in a PhD at a leading Australian university but has also been offered competitive PhD scholarships — such as the Australian Government Research Training Program Scholarship — to support them during their research degree.

Acknowledgements

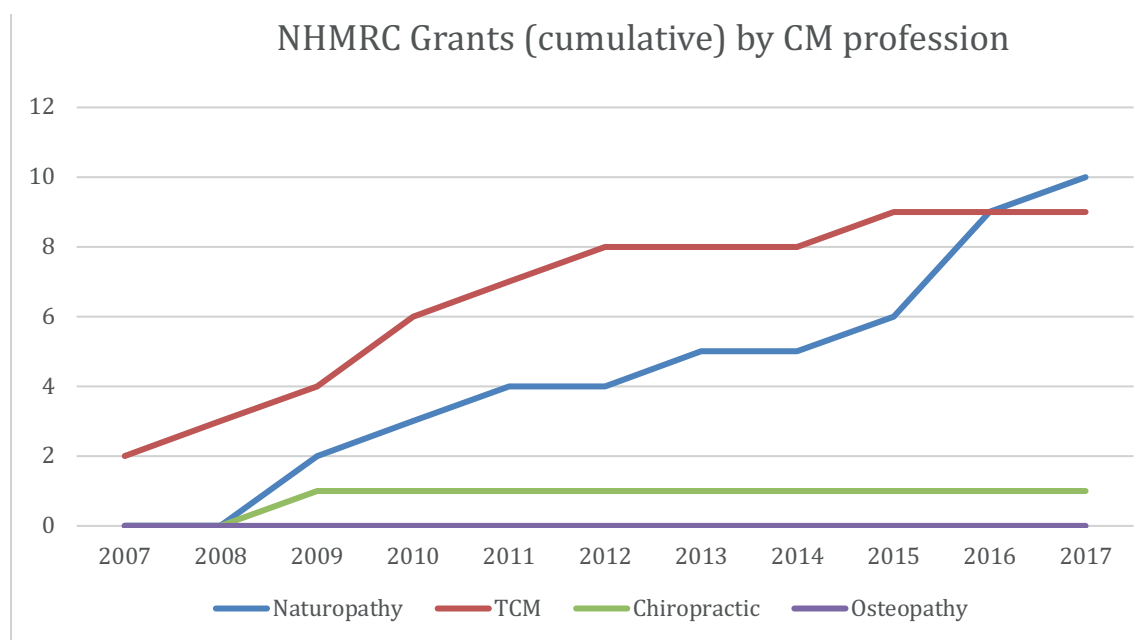
We are grateful to Endeavour College of Natural Health and the Practitioner Research and Collaboration Initiative (PRACI) for providing unpublished data for inclusion in this document.

Notes

- * The Scopus database is the pre-eminent database and quality metric for peer-reviewed journals. The *AJHNM* has a score of 0.27, the *Journal of the Australian Traditional Medicine Society* a score of 0.09, the *Chiropractic Journal of Australia* a score of 0.07 and the *Australian Journal of Acupuncture and Chinese Medicine* a score of 0.04. For reference, the median score for general medical journals is 0.26, which places *AJHNM* in the top 50% of peer-reviewed medical journals internationally.
- † The AANMC regulates the educational standards and delivery of naturopathic education in Canada and the United States.
- ‡ Three authors from the top 10 are from the United States, two from Canada and one from Germany.

References

1. Steel A, McIntyre E, Harnett J *et al.* Complementary medicine use in the Australian population: Results of a nationally-representative cross-sectional survey. *Sci Rep* 2018;8(1):17325.
2. Baggoley C. The Review of the Australian Government Rebate on Private Health Insurance for Natural Therapies, 2017. <http://www.health.gov.au/internet/main/publishing.nsf/Content/phi-natural-therapies> (accessed 20 Feb 2019).
3. Wardle JL, Adams J, Lui C-W, Steel AE. Current challenges and future directions for naturopathic medicine in Australia: a qualitative examination of perceptions and experiences from grassroots practice. *BMC Complement Altern Med* 2013;13(1): 15.
4. Wardle J. Holding unregistered health practitioners to account: An analysis of current regulatory and legislative approaches. *J Law Med* 2015;22(2014):350–75.
5. Australian Register of Naturopaths and Herbalists. ARONAH Documents, 2017 (accessed 6 Sep 2017).
6. World Naturopathic Federation Education Committee. Correlation between Education and Credentials. Toronto, Ontario: World Naturopathic Federation, 2018.
7. Myers S, Vigar V. The state of the evidence for whole-system multi-modality naturopathic medicine: A systematic scoping Review. *J Altern Complement Med* 2019;25(2).



† traditional Chinese medicine. *Naturopathy no longer has a university-based faculty, 2007–2017

8. McIntyre E, Adams J, Foley H *et al.* Consultations with naturopaths and Western herbalists: Prevalence of use and characteristics of users in Australia. *J Altern Complement Med* 2018;25(2).
9. McIntyre E, Steel A, Harnett J. Complementary medicine use, health literacy and disclosure of the Australian population. University of Technology Sydney, 2017.
10. Steel A, Sibbritt D, Schloss J *et al.* An Overview of the Practitioner Research and Collaboration Initiative (PRACI): a practice-based research network for complementary medicine. *BMC Complement Altern Med* 2017;17(1):87.
11. Wardle J. The role of complementary medicine providers in health promotion activities: an Australian case study. In: Australia PHAo, editor. Australian Public Health Conference 2018. Cairns, Australia, 2018.
12. Xue C *et al.* Complementary and alternative medicine use in Australia: Results of a national population based survey in 2005. *J Altern Complement Med* 2007;13(6):643–50.
13. Steel A, Leach M, Wardle J *et al.* The Australian complementary medicine workforce: a profile of 1,306 practitioners from the PRACI study. *J Altern Complement Med* 2017; in press.
14. Wardle J, Adams J, Magalhães RJS, Sibbritt D. Distribution of complementary and alternative medicine (CAM) providers in rural New South Wales, Australia: A step towards explaining high CAM use in rural health? *Aust J Rural Health* 2011;19(4):197–204.
15. Wardle JL, Sibbritt DW, Adams J. The interface with naturopathy in rural primary health care: a survey of referral practices of general practitioners in rural and regional New South Wales, Australia. *BMC Complement Altern Med* 2014;14(1):238.
16. Office of Research. Office of Research Annual Report 2018. Brisbane, Australia: Endeavour College of Natural Health, 2019.
17. Steel A, Goldenberg J, Cooley K. Establishing an international research collaborative for naturopathy: The International Research Consortium of Naturopathic Academic Clinics (IRCNAC). *Adv Integr Med* 2017;4(3):93–7.
18. Steel A, Peng W, Gray A, Adams J. The role and influence of traditional and scientific knowledge in naturopathic education: A qualitative study. *J Altern Complement Med* 2019;25(2):196–201.
19. Wardle J, Steel A, Adams J. A review of tensions and risks in naturopathic education and training in Australia: a need for regulation. *J Altern Complement Med* 2012;18(4):363–70.
20. Osteopathy Chiropractic and Naturopathy Committee. Report upon Osteopathy, Chiropractic and Naturopathy. <https://www.parliament.vic.gov.au/papers/govpub/VPARL1974-76NoD27.pdf>: Victorian Government, 1975.
21. Lin V, Bensoussan A, Myers S *et al.* The Practice and Regulatory Requirements of Naturopathy and Western Herbal Medicine. Melbourne: Department of Human Services, 2005.
22. Victorian Department of Health. Options for regulation of unregistered health practitioners. Canberra, Australia: Australian Health Ministers' Advisory Council, 2013.
23. Herman PM, Poindexter BL, Witt CM, Eisenberg DM. Are complementary therapies and integrative care cost-effective? A systematic review of economic evaluations. *BMJ Open* 2012;2(5):e001046.
24. Arentz S, Smith CA, Abbott J, Fahey P, Cheema BS, Bensoussan A. Combined lifestyle and herbal medicine in overweight women with polycystic ovary syndrome (PCOS): a randomized controlled trial. *Phytother Res* 2017;31(9):1330–40.
25. Braun L, Stanguts C, Spitzer O *et al.* A wellness program for cardiac surgery improves clinical outcomes. *Adv Integr Med* 2014;1(1):32–7.
26. Naturopaths and Herbalists Association of Australia. An audit of naturopaths engagement in research higher degree programs. Unpublished, 2018.
27. Wardle J, Adams J. Are the CAM professions engaging in high-level health and medical research? Trends in publicly funded complementary medicine research grants in Australia. *Complement Ther Med* 2013;21(6):746–9.

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Naturopaths and Herbalists Association of Australia Centenary Conference Abstracts

Traditional Practice

Integrating traditional medicine systems with national health systems: Lessons from Asia and musing on the ‘forgetting’ of wisdom

Dr Rachel Canaway¹

¹University Of Melbourne, Melbourne, Australia

Traditional medicines play an important role in the provision of healthcare for many people throughout the world. Yet in this age of evidence-based ‘everything’, Australian governments and research funders seem to be increasingly overlooking the contribution of traditional and complementary therapies to wellness, disease prevention and management regimens; but the same is not true in all countries or among all observers.

Rachel draws on work she undertook for the World Health Organization (WHO) to discuss models of ‘integration’ and lessons drawn from the different ways in which traditional and other ‘complementary’ medicine practitioners, products and practices are incorporated (or not) with national health systems outside of Australia (particularly in Asia). Sustainability, affordability, universal access to healthcare and culture drive support for traditional and complementary medicine, yet public safety remains a concern. Increasingly, the modernisation of traditional medicines, prompted by the drive for evidence-based and standardised healthcare, is associated with many such public safety concerns.

Becoming aware of what is possible ‘outside of the box’ is often when innovation and paradigm changes occur. Greater awareness of how integration of traditional medicine systems occurs with national healthcare systems outside of Australia can provide lessons which could contribute to Australian policy change and reform. Equally, raising awareness that ‘modernisation’ of traditional systems of medicine, in some instances, can have a negative rather than positive effect on public health and safety, may help to preserve age old wisdom that has long guided herbalists.

Wildcrafting herbal medicines and edible plants found in Australia: Identification of medicinal plants can be challenging and often takes experience to identify the correct species. A collection of photographic samples and practical tips of where to find and how to identify these natural pharmacies can be most helpful and inspiring.

Mrs Amina Eastham-Hillier¹

¹Noosa Holistic Health, 35 Mary Street, Noosaville, Australia

Evidence based medicines are growing all around us. After a few rambles with Aboriginal fellow plant experts on her 190 acre retreat, Amina was intrigued with the abundant diversity of herbal and plant medicines growing wildly in Australia. This led her to investigate further, not only assuring true identification of the plants but also to research their medicinal qualities, from a traditional and a scientific perspective for clinical evidence.

For example, just one common underrated weed in Australia holds over 200 phytochemicals and has studies showing to be beneficial in over 45 diseases, quoted in 900 PubMed studies.

Ongoing research led Amina to seek yonder ‘roots’ and adventure a four month wild herbal trekking expedition across Europe, from ancient Icelandic Viking herbal medicines, French Provincial herbs, traditional Greek, British and Irish wildcrafting, and back home to Australian forests and hills.

Occasional plants needed further identification of flowers and seeds, so after visits to six different international botanical gardens across the world, Amina has collated quite the herbal photographic repertoire.

Learn some of the most valuable wild growing herbal medicines found in Australia, not currently offered as commercial tinctures yet have proven clinical trials and or promising medicinal values.

Plants are precious and we know they hold the answers to much of the health concerns of this era.

Let’s use them in any form we can, tinctures for therapeutic doses, herbal teas for home use and wildcrafting for food. THIS is using traditional wisdom for future practice.

Seeing, Feeling. Smelling, Tasting — is Believing. Assessing the quality of herbs through our senses — a hands-on workshop

Dr Sue Evans¹, Mr Greg Whitten²

¹University Of Tasmania, Sandy Bay, Australia, ²Goulds Natural Medicine, Hobart, Australia

Background: As prescribers of sophisticated herbal products, most practitioners have limited experience with assessing the quality of the raw herb. Desires to connect with plants rather than products, to make their own tinctures, to use herbs in their fresh or dried form, and to source plants locally (out of an awareness of “herb-miles”) are among the factors driving practitioner interest in using unprocessed herbs, either fresh or dried. Utilisation of plants in this way requires practitioners to be skilled in assessing the quality of raw herbs.

Topic: This workshop is designed to encourage participants to engage with the world of herbal organolepsis, using our senses to assess the quality of herbal raw materials.

Learning objectives: Participants are introduced to the categories of organoleptic characteristics – appearance, fracture, texture, aroma and flavour – and to some of the language used to describe herb samples. This is a hands-on workshop, with opportunities provided to practice these skills.

Implications: The skills practiced here will provide practitioners with an understanding of the importance of quality, and a framework and language for practitioners to describe medicinal plants and assess their quality.

This workshop is linked to a broader research project with Southern Cross University, looking at the relationship between organolepsis and constituent profiles of medicinal plants. To this end, participants will be invited to participate in this project by completing a short questionnaire on organolepsis. The questionnaire will be subject to ethics approval and those participating will be provided with details of the research project

Historical and contemporary naturopathic recommendations for cases of endometriosis, dysmenorrhea, and menorrhagia

Ms Rebecca Reid¹, Dr Amie Steel², Dr Jon Wardle², Distinguished Professor Jon Adams²

¹Endeavour College Of Natural Health, Fortitude Valley, Australia, ²Australian Research Centre in Complementary and Integrative Medicine: University of Technology Sydney, Ultimo, Australia

Introduction: Naturopaths utilise a variety of disciplines for the care of women experiencing menstrual disorders;

however, there is limited scholarship conducted from a historical and contemporary perspective. Assessing the level of traditional and contemporary evidence in naturopathic practice is vital to understanding current practice and to evaluate the naturopathic care for women with menstrual disorders.

Methods: A content analysis explored the recommendations of naturopathic treatments for the management of endometriosis, dysmenorrhea, and menorrhagia, from traditional and contemporary texts from Australia and North America. Traditional texts were identified through a search of the Friedhelm Kirckfeld Rare Book Collection at National University of Natural Medicine. Identified contemporary texts were from naturopathic higher education institutions in Australia, Canada, and USA. Periodicals were identified from the Friedhelm Kirckfeld Rare Book Collection, National Library of Australia, and State Library of South Australia.

Results: The most reported disciplines were herbal medicine, nutritional medicine, homeopathy, hydrotherapy, and chemical-based medicines, across all sources. Over the last 200 years, herbal medicine was extensively recommended, in comparison to nutritional medicine being employed in all three conditions from 1941. Limited recommendations for homeopathy and hydrotherapy were described, while chemical-based medicine use ceased after 1922.

Conclusion: These findings provide insight into the documented historical and contemporary naturopathic treatments for the management of these menstrual conditions. While the naturopathic armamentarium appears to have altered of time, key features of naturopathic medicine have been retained in curriculum. Such insights will be of interest to naturopaths and educators designing naturopathic curriculum.

‘Safety Based Practice’ — harmonising traditional knowledge and scientific evidence based practice

Dr Stuart Glastonbury¹

¹Tweed Coast Medical, Cabarita Beach, Australia

There exists a tension between traditional herbal/naturopathic and modern evidence based/scientific paradigms. This can be a source of frustration for practitioners who are often left trying to harmonise the seemingly conflicting philosophies and underpinning knowledge of these different approaches.

The answer to this appears to remain elusive and is often a driving question behind much discourse in the complementary medicine profession.

The overarching philosophical and practical umbrella of ‘Safety Based Medicine’ (SBM) may bring some harmony to this tension.

This presentation introduces delegates to a concept of SBM by first exploring the history of western herbal

medicine and encouraging delegates to reflect back on, and acknowledge, their own unique historical roots. It goes on to look at the principles and practice of modern western evidence based medicine and how a philosophy of SBM may be utilised to harmonise the two often seemingly contradictory practices.

SBM allows this harmonisation by taking a broader perspective on health care, away from the myopic focus on medicines, actions and therapeutics. It broadens the scope and perspective by putting patient safety firmly in the centre of the picture independent of any combination of philosophies a practitioner may choose to guide their diagnostics and decision making processes.

SBP also expands beyond the specific practitioner-patient relationship to fundamental and essential concepts of environmental and cultural safety that must be taken into consideration when any comprehensive and holistic health and medicine practice is undertaken.

Past and Present: Clinical applications for Kawakawa (*Piper excelsum*), an indigenous plant from Aotearoa

Mr Phil Rasmussen¹

¹Phytomed Medicinal Herbs Ltd, Auckland, New Zealand

Kawakawa was one of the most important healing herbs in Rongoā Māori (Traditional Māori medicine), utilised by Māori for a wide range of medicinal applications. As with other traditionally used medicinal plants, interest in Kawakawa and our understanding of its therapeutic potential, continues to increase. Kawakawa is regarded as a particularly valuable phytomedicine for common conditions affecting the gastrointestinal tract and nervous system, which are becoming ever more prevalent in modern clinical practice.

Case studies will be utilised to demonstrate the wide-reaching effects of Kawakawa, and the strong results achieved via incorporation using several different clinical approaches.

This presentation will summarise the known and potential therapeutic properties of this endemic New Zealand native plant, and some ways in which to effectively achieve clinical success.

Through examination of its historical use by both Māori and early European arrivals to New Zealand, modern day uses by western and Rongoā practitioners, and an evaluation of the recent expansion of knowledge about its phytochemistry and pharmacology, we are gaining a deeper understanding of Kawakawa's medicinal actions. This is informing us about its appropriate positioning for optimal clinical use. As our understanding of the connections between the gastrointestinal tract and the nervous system increase, phytomedicines such as Kawakawa strongly demonstrate the link between traditional knowledge and modern evidence, and their growing importance in modern clinical settings.

Six golden rules of Traditional Persian medicine to have healthy life style

Dr Zahra Ayati¹

¹Mashhad University Of Medical Sciences, Mashhad, Iran

Introduction/Background: Traditional medicines have been recommended by the World Health Organization (WHO) as complementary or alternative for current classic medicine. Inefficiencies of some therapeutic methods in the current medicine, particularly for some chronic refractory disorders, such as cancer, also the disease prevention nature of traditional medicines may be the main motivation for this advice.

Traditional Persian Medicine (TPM) is an ancient, comprehensive school (Maktab) with several thousand years of history.

During centuries, many scholars have been practically promoted TPM knowledge which is being exploited recently and is getting more popular.

One of the most significant differentiation sides of TPM school compared to some other medical schools is essential role of health promotion and disease prevention, so the medicine has been described by Avicenna, a great ancient Persian scholar, as the following comprehensive definition: "The health maintenance when you are healthy, and its restoration when you are sick."; So TPM emphasizes on health maintenance over treating diseases.

Learning objectives of workshop: According to TPM six essential rules (SER) (Sitteh-e-Zarurieah) are the most noticeable principles to maintain human health, which have been defined as Hefz-ossehhah.

Implications: SER, the most essential preventive rules in TPM, includes air (Hava), food and drink, body movement and repose, sleep and wakefulness, evacuation and retention, and mental movement and repose (A'raz-e-Nafsani), with their specific definitions and interpretation. These essentials cover all sides of human health and knowing about them can be greatly beneficial for everyone who cares about healthy life style.

Public Health, Policy and Community Healthcare

Research Contributions of the International Naturopathic Community: a collation of research literature produced by naturopaths globally

Ms Hope Foley^{1,2}, Dr Amie Steel¹, Dr Iva Lloyd³

¹Australian Research Centre in Complementary and Integrative Medicine, University Of Technology Sydney, Ultimo, Australia, ²Office of Research, Endeavour College of Natural Health, Brisbane, Australia, ³World Naturopathic Federation

Background: Since its inception in 2014, the World Naturopathic Federation has been assessing the global naturopathic landscape and working to establish a formal relationship with the World Health Organisation (WHO) to strengthen and advance the naturopathic profession internationally. This groundwork includes developing an understanding of the profession's engagement with the scientific process through research.

Methods: This project aimed to collate a list of peer-reviewed publications authored by researchers with naturopathic qualifications internationally. A snowballing approach was employed, utilising networks of naturopathic researchers known to the project team in order to identify other naturopathic researchers and collate publication lists, as well as searching databases, the social networking site ResearchGate, and author lists of identified publications.

Results: More than 150 researchers were identified, having produced more than 1,900 publications in peer-reviewed, indexed journals. This body of literature spans four decades of work conducted across all WHO world regions. Research topics frequently focus on naturopathy and other complementary medicine disciplines, but also contribute to a number of different disciplines within fields of health, medicine, psychology, biology, chemistry, law/policy, education, sociology, and research methodology.

Discussion and Conclusion: The naturopathic profession appears to have generated a proliferative research community with a notable collection of published literature. Contrary to assertions that naturopathy lacks scientific rigour, the profession has demonstrated remarkable dedication to developing a scientific evidence-base on a broad number of topics. The results of this project testify to the naturopathic profession's capacity to stand as an accomplished, replete health profession on the contemporary world stage.

Naturopathic Approaches to Treatment: An international survey of naturopathic approaches to clinical care

Dr Amie Steel¹, Ms Hope Foley^{1,2}, Ms Rebecca Reid^{1,2}, Dr Janet Schloss^{1,2}, Dr Iva Lloyd³

¹Australian Research Centre In Complementary Medicine, University Of Technology Sydney, Sydney, Australia, ²Office of Research, Endeavour College of Natural Health, Brisbane, Australia, ³World Naturopathic Federation, Toronto, Canada

Introduction: Naturopathy is practiced in many countries throughout the world and a recent survey of naturopathic organisations suggests there is more consistency than difference in how naturopaths are trained and the treatments and practices considered part of naturopathic care. However, to date, there has been no prospective examination of the approaches to treatment employed by naturopaths in real-world clinical settings.

Methods: Naturopaths in up to 4 countries in each World Health Organisation defined world region were invited to provide information about treatment approaches for 20 patients through an online survey platform. The naturopaths provided information about basic demographics (age, gender), primary diagnosis, chosen treatments and practices used, and secondary diagnoses and related health complaints.

Results: Naturopaths treat patients with a diverse range of health complaints, and employ a variety of treatments in the management of those complaints. There are some differences in the treatment approaches of naturopaths based on their location of practice, however there is also significant consistency in the broad range of treatments used globally.

Conclusion: This is the first study to capture real-world clinical data from naturopaths in all world regions. The results of this study are an important contribution to the body of evidence underpinning naturopathic practice and provides important insights for clinicians, professional leaders and policy makers.

Primary care, public health and health promotion impact of naturopathic providers in Australia: challenges and opportunities

Dr Jon Wardle¹

¹University Of Technology Sydney, Ultimo, Australia

Background: Naturopaths now form a significant part of the healthcare system in Australia, yet very little is known about how these professions practice or impact on health

promotion and public health goals. This presentation outlines a program of research on this topic, including the results of the largest empirical investigation on this issue.

Methods: 500 consecutive patients seeing naturopaths (n = 500) from 25 practitioners in five Australian cities was conducted to examine reasons for visit, practice and consultation characteristics, practitioner recommendations and patient perceptions on naturopaths and their role in public health and health promotion.

Results: Naturopaths have a significant primary care role, with over half their patients using them as their primary care provider. Naturopathic patients overestimate the training, regulation and qualifications of their CM practitioner. Patients consider naturopaths to be equally trained and knowledgeable about health issues as conventional medical providers. Patients tend to view naturopaths as good sources of information on most health issues, even those unrelated to their scope. Dietary and lifestyle recommendations are built into naturopathic consultations at a much greater level than observed in conventional practice and align with conventional public health and health promotion recommendations. Naturopaths cross-refer to conventional providers, but these are often not supported or utilized by patients.

Conclusions: Naturopaths are strong supporters of patient education, health promotion and self-care activities. To ensure that naturopaths are optimally used in health promotion initiatives issues such as appropriate integration, education and practice initiatives need to be considered.

Planetary health: Challenges and opportunities for naturopaths and herbalists

Dr Erica McIntyre¹

¹University Of Technology Sydney, Ultimo, Australia

Introduction/background: Planetary health—a new public health paradigm—emphasises how the Earth's changing natural systems are an increasing threat to human health and is based on an understanding that complex interactions between natural and social systems influence human health outcomes. The Rockefeller Foundation–Lancet Commission on planetary health reported that the current rate of ecosystem deterioration is unsustainable, causing unprecedented public health challenges. The urgency and complexity of these challenges requires reconceptualising health and health care. Naturopaths and herbalists have a critical role in planetary health that requires broad consideration of the future health of the environment and generations to come.

Focus of discussion: This presentation will provide an overview of planetary health and discuss the challenges and opportunities facing traditional and complementary medicine systems as a consequence of environmental changes that are the focus of planetary health, which include ecosystem deterioration, biodiversity

transformation, and climate change. These will be discussed within the context of the clinical practice of naturopaths and herbalists and the broader socio-political systems they practice within.

Implications: There are significant challenges for naturopaths and Western herbalists related to environmental change, which include medicine prescribing, equity in health care, health care systems, and changing health care needs. These health professions also have an opportunity to advance planetary health as they have unique healing philosophies that align human health with the natural environment. However, new ways of thinking are required to develop strategies to adapt clinical practices to ensure the Earth is a better place for future generations.

The expressed demand for complementary medicine interventions and services in rural South Australia

Dr Matthew Leach¹, A/Prof Martin Jones¹,
Dr Marianne Gillam¹

¹University Of South Australia, Whyalla Norrie, Australia

Background: Populations living in rural locations frequently experience high levels of health care need. Given that increasing health care needs are an important driver of complementary medicine (CM) use, it could be inferred that demand for CM in rural locations would be high. However, data on the expressed demand for CM in rural Australia is conflicting. We used rural South Australia (SA) as a case exemplar to explore this important health service issue further.

Methods: The 2017/18 Regional South Australia Health (RESONATE) survey is one of the largest cross-sectional studies ever conducted in the region. The survey was designed to measure health care need, barriers to health care access, and health service utilisation, experiences, attitudes and satisfaction. Adults living in rural SA were invited to complete the validated, multi-dimensional, self-administered instrument, either online or in hard-copy.

Results: 3,929 adults completed the survey, of which 72% had used some form of CM intervention/service in the past twelve months. CM services used most frequently in rural SA were massage therapy (62% of service users), chiropractic (45%) and yoga (19%). Among the most frequently used CM interventions were massage (40% of intervention users) and nutritional supplementation (38%). Consumer satisfaction with CM services was generally high, with over 70% consumers satisfied or very satisfied with 11/16 CM services.

Conclusion: The survey findings suggest that CM use in rural SA is higher than that reported nationally. The potential drivers of this, and the implications for future CM practice/education/research, will be explored throughout this presentation.

Natural Medicine in a Post-Antibiotic World: co-ordinating the international effort to find affordable, effective natural solutions. A turning point for natural medicine

Mrs Joanne Matthews¹

¹Antimicrobial Resistance Alliance, Sydney, Australia

Imagine a world where natural medicine is the first port of call before the prescription pad; where natural substances are used to preserve food, improve farming practices and are available to all practitioners; where poor countries can farm their own medicines without need of debt to wealthy, foreign pharmaceutical companies. Its on our doorstep - and not for good reason.

Systematic misuse and overuse of antimicrobial drugs in human medicine and food production have put every nation at risk. Antimicrobial resistance (AMR) is an acknowledged global threat to human health. Few replacement products for antimicrobials are in the pipeline. Without harmonized and immediate action on a global scale, the world is heading towards a post-antibiotic era in which common infections could once again kill.

Currently, conventional medicine is looking almost exclusively at antimicrobials that will be derived from fungus and bacteria - with the same in-built redundancy - which makes drug companies disinterested in R&D on new AMR drugs.

There is currently extensive philanthropic and government money earmarked for innovative antimicrobial R&D.

This is a call to arms.

The Antimicrobial Resistance Alliance is intended to combine all international natural medicine peak bodies together with conventional medical practitioners, policy, economic and political heavy-weights and to systematically pursue and co-ordinate research priorities through to clinical trial and practice and lobbying for structural and market reform.

The World Naturopathic Federation must be involved. The world's collective wisdom on natural medicine is needed now.

Mental Health disorders are higher in the vegetarian/vegan (veg*n) population. Why is this? Is it simply a nutritional issue or is there more to it? What are we as practitioners missing? What else do we need to consider when treating the veg*n demographic?

Ms Candace Borg¹

¹Northcote Natural Therapies, Northcote, Australia

Background: Australia is the third fastest growing vegan

market in the world. Currently 11.2% of the population identifies as veg*n. Research has shown the prevalence of mental disorders are 15% higher in those following a veg*n diet. Much research has been done on causative factors of mental disorders, however there hasn't been much emphasis on correlating this data to the veg*n demographic.

Workshop topic: This workshop will discuss the nutritional, emotional, environmental, social and behavioural influences the veg*n demographic faces and how this may impact their mental health.

Learning objectives of workshop: By attending this workshop you will learn how to better support your veg*n clients. You will learn about how their diet may be influencing their mental health, what makes certain supplements non veg*n and why this demographic is so strict on what their supplements contain. This will enable you to better assist and motivate your veg*n clients in their health goals, ensuring their longevity with you.

Implications: With the growing rate of veg*n and mental health disorders predicted to continue to rise, it is paramount that we understand the needs and wants of our patients but also have the tools and knowledge to help treat them.

Models of naturopathy in community health: First nations, drug and alcohol, refugee and women's health services

Ms Jenny Adams¹, Dr Judy Singer²,
Dr Ses Salmond³, Ms Sally Chick⁴

¹Foundation House, Melbourne, Australia, ²University Centre for Rural Health (University of Sydney), Lismore, Australia, ³Leichhardt Women's Community Health Centre, Liverpool Women's Health Centre, Liverpool, Australia, ⁴Windana Drug & Alcohol Recovery, Melbourne, Australia

Introduction: Naturopathy offers a holistic model of care that is a popular health care choice for those who can afford to pay for it. There are currently few community health models where naturopathy is offered free of charge or as a low-cost treatment option due to a number of barriers including cost. In contrast, the examples that will be presented describe community health services that have successfully included naturopathy and other complementary therapies for up to 40 years with exceptional results.

Focus of discussion: Each of the four presenters will outline a brief history of the programs they work within: First nations peoples' health, drug and alcohol rehabilitation, refugee mental health and women's health services. They will discuss where naturopathy fits within the program model and what value it adds to the service. What does a typical 'day at the office' look like? Challenges inherent in working with limited funding, within a multidisciplinary team and with traumatised or marginalised client groups will be addressed.

Implications: The presented case studies of community health programs exemplify the value and potential for the integration of naturopathy into a range of community health settings. Prerequisite conditions include leadership and political will on the part of the agency and adaptability on the part of practitioners. Despite the challenges of including naturopathy within a community health service, the benefits for clients, practitioners and the overall agency are significant.

Community Herb Clinics and the Social Determinants of Health

Ms Kerrie Oakes¹

¹Somerset Community Herb Clinics, Harlin, Australia,

²Ganael, Harlin, Australia

Background: The World Health Organisation estimates that 80% of the world population uses herbal medicine for some aspect of the primary health care. In Australia, there is growing interest in complementary and alternative medicine for many reasons including dissatisfaction with the health care system, desire to live more sustainably, and a wish to be proactive about preventing poor health.

Focus of discussion: Social determinants of health determine individual and community health inequities. Comprehensive, cross-sectoral approaches to addressing social inequity contribute to the achievement of health equity. The Beijing Declaration recognises the right of people to participate “individually and collectively” in planning and implementing health care. It also recognises the role of traditional medicines such as herbalism.

Broad community involvement – such as that promoted by Community Supported Agriculture and Community Supported Herbalism initiatives – is beneficial for both individual health and community sustainability. These models are based on communities of individuals who pledge their support with growers, practitioners and consumers providing mutual support and sharing in operations.

The focus of this presentation will be on introducing a Community Supported Herbal Clinic model being implemented in the Somerset Regional Council with some comparisons with overseas models.

Implications: The presentation will identify considerations for researching the contribution this model makes in addressing the social determinants of health. It includes outlining potential implications for future development of the model and its applicability within the Australian health care system.

Herbal medicine support for women undergoing in vitro fertilisation (IVF): Utilising traditional knowledge alongside contemporary clinical skills and understanding

Ms Rhiannon Hardingham¹

¹Fertile Ground Health Group, Suite 3, Level 6, Albert St Medical Centre, 372–376 Albert St, East Melbourne, Australia

Selecting the most efficacious herbal prescription for your patients can be a challenging task, especially when dealing with complex fertility cases and those undergoing assisted reproductive treatment (ART) including in vitro fertilisation (IVF). Practitioners may feel overwhelmed by the heavily medicalised patient, and the potential risk of herb-drug interaction. Despite this, we know that the majority of women undertaking ART and IVF in Australia do seek support from complementary practitioners, and therefore literacy and clinical competence in this area is of high value to the naturopathic practitioner in general practice. Employing clinical assessment and pathology interpretation alongside a clear understanding of both herb and drug action, allows for accurate herbal prescription in this patient group. Combined with open collaborative management with the patient’s medical doctors, safe and confident herbal prescribing becomes not just possible, but often extremely beneficial to clinical outcomes for this highly sensitive patient group. This presentation will introduce a number of circumstances where herbal practitioners are able to enhance patients ART outcomes, whilst openly and confidently communicating clinical intention with their medical counterparts.

Improving dietary guideline adherence in preconception care through a behaviour change approach — dietary and nutrition education and counselling delivered by clinical naturopaths

Miss Cherie Caut¹, Dr Matthew Leach, Dr Amie Steel

¹Endeavour College of Natural Health, Adelaide, Australia

Introduction/background: A healthy periconceptual diet that meets nutritional recommendations has the potential to positively impact fertility, pregnancy and birth outcomes, as well as the future health of the next generation. Consuming a healthy diet is one of the foundations of naturopathic treatment. National dietary guidelines exist to inform healthy dietary intake, however, non-adherence to dietary guidelines is a global issue, including during the periconceptual period.

Focus of discussion: While national dietary guidelines serve a number of functions at a population level, their

impact at an individual level is somewhat questionable. Accordingly, there is a need to rethink how adherence can be improved, particularly during the periconceptual period where inadequate nutrition or maternal obesity increases the risk of harm for both the foetus and mother. Nutrition education and counselling delivered by trained clinicians have demonstrated effectiveness for improving health outcomes. Naturopathic clinicians are skilled in the delivery of dietary and nutrition education and counselling and could serve as facilitators of this intervention approach to improving the adherence to dietary guidelines in preconception care.

Implications: The delivery of face-to-face dietary and nutrition education and counselling by trained naturopathic clinicians, may present an opportunity to support periconceptual women and men in adhering to dietary guidelines in order to improve nutritional intake, and in turn, improve fertility, pregnancy and birth outcomes as well as the health of future offspring.

Factors that influence women's decision-making to use complementary medicine products in pregnancy and lactation

Ms Larisa Barnes^{1,2}, Emeritus Professor Lesley Barclay^{2,3}, Professor Kirsten McCaffery³, Professor Parisa Aslani¹

¹The Sydney University School Of Pharmacy, Faculty of Medicine and Health, Camperdown, Australia, ²The University of Sydney, University Centre for Rural Health, Faculty of Medicine and Health, Lismore, Australia, ³The Sydney University School of Public Health, Faculty of Medicine and Health, Camperdown, Australia

Background: Pregnant and breastfeeding women commonly use complementary medicine products (CMPs). This study aimed to explore and describe the factors influencing women's decisions to take, or not to take, a CMP when pregnant or breastfeeding.

Methods: Qualitative research entailing thematic analysis of in-depth interviews and focus group discussions with 25 pregnant or breastfeeding women who currently use CMPs. Participants also completed two validated health literacy screening tools: the single-item health literacy screening question and the Newest Vital Sign.

Results: Participants had high health literacy levels and described complex decision-making processes. Women actively sought information from multiple sources, and used a reiterative collation and assessment process before making final decisions regarding CMP use. Prime factors that influenced women's decisions were: access to comprehensive, consistent, clear, evidence-based information; and preferably obtaining this information from reputable sources including healthcare practitioners and published research. Lack of comprehensive information made women feel they could not establish

the safety of a CMP and resulted in decisions not to use a CMP. Conversely if participants felt the information collated and assessed was good quality and from trusted sources, and they could identify clear benefits to CMP use, they were more likely to decide to use a CMP.

Conclusions: Participants' high health literacy skills and needs to establish the safety and efficacy of CMPs drove their reiterative information-seeking and analyses of information. Healthcare practitioners can help pregnant and breastfeeding women's CMPS decision-making by providing or directing women to reputable, comprehensive information presented in clear, easy to understand formats.

Are herbal medicines compatible with lactation? Arming practitioners with guidelines, knowledge and tools for informed decision making.

Mrs Julie Cottle²

¹University of New England, Armidale, Australia,

²Blackmores Ltd, Warriewood, Australia

Introduction/background: Breastfeeding women use herbal medicines for a variety of reasons and look to their health care providers for advice around issues of safety and efficacy. This presentation aims to arm health care professionals with the guidelines, knowledge and tools required to inform clinical decision making when working with herbal medicines and breastfeeding women.

Focus of discussion: The presentation examines the barriers to obtaining the high level of evidence required for safety and efficacy studies in lactation and looks at the existing pool of evidence and resources that are available. It provides the practitioner with an understanding of the principles underlying the transfer of substances into breast milk and gives strategies to minimise potential adverse effects on the infant and the mother's milk supply.

This work synthesises the findings of academic and grey literature retrieved from searches of electronic databases, websites and authoritative texts.

Implications: Not all herbal medicines can be deemed compatible with lactation, but the judicious use of appropriate herbs may provide a safe and effective treatment option for mothers with very little risk to the breastfeeding infant. It is important that practitioners assess each herbal medicine on its own merits, using the totality of available evidence which includes traditional use, pharmacological studies, animal studies and appropriately designed clinical trials. Although high level safety and efficacy data is lacking, there are several resources available to assist with clinical decision making and risk assessment to help women make informed choices about their health care needs.

The art and science of clinical prescribing in patients with PCOS and Cardiometabolic syndrome: Combining traditional knowledge and science for future practice

Dr Brad McEwen¹

¹National Centre for Naturopathic Medicine, PO Box 534, Australia

Background: Cardiometabolic syndrome is a multifactorial disease comprising of the clustering of cardiometabolic risk factors, including insulin resistance, elevated blood pressure, dyslipidaemia (elevated triglyceride and glucose levels), abdominal obesity, chronic inflammation, endothelial dysfunction, atherosclerosis, and a prothrombotic state. Polycystic ovary syndrome (PCOS) is the most common endocrine disorder in females of reproductive age. Women with PCOS have an increased risk of cardiometabolic syndrome, especially insulin resistance, glucose intolerance, type 2 diabetes, dyslipidaemia, endothelial dysfunction, hirsutism, and infertility. These conditions negatively affect quality of life. Having a greater understanding of these risk factors improves clinical outcomes.

A literature review was conducted using Pubmed and Sciencedirect to investigate the effect of diet and nutrients on cardiometabolic syndrome in women with PCOS. Diets such as the Mediterranean diet and low Glycaemic Index diet improved indices of cardiometabolic syndrome. Whereas, the Western diet and diets high in sugar had a negative effect. Nutrients such as Omega-3, N-acetylcysteine, Chocolate, Vitamin D, Vitamin K2, Chromium, Magnesium, and Zinc had favourable effects on indices of cardiometabolic syndrome, such as fasting glucose, insulin resistance, inflammation, oxidative stress, and dyslipidaemia. This presentation will highlight the art of prescribing nutrition in complex conditions.

Implications: Cardiometabolic syndrome and PCOS are serious health conditions affecting quality of life. When presenting together, the effect on health is amplified making it more complex to confidently prescribe. Optimum nutrition plays a fundamental role in the management of cardiometabolic syndrome and PCOS. Effective prescribing is very important in managing these conditions as well as improving quality of life.

Working with indicators of patient-centred care to increase the integration of complementary and alternative medicine with conventional medicine; to improve patient outcomes in Type 2 Diabetes.

Ms Daen Medina¹ Mrs Suman Naik

¹ACNT, 16 Bulga Road, Australia

Introduction/background: The integration of complementary and alternative medicine (CAM) and conventional medicine is becoming increasingly more

common for people with chronic disease. Research shows that the integration of CAM with conventional medicine can expand therapeutic options for patients; improve patient-centred care, and offers more effective health outcomes. This workshop presents preliminary insight and discussion on the role of patient-centred focus that influence patient adherence to treatment.

Topic: Indicators for patient-centred care (PCC) have been compiled by international key leaders in health and will be used in this workshop; used as markers to better operationalise the meaning of PCC for patients and health care practitioners. The analysis is used to review a strategy and explore, map and develop referral templates.

Learning objectives of workshop: 1. Participants will be able to identify and describe at least one PCC indicator; Participants will be familiar with the relevance of using validation and substantiation for CAM therapeutics to support PCC indicators; Participants will identify 2 key areas for referral to support PCC indicator; Participants will develop a referral letter template based on PCC indicators and evidence based validation.

Implications: This workshop presents preliminary insight and discussion on the role of patient-centred focus that influence patient adherence to treatment and open communication across healthcare disciplines and highlight poor collaboration between patient and clinicians carries significant consequences to patients' treatment, prognosis and impacts on life-shortening trajectories. Research shows that participants largely self-manage the use of CAM strategies for Type 2 Diabetes and inconsistently discuss their treatment strategies.

Cancer patients, complementary medicine, and the hospital system

Dr Greg Connolly¹

¹Southern School Of Natural Therapies Laureate, Fitzroy, Australia, ²University of Melbourne, Parkville, Australia

Introduction/background: Sixty-five percent of cancer patients are using complementary medicine (CM) such as herbal and naturopathic supplements in cancer care but these patients can be reluctant to discuss CM with their oncology medical teams. The lack of communication regarding the use of CM in oncology care can impact adversely on patient satisfaction, autonomy, and safety.

Methods: In this qualitative PhD research 38 in-depth, semi-structured interviews were conducted with cancer patients, doctors, nurses, and pharmacists at a major Australian cancer hospital. Thematic analysis was utilised to explore the tensions between cancer patients using CM and their medical teams.

Results: Results demonstrate that oncology medical teams have significant misplaced assumptions regarding

why cancer patients choose to use CM, its costs, its safety and its effectiveness in supportive care.

Discussion/conclusion: These tensions highlight a range of issues concerning the role of consumers in healthcare, the integration of CM into the hospital system on an equitable basis, the wider political debate of medical pluralism, and the role of power, risk, scientific evidence and ideology in understanding the sources of conflict between cancer patients using CM and the hospital in which they are treated.

Importantly for herbal and naturopathic practitioners, this research can provide key insights and strategies into how best to liaise with medical teams to advocate on behalf of patients to be able to safely and effectively use naturopathic and herbal medicines in hospital care.

What CAM practitioners are recommending for acute respiratory tract infection in children and why are parents utilising their services?

Ms Sandra Lucas¹, Dr Saravana Kumar¹,
Dr Matthew Leach², Dr Anna Phillips¹

¹School of Health Sciences, Division of Health Science, University Of South Australia, City East Campus, North Terrace, Adelaide, 5000, Australia

²Department of Rural Health, Health Sciences, University of South Australia, Whyalla Campus, 111 Nicolson Avenue, Whyalla Norrie, SA 5608, Australia

Background: Acute respiratory tract infection (ARTI) is one of the most prevalent childhood complaints, commonly resulting in paediatric hospitalisation. Although parents frequently consult complementary and alternative medicine (CAM) practitioners to assist with the management of childhood ARTI, little is known about the treatments that CAM practitioners prescribe, and the motivations for parents consulting these practitioners. The purpose of this research was to shed light on these knowledge gaps.

Method: This qualitative descriptive study recruited CAM practitioners across Greater Melbourne that treated childhood ARTI. Practitioners' perspectives were captured using semi-structured interviews, which were audio-recorded and transcribed verbatim. Several strategies to improve trustworthiness were implemented (e.g. triangulation of data). Content data-analysis was utilised to identify relevant categories.

Results: Twenty-four practitioners (75% female; aged 31-60 years) participated in the interviews. More than half of participants (54%) were naturopaths. The categories of remedies practitioners commonly recommended for childhood ARTI were nutrition/diet-based treatments, vitamin/mineral supplements and lifestyle modification. Most practitioners believed parents consulted CAM providers to manage ARTI because they were seeking

other treatment options or were recommended by friends or family.

Discussion: The findings of the study indicate that there were many commonalities to management for ARTI in children, across different CAM modalities. A common prescription was food as medicine. This could suggest that practitioners perceived children as being vulnerable and hence were reserved in their prescribing. Future research could focus on the development of treatment guidelines which may facilitate consistent CAM practice for ARTI.

Exploring the use of complementary medicines for paediatric eosinophilic oesophagitis: experiences of Australian parents

Mrs Nicole Hannan¹, Dr Sara McMillan¹, A/
Prof Evelin Tiralongo¹, Dr Amie Steel²

¹Griffith University, Gold Coast, Australia,

²UTS:ARCCIM, Sydney, Australia

Introduction: Eosinophilic Oesophagitis (EoE) is a rare inflammatory gastrointestinal disorder characterised by high levels of eosinophils in the oesophagus, resulting in oesophageal dysfunction and gastrointestinal symptoms. Paediatric EoE prevalence in Australia is estimated at 1 in 10,000. There are currently no known studies on complementary medicine (CM) use in EoE and no CM or pharmaceutical therapy specifically indicated for EoE management.

Methods: A national cross-sectional online survey of Australian parents of children with EoE (up to 18 years of age) was released in early September 2018. The survey explores what types of CMs are being used for the treatment of paediatric EoE and to gain further understanding as to why they are being used and who is recommending them. Descriptive statistics will be used to analyse data.

Results: 82 participants have completed the survey within the first month of its release. Preliminary findings show CM use is common with 61.5% increase in use post diagnosis. CM is often self-prescribed and can be both effective and cause EoE symptoms. Although 50% of parents report CM use concerns, across all CM categories they would be more than 57% likely to use it again.

Discussion/conclusion: Practitioner awareness and training for EoE management is low despite prevalence continuing to rise rapidly. Exploring current patient experiences and attitudes surrounding CM use can highlight areas where additional support is needed for EoE families, increase practitioner awareness and training, and assist in informing safe and efficacious CM treatment guidelines.

Medicinal Cannabis – Why do Herbalists and Naturopaths need to know about it?

Dr Janet Schloss¹

¹Office Of Research, Endeavour College Of Natural Health, Brisbane, Australia

Introduction: Medicinal cannabis is a highly debated topic, due in part to the legalisation of its use in several countries including Australia and the controversy surrounding its application in disease management. Cannabis has a long recorded history of use as a medicine before being first restricted and subsequently criminalised in the 20th century. These legislative actions have limited academic and medical research into MC, further exacerbating the current gaps in knowledge surrounding this herb. However, with the recent legislation changes and legalization for medicinal purposes, this plant has come back in vogue.

Focus of discussion: Medicinal cannabis currently can only be prescribed by a medical doctor as it is a schedule 4 and 8 drug in Australia. This means that complementary medicine practitioners cannot prescribe this herbal medicine. So why is it imperative that complementary

medicine practitioners know about this plant in depth? And how can they gain access to this knowledge? What needs to occur to assist in all working together to assist patients achieve their best health outcomes.

Implication: Medicinal cannabis is and will be in the future a drug that a large population will be taking on a regular basis. This maybe either from black market access or via medical prescription. Complementary medicine practitioners will be consulting with patients who are taking this drug and need to thoroughly understand its implications, contraindications, interactions and indications. These will be discussed in this talk along with the knowledge required about medicinal cannabis in clinical settings and possible clinical trials.

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Philosophy and Naturopathic Principles of Practice

CAM and complexity theory: a novel research approach to explore naturopathic philosophy and practice.

Ms Kim Graham¹, Dr Amie Steel¹,
Dr Jon Wardle¹

¹University Of Technology, Sydney, Sydney, Australia,

²Endeavour College, Melbourne, Australia

Introduction: Complexity theory provides a framework to conduct computational and mathematical modelling of complex adaptive systems (CAS), and offers an innovative approach to explore the complexity of health management. Underpinning our current dominant health paradigm is a basis of reductionism, which is a poor fit for the holistic and vitalistic foundation of naturopathy. Complexity research has identified numerous CAS properties including: adaptation, emergence, self-organisation, connectivity, permeable borders, and sensitive dependence on initial conditions; characteristics aligned with naturopathic philosophy. Concepts such as specific and non-specific treatment factors, prevention, vitality and resilience can potentially be explored using this approach. The novel use of complexity theory to investigate naturopathic concepts and clinical management will be trialled in this project.

Methods: This project includes two phases: 1) a systematic review (SR) of CAM practitioner perspectives on healing, and 2) a computational network mapping and mathematical analysis of naturopathic approaches.

Results: In the SR, CAM practitioners affirmed that the philosophical foundation of holism and vitalism influences all aspects of their clinical practice. Practitioners also indicated how systems thinking and complexity approaches, including concepts such as emergence, self-organisation, and adaptation, underpin their clinical understanding.

System mapping and analysis will investigate the alignment of naturopathic approaches with a scientific CAS methodology.

Discussion: Complexity theory is an emerging science, which has potential relevance for investigating naturopathic philosophy and practice, and provides a framework for our profession to engage in scientific discourse with other disciplines in a manner that is aligned with our holistic and vitalistic foundations.

Dialectics and Virtue Ethics: Applying Ancient Wisdom to Current Health Problems

Dr Glenn McLaren¹

¹Swinburne University of Technology, Hawthorn, Australia

The philosophical roots of natural medicine are often assumed to be in holistic Eastern philosophies which are seen to be opposed to more analytical Western approaches. There are holistic traditions within Western philosophy, however, such as process philosophy, which also challenge the analytic tradition and which can deeply inform natural medicine. In this presentation, two forms of Ancient Western wisdom rooted in process philosophy will be discussed which are relevant to our current understanding of health and wellness; dialectics and virtue ethics.

The philosopher, Georg Hegel, argued that the roots of dialectics lies in the works of Heraclitus of Ephesus over 2,500 years ago. Heraclitus argued that reality was fundamentally active being the product of a war of opposites. Hegel developed this idea into his dialectical process of consciousness development through continually encountering and overcoming opposition. Virtues are common amongst many ancient cultures but virtue ethics is generally associated with Aristotle's Nichomachean Ethics. For Aristotle, ethical behaviour is potential which is actualized through a development process involving education, experience and the practicing of good habits.

In this presentation, it will be shown how both can be applied to deepening our understanding and improving our treatment of many current health problems with a particular focus on Type 2 Diabetes. It will be argued that an education in these ancient philosophical ideas could be the most effective treatment, a view consistent with holistic approaches to wellness.

Wellness and Health Promotion: the emerging seventh principle of holistic medicine.

Dr Liza Oates^{1,2,3,4}, Dr Greg Connolly¹

¹Southern School of Natural Therapies, Fitzroy, Australia, ²Endeavour College of Natural Health, Melbourne, Australia, ³Malvern Natural Healthcare, East Malvern, Australia, ⁴RMIT University, Bundoora, Australia

Introduction/background: In 1989 the American Association of Naturopathic Physicians unanimously approved seven principles underlying the modern practice of naturopathic medicine. These powerful holistic tenets

form a philosophical foundation for the modern practice of naturopathy and western herbal medicine. Many Australian practitioners can readily cite six of the seven core principles, but what of the emerging principle of 'Wellness and Health Promotion'?

Focus of discussion: This discussion will focus on the understanding and application of 'wellness and health promotion' in clinical practice. What is 'wellness' and how does it relate to our understanding of our naturopathic and western herbal medicine traditions? How do we define ourselves within the \$4.2 trillion wellness economy? There are major challenges facing us as a profession. If we cannot define ourselves how can we defend our valued traditions from being eroded by commercial interests?

Implications: By better understanding our role in 'wellness and health promotion' we can more fully embody the core principles of our profession and reclaim our place as leaders in wellness.

Naturopathy and Social theory: Transition from past 'alternative' occupation to health profession

Mrs Jill Dunn¹, Dr Jon Wardle¹,
Dr Amie Steele¹

¹ARCCIM, UTS, Sydney, Australia

Introduction/Background: Well-developed professions have identified, codified and applied frameworks and infrastructures informed by social theory. The emerging profession of naturopathy has not undergone similar critical self-examination, despite calls from the World Health Organisation (WHO). An examination of challenges, barriers and facilitators to naturopathic professionalisation viewed through the lens of social theory may provide insights into potential conflicts and direction for future efforts for the global naturopathic profession.

Methods: This presentation draws on the World Naturopathic Federation professional mapping, on-line, cross-sectional survey of 59-items of 225 naturopathic organisations (naturopathic regulators, professional associations and education institutions) from 45 countries.

Results: Barriers, facilitators, opportunities and challenges relative to current regulation and education policy frameworks and infrastructures for the global naturopathic professionalisation project are examined using social theory. Training standards linking skill and jurisdiction are a hallmark of a profession, however state policy provides market shelters that favour medical dominance. Social exclusion of naturopathy from state-funded public universities and professional clinical settings restricts development of naturopathic theory and evidence-based practice and enables co-optation by medicine to maintain and gain market value.

Discussion/Conclusion: There remains enormous variability in education and regulation policy frameworks and infrastructures, development of which are needed for the naturopathic profession to enter its next phase of professional development, and to live up to its potential in contemporary healthcare.

Examining the changing face of the traditional naturopathic Paradigm – has the recent focus on concepts like methylation and 'leaky gut' modified the core principles?

Naturopath Robert Thomas^{1,2}

¹CTG Education and Manuka Science, Zonnebloem, South Africa, ²ANTA 567, Maroochydore, Australia

Embracing scientific advancements within the framework of naturopathic philosophy is a challenge facing all contemporary natural health practitioners. Within the rapidly changing environment of our profession, should we be the guardians of the founding principles of Naturopathy or should we depart from the old ways? This question will be examined within the context of popular trends in modern naturopathic practice - the role of the methylation process and strategies for addressing the dynamics of intestinal tight junctions as examples where newer scientific knowledge may significantly impact traditional healing principles. Other advancements in scientific research on natural medicines have the potential to dramatically change the way naturopathy is practised in the 21st century. The diverse range of supplements currently available to naturopathic practitioners may challenge the notion that all such supplements are 'natural'. If a nutrient is administered in doses well in excess of any amount that a patient could reasonably consume in food, is this an example of 'nutritional' medicine – or should it instead be classified as 'pharmaceutical' medicine? The question naturopaths may need to consider is this: Does 21st century Naturopathy still have its roots anchored in traditional medicine – or is it gradually embracing a more pharmaceutical model? Is it perhaps more appropriate to selectively embrace elements of both? If the profession does not carefully examine its roots in the context of the changing environment, it may ultimately be others who decide how naturopaths practise in the future.

Education in Naturopathy

Barriers to the conduct and the application of research among complementary and alternative medicine: a systematic review

Ms Yaamin Veziari¹, Dr Saravana Kumar¹, Dr Matthew Leach²

¹School of Health Sciences, University Of South Australia, Adelaide, Australia, ²Department of Rural Health, University of South Australia, Adelaide, Australia

Background: Over the past few decades, the popularity of Complementary and alternative medicine (CAM) has grown considerably. Thereby, increasing public pressure for CAM to be evidence-based. Notwithstanding, the conduct and application of research in CAM faces a number of obstacles. No systematic review had mapped these barriers to date. This systematic literature review aimed to explore, identify and map the barriers to the conduct and application of research in CAM.

Methods: Systematic searching of MEDLINE, Embase, AMED, CINAHL, The Cochrane library, Google scholar and Google was conducted for pertinent publications. Pearling of retrieved publications was also undertaken. Two critical appraisal tools were used to critically appraise descriptive studies and opinion publications.

Results: A total of 21 eligible publications were included in this review. A critical appraisal process found two categories of good quality publications. The synthesised data from the selected publications about the barriers to the conduct and application of research within CAM were captured within two broad components, namely capacity and culture. Capacity encompassed elements such as access, competency, bias, incentives and time. Encompassed within culture were elements relating to the values and complex system of CAM.

Conclusions: Multiple barriers exist for the conduct and application of research in CAM. As the popularity of CAM grows, it is essential that the evidence base underpinning CAM also continues to expand. By addressing these barriers, CAM professions will be able to develop a critical mass and a well-coordinated research effort to assist the integration of evidence – based practice in CAM.

Pedagogical Considerations for Educators Teaching an EBP Curriculum – A Guide for Educators Delivering a Bachelor of Health Science (Naturopathy) in Australia

Mr Mark Hinchey¹

¹Wea Hunter, Newcastle, Australia

Background: Professional practice involves skills such as discipline competency, problem-solving, evidence-based judgement, and informed decision making. It is understood that practitioners of Naturopathy need to employ practical reasoning and professional discretion in problem-solving the difficulties which present for a wide-range of patients. Such skills are thought to enhance the accuracy of clinicians in their efforts to define and manage patient problems. It is suggested that the model known as Evidence-Based Practice (EBP) is capable of facilitating the foregoing skills, while resolving the problems of ineffective clinical intervention, and improving quality care and patient safety.

Focus of discussion: It has been acknowledged that the process by which EBP is disseminated across institutions, curricula and the classroom requires careful planning, involving continuity of collaboration between educators and stakeholders. Moreover, the challenge to provide engaging, epistemically pertinent and effective learning tasks is proving difficult. Within the context of Health Sciences, educators are pursuing teaching strategies designed to heighten student engagement, target critical thinking outcomes and capitalise on the strengths and interests of contemporary learners.

Implications: It is the aim of this paper to develop a preliminary guide for educators teaching a Bachelor of Health Science (Naturopathy), which addresses the benefits of an EBP curriculum, the need for integrative collaboration between educators and stakeholders, and an understanding of the epistemological foundations upon which the pragmatic efficacy of pedagogical interventions can be established to maximise the relevancy of integrating problem-based curriculum protocols.

Herbal Medicine Pharmacology

Olive Leaf in Cardiovascular Care: A Phytochemical Comparison of Extracts in the Australian Marketplace

Mr Ian Breakspear^{1,2,3}

¹Senior Lecturer (Naturopathy), Endeavour College of Natural Health, Sydney, Australia, ²Member, Expert Scientific Steering Committee, Boundary Bend Olives, Lara, Australia, ³Herbal Clinician, King Street Clinic, Sydney, Australia

Background: Olive leaf extract, and key constituents including oleuropein and hydroxytyrosol, are generating clinical and research interest as cardiovascular risk modifiers. Positive effects have been reported on blood pressure, inflammation, immune function, and insulin resistance, and olive leaf extracts are used clinically by herbalists and naturopaths.

Methods: Five Australian practitioner-only and four over-the-counter (OTC) olive leaf liquid extracts were analysed for secoiridoids, phenylethanoids, flavonoids and pentacyclic triterpenes, in a specialist olive chemistry laboratory, using high performance liquid chromatography and gas chromatography. Key compounds quantified included oleuropein, hydroxytyrosol, oleacein, luteolin, maslinic acid, oleanolic acid, erythrodiol and uvaol.

Results: Both practitioner and over-the-counter olive leaf extracts on the Australian marketplace demonstrated considerable variation in phytochemical profiles. Of particular note was a lack of label claims for oleuropein content in practitioner products, and a more than 4 fold variation in oleuropein concentration between different practitioner extracts. In contrast, the oleuropein concentrations in sampled OTC products were largely consistent with label claims. Pentacyclic triterpenoid concentrations also showed significant differences, and may be reflective of different solvents used in extraction.

Discussion: This research demonstrates considerable variability between olive leaf extracts, raising the question for practitioners as to whether clinical results from different olive leaf extracts will be consistent, comparable, or reliable.

The pharmacological evidence of medicinal cannabis in oncology

Miss Danielle Brown¹, Dr Michael Watson¹, Dr Janet Schloss¹

¹Endeavour College Of Natural Health, Australia

Introduction: A continued understanding of the pharmacology and modulatory effects of medicinal cannabis may improve patient centred outcomes and better inform prescriptive practice. This systematic review examines research into the use of medicinal

cannabis in cancer management. The aim was to identify the gaps in knowledge on the dose, dosing schedule and absorption of the administration routes of medicinal cannabis use in oncology.

Methods: A comprehensive search of the literature was systematically conducted across six databases to identify original data reporting the pharmacology of medicinal cannabis in oncology.

Results: Eighteen articles were selected for review. Of the selected articles, ten were identified as randomized control trials, two experimental studies, two retrospective cohort studies and four case studies. Four articles reported absorption data and one drug interaction study was identified.

Conclusion: There is little evidence reported in the literature on the absorption of medicinal cannabis in cancer populations. Various reasons are explored for the apparent lack of pharmacokinetic studies for medicinal cannabis in cancer populations. These include the availability of assays to accurately assess cannabinoid levels, lack of clinical biomarkers and patient enrolment for pharmacokinetic studies.

An evaluation of garlic products available in Australian pharmacies — from the label to the laboratory

Dr Joanna Harnett¹, Ms Jocelin Chan¹, Associate Professor Nial Wheate¹, Professor Andrew McLachlan¹

¹The University of Sydney, Sydney, Australia

Garlic is one of the most commonly used herbal medicines worldwide. There is medium quality evidence to support that specific garlic formulations at specific doses have an antihypertensive effect in a cohort of individuals with hypertension. There is lower quality evidence for garlic's hypolipidaemic effects. While there are many garlic products available in Australian pharmacies, it is unclear if these products are formulated based on the current evidence for use in such populations. The aim of this study was to evaluate garlic product formulations available in Australian pharmacies for quality indicators including: supporting evidence, labelling, product, safety and manufacturing information and the presence of key constituents previously identified as having hypotensive or hypolipidaemic properties. A qualitative evaluation of commercially available garlic products was conducted in accordance with the study aims. Thin-layer chromatography (TLC) was included in the evaluation to investigate the presence of alliin and s-allyl cysteine in both garlic products and raw garlic. The quality indicators evaluated in this study including evidence for the formulation used, labelling, product, safety and manufacturing information and key constituents varied

significantly between the garlic products available in Australian pharmacies. These findings have a number of clinical implications for herbalists, naturopaths, pharmacists and for consumers who may consider using garlic products in the management of hypertension and/or dyslipidaemia.

Effect of *Sesamum indicum* seed extract and its active components, sesamin and sesamol on SAPK / JNK and MAPK ERK1/2 activated by 6-OHDA in PC-12 cells

Dr Zahra Ayati¹, Dr Elham Ramazani², Dr Faeze Ebrahimpour³, Dr Seyed Ahmad Emami¹, Dr Abolfazl Shakeri³, Dr Behjat Javadi¹, Dr Zahra Tayarani-Najaran⁴

¹Department of Traditional Pharmacy, School of Pharmacy, Mashhad University of Medical, Mashhad, Iran, ²Department of Biology, Faculty of Science, Ferdowsi University of Mashhad, Mashhad, Iran, ³Department of Pharmacognosy, School of Pharmacy, Mashhad University of Medical Sciences, Mashhad, Iran, ⁴Medical Toxicology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Parkinson Disease (PD) is one of the most common neurodegenerative progressive diseases. Recently, increased reactive oxygen species (ROS) has particularly addressed in neurological impairments, including PD. *Sesamum indicum* L. (sesame) which belongs to Pedaliaceae family is one of the most widely used herbs in traditional medicines and has been known as a source of antioxidants. Sesame oil contains lignans such as sesamin and sesamol which have shown to pose anti-inflammatory, antioxidant and anti-apoptotic properties. In this study, the neuroprotective effect of sesame seed extract and its main bioactive components (sesamin and sesamol) on PC12 cells, in the presence of OHDA-6, as a neurotoxic agent, has been investigated.

Methods and Materials: Cell viability and apoptosis were measured on PC12 cells, using resazurin assay, PI staining and western blot analysis. ROS was measured using DCF-DA by flow cytometry analysis.

Results: According to the results, pretreatment with sesame seed extract, sesamin and sesamol significantly increased cell viability and decreased apoptosis. The levels of P-MAPK44/42 / MAPK44/42 were decreased, and the level of survivin and SAPK/JNK were increased, while the pretreatment with sesame significantly decreased all of the cell injuries induced by 6-OHDA and these effects were significantly more potent in sesame seed extract than sesamin and sesamol.

Conclusion: 6-OHDA toxicity was consistent with increased ROS production which reduced by sesame seed extract, sesamin and sesamol pretreatment. These results suggest sesame and its lignans, sesamin

and sesamol could be potentially considered as neuroprotective agents against the progression of PD.

Synergistic immune modulating activity of a traditional mushroom formulation

Dr Hans Wohlmuth¹, Associate Professor Joe Tiralongo⁴, Mr Brody Mallard⁴, Dr David Leach¹, Adjunct Professor Kerry Bone¹

¹Integria Healthcare, Ballina, Australia, ²NICM Health Research Institute, Westmead, Australia, ³The University of Queensland, St Lucia, Australia, ⁴Institute for Glycomics, Griffith University, Gold Coast Campus, Australia

Introduction/background: Mushrooms have a long history of medicinal use, in particular in Asia but increasingly also in the West. Much work has been done on their immune modulating properties, with much of the interest centering on beta-glucans. We compared a range of mushroom extracts and powders to develop a formula with demonstrable immune modulating activity.

Methods: Raw materials were assayed for alpha- and beta-glucan content using the Megazyme assay, which is considered the industry standard. Immune modulating activity was assayed in human macrophages ex vivo. The expression of four cytokines (IL-1 alpha, IL-6, IL-10 and TNF-alpha) with and without exposure to mushrooms was quantified by ELISA. Synergistic activity of three mushroom ingredients was explored using additivity graph and curve-shift approaches.

Results: Most mushroom preparations displayed potent immune modulating activity (EC50<100 microgram/mL). The combination of three mushrooms was more potent than expected, based on the activity of the individual ingredients, and a true synergistic effect of the combination was confirmed.

Immune modulating activity did not correlate with glucan content. Many mushroom extracts appear to contain beta-glucans of non-fungal origin (e.g. from growth media or excipients), and these interfere with the glucan assay when present.

Discussion/Conclusion: We applied modern scientific methods to the development of an optimised, clinically effective, traditional medicine. This study is the first to report a synergistic, immune modulating activity of a mushroom formula on human macrophages. The work is an example of how traditional wisdom and science can be combined to provide better, more effective medicines.

Naturopathic and Herbal Medicine Clinical Practice

1. Case taking and clinical assessment

Beyond the illness paradigm: case-taking for wellness optimisation

Dr Liza Oates^{1,2,3,4}

¹Southern School of Natural Therapies, Fitzroy, Australia, ²Endeavour College of Natural Health, Melbourne, Australia, ³Malvern Natural Healthcare, East Malvern, Australia, ⁴RMIT University, Bundoora, Australia

Introduction/background: Wellness is a multi-trillion dollar industry currently dominated by beauty and anti-aging product sales, fitness and weight loss. Although holistic practitioners understand that wellness is greater than the ‘absence of disease’, the average practitioner spends most of their time working in the illness paradigm. While we are well positioned to educate our patients on ways to optimise wellness, this role is increasingly filled by online health bloggers and ‘coaches’. The problem is not that we don’t have the answers But do we ask the right questions?

Focus of discussion: This discussion will focus on case-taking for wellness optimisation. Holistic practitioners are trained to ask questions related to the complaint (symptoms), the causes, and the context. We aim for more than symptom relief but are we sufficiently addressing our patients’ wellness needs? Wellness is a journey in pursuit of physical, psychological and spiritual harmony but it must extend beyond the self. Although we espouse the importance of wellness promotion, practitioners often struggle to know what questions to ask when a patient presents without specific symptoms. This presentation will explore areas you might review in a wellness consultation, from medical history, to environmental exposures to life purpose.

Implications: There are as many ways to practice as there are practitioners, but many of us were drawn to this profession with a desire to work within a wellness paradigm. There is an opportunity to extend our case-taking to more fully embrace the pursuit of wellness optimisation with our patients.

Contemporary Naturopathy — A Discourse on Diagnostic Dualism

Ms Rachel Arthur¹

¹Rachel Arthur Nutrition, Mullumbimby, Australia

While debate regarding what defines contemporary naturopathy continues, a review of the literature suggests a major source of conjecture is the amount of biomedical training provided by naturopathic under-graduate courses. Criticised by some in favour of more traditional teachings and practice models, while viewed as progressive by

others, who assert that naturopathy is not defined by the tools it employs but rather the principles and philosophy underpinning their use. Western medical diagnostics, and more specifically laboratory results interpretation (LRI), is taught to varying degrees by the majority of training institutions both here and overseas and while there is limited research detailing practice-based behaviours of Australian naturopaths, studies to date suggest LRI has been adopted by the majority, alongside ‘traditional diagnostic techniques’ e.g. face, tongue, nails.

This aspect of ‘contemporary naturopathy’ may be advantageous, for the practitioner, the greater profession and the patient, e.g. increased diagnostic accuracy consistent with the evidence-based medicine (EBM) model, greater shared language with conventional medical practitioners with whom we frequently share patient care and reduced reliance on expensive out of pocket ‘functional testing’. However, given a proportion of naturopaths report using LRI in spite of not receiving any formal training in this area, may also present some risks, such as missed and misdiagnoses and delay in or failure to refer when clinically appropriate.

As a responsible and responsive professional community we need to discuss the diagnostic dualism of contemporary naturopathy and how best to support, steer and supervise the majority of naturopaths who use LRI currently.

The importance of professional case sharing

Ms Catherine Smith¹, Ms Teresa Mitchell-Paterson²

¹Think Education: ACNT / SSNT, Level 5, 235 Pyrmont Street, Pyrmont, Australia, ²Torrens University, Level 5, 235 Pyrmont Street, Pyrmont, Australia

Introduction: Most practitioners experience successful client outcomes that confirm Naturopathy and Western Herbal Medicine (Nat/WHM) make an important contribution to improving the health of individuals. However, often these outcomes are not recorded or acknowledged, as we do not appropriately share practice outcomes with the wider health community.

Focus of discussion: The objective of the presentation is to explore the importance of clinical case sharing in professional practice. The facilitators will explore best practice examples of case report writing and break the writing process into easily manageable steps that can be undertaken by practitioners of various levels of skills and experience. Critical thinking, research and reflective practice skills will be emphasized to form the case report. The aim of the presentation is to encourage practitioner contributions to scholarly discussion via publication.

Implications: In an age where social media is becoming a go-to source for information, it is important to embed professionalism in information sharing. Proficient case writing is a skill that has the following benefits:

- development of a professional community of practice
- improved evidence base for Naturopathy and Western Herbal Medicine as systems of medicine
- dissemination of knowledge to inform future practice
- enhanced communication of wholistic and individualized treatment approach
- stimulation of new ideas for research projects

That most people who have autoimmune disease also have a grade 1-2 iris structure

Mrs Jackie Arbuckle¹

¹Alchemy For The Body And Soul, Melbourne, Australia

Introduction: The Jensen grading system covers the density of the iris fibres and tells the practitioner about the strength of the immune system. Grades 1-2 are traditionally thought of as stronger more robust systems, and grades 4-5 being more delicate and fragile. The author has noticed anecdotally that patients who have autoimmune disease tend to have the “stronger” grade irises (1-2).

Hypothesis: that the strong immune systems of people with grade 1-2 irises are more likely to develop autoimmune disease when compared to grades 4-5.

Methods: Case reports from 10 years of naturopathic practice.

How many patients treated in that time have autoimmune disease? And how many of these also have a Gr1-2 iris?

Results: In a part-time naturopathic practice, over a 10yr span, 133 patients were seen. Of this 18 had autoimmune disease, either as a presenting condition or part of their health history. The most common autoimmune presentations were psoriasis(5), inflammatory bowel disease(4), rheumatoid arthritis(3).

It was found that 17/18 of these patients with autoimmune disease have a Gr1 or 2 iris (7=Gr1, 10=Gr2, 1=Gr3)

Discussion: A serious limitation of this data is the absence of Gr5 irises captured as part of the patient case reports. Only 1 Gr4 iris was included. The majority of patients seen in this practice are Gr1 and 2. More data is needed from other practitioners who see these higher iris grades.

Tongue diagnosis and suitable herbs for optimal treatment protocols

Ms Bettina Schmoll¹

¹Self employed Member NHAA 155797, Brisbane, Australia

Background: Tongue diagnosis has been used in Traditional Chinese Medicine but also by the Eclectic

John Scudder (1874) who stated the tongue could tell us:

- The condition of the digestive apparatus
- The condition of the blood
- The condition of the Nervous system
- The functions of nutrition and excretion

According to TCM, there are different zones on the tongue relating to different bodily organs and this aligns well when considering the overall energetics of the patient. Performing tongue diagnosis with a comprehensive evaluation of the patient enhances the herbal treatment protocol and achieves a better outcome.

Discussion: The tongue has many relationships and connections in the body and is a very useful diagnostic tool which assists us in understanding what is currently happening with the patient.

The body of the tongue, its colour, the coatings, the edges, its length and mobility all indicate whether the patient has digestive, emotional, and/or mental health issues. Tongue diagnosis can help direct us to what the patient is not always able to articulate verbally. For example, patients can be reticent to discuss some issues, e.g. anxiety and its impact upon their digestion, in a first meeting. Early tongue examination can simplify the direction of questioning. For example, an extremely pale swollen tongue supports why the patient has presented with extreme fatigue. It facilitates a clearer understanding as to why herbs such as *Rehmannia glutinosa*, *Glycyrrhiza glabra* and *Withania somnifera* may need to be consumed over a longer period in this case.

Implications: The number of herbs/supplements at our disposal is vast. Choosing the best herb and/or herbs for the signs shown helps make the process less overwhelming. For example, a hot red stomach zone requires the use of cooling bitter herbs and if this is associated with a red scalloped tongue edge where alcohol is consumed excessively, then *Andrographis paniculata* would be an ideal choice.

Observation over the last 15 years has demonstrated that students in a clinical environment struggle with the choices of herbs for an ideal formula. To be able to choose a formula that addresses the nuances of a patient and their presenting complaint, can ensure good patient compliance, a simpler more efficient treatment approach and thus a sense of achievement once this positive outcome has been reached.

The clinical application and value of urinary kryptopyrrole testing: translational research for Australian clinical practice

Dr Amie Steel^{1,2}, Mr Jason Rainforest^{2,3},
Dr Janet Schloss^{1,2}

¹Australian Research Centre In Complementary Medicine, University Of Technology Sydney, Brisbane, Australia, ²Endeavour College of Natural Health, Brisbane, Australia, ³School of Health, University of New England, Armidale, Australia

Introduction: Until recently urinary kryptopyrrole (UKP) testing has been widely available in Australia and considered a useful clinical diagnostic tool by clusters of health professionals including naturopaths and herbalists. Recently, an absence of validation of a reliable testing procedure or robust research relating to the clinical application and value of UKP to inform clinical decision-making, has affected access to this test.

Focus of discussion: In this session, the presenters will discuss four separate but related research projects nested within a larger program of research exploring various aspects of UKP testing in Australia. Dr Steel will briefly present the background aims and objectives for the overall program of research. Mr Rainforest will present a review of existing published original research underpinning UKP testing. Dr Steel will present the results of a survey of Australian clinicians who have used UKP in their clinical practice. This will focus on the conditions they identify as associated with elevated UKP and the treatments they use to manage UKP. Dr Schloss will present preliminary analysis from a large clinical study examining UKP levels in selected population. Mr Rainforest will end the session with an overview of a pragmatic observational study of UKP testing practices within community-based clinical settings.

Implications: This session will present important preliminary findings with direct implications for the clinical use of UKP testing. The research team will also use this program of research as an example of the interface between practice-informed research and evidence-informed practice in an under-researched topic.

Identifying and treating hormonal drivers in the naturopathic management of acne vulgaris

Ms Rebecca Hughes¹

¹Natural Skin Medicine, Melbourne, Australia

Introduction/background: Acne vulgaris (acne) is a chronic disease. 42% of men and 50% women will endure acne into their twenties, and 30% of women throughout their fertile years. Medical management focuses on sebum reduction, the bacterial model of disease or assumes androgen dominance. Patients are typically frustrated or concerned by conventional treatments, and impacted psychologically, as well as physically, by their

condition. Traditional herbal medicine management is valuable for enhancing detoxification pathways and enhancing skin healing, but may have limited results in chronic cases. The case studies presented are designed to expand the understanding of the clinical drivers, and therefore, management of chronic acne.

Case summary: A diagnostic test measuring hormone metabolites in urine, will be applied in 3 case studies to illustrate the variation in hormonal differences in similar clinical presentations. Targeted herbal and nutritional medicine management will be discussed based on these results.

Outcomes: Whilst variations are seen across the testing results, all 3 patients responded to a tailored treatment, achieving resolution and maintenance over time.

Implications: People with acne have quality of life scores similar to those patients with other chronic diseases, experiencing higher rates of depression and suicidal ideation compared to healthy counterparts. Yet the medical management of acne has varied little over time producing equivocal results. Relapse rates after treatment with oral isotretinoin vary between 10% and 60%. Another view could be taken of the aetiology of acne vulgaris, beyond hyperseborrhea and propionis acnes, exploring unique hormonal influences in individual patients, allowing for targeted treatments.

A critical review to identify the domains used to measure the effect and outcome of adaptogenic herbal medicines.

Ms Sophia Gerontakos¹, Dr Jon Wardle²,
Mr David Casteleijn^{1,2}

¹Endeavour College of Natural Health, Brisbane, Australia, ²University of Technology, Sydney, Australia

Background: Adaptogens are a foundational herbal medicine concept, considered to strengthen organ systems compromised by stress, be it of a physical, mental, environmental or chemical nature. They are used widely amongst traditional medicine practitioners including Naturopaths, Western Herbalists, Chinese Medicine practitioners and Ayurvedic practitioners. Their non-specific characteristics have led to a mishmash of measurements used to assess activity and no consensus on the most appropriate method to accurately determine the action and efficacy.

Methods: Databases EMBASE; AMED, PubMed, Cochrane Library and WHO ICTRP were searched. Articles were included if they were clinical trials reporting on individual herbal medicines with an adaptogenic action examining physical and mental endurance or physiological stress adaptation in healthy individuals.

Results: The findings identified three broad categories of outcome measures which have been used to assess adaptogens, however, these have only been applied individually providing no more than a reductionist understanding and outcome.

Conclusion: This is the first critical review of the available evidence to identify domains that have been used to measure the effect and outcome of adaptogens and to determine the relevance of those methods. The heterogeneity in data made it impossible to draw definitive conclusions as to the most effective measurement tools. However, cognitive measures hold promise when used in conjunction with other relevant tools and it is likely numerous measures will need to be combined to form the holistic measure required to translate a traditional concept into clinical terminology and move forward with clinical trials to accurately demonstrate adaptogenic activity.

Risk factors associated with intestinal permeability in an adult population: A systematic review

Mr Bradley Leech¹, Prof David Sibbritt¹,
Dr Amie Steel¹, Dr Erica McIntyre¹

¹University Of Technology Sydney, ARCCIM, Sydney, Australia

Background: Increased intestinal permeability (IP) involves the loss of integrity between the cells of the small intestine. IP has been suggested to contribute to the pathogenesis and exacerbation of many chronic diseases. The purpose of this review is to summarise the known risk factors for IP along with identifying the most significant risk factors.

Methods: A systematic literature search was conducted up until September 2018 in PubMed, EMBASE, CINAHL, and Scopus.

Results: A total of 47 articles met the inclusion criteria and were included. Identified potential risk factors for IP were biomarkers, anthropometric measurements, demographics, dietary intake and chronic diseases (severity, subgroup, and duration). The risk of IP increases when coupled with a multiple disease state or combined with other environmental risk factors. Furthermore, many of the identified risk factors such as anthropometric measurements and biomarkers were external from intestinal health and rather resembled a metabolic like condition.

Conclusion: Elevated levels of proinflammatory markers, dyslipidaemia, hyperglycaemia, insulin resistance, anthropometric measurements resembling obesity, advanced disease severity, comorbidity and the consumption of a Western-style diet were identified as the strongest risk factors for altered intestinal integrity. These risk factors warrant the attention of clinicians and other health care providers to aid the identification of potential patients at risk of altered IP. Further research needs to examine whether the identified risk factors are homogeneous with the diagnosis of IP or whether the disease state influences the association.

The diagnostic and clinical management of individuals recommended gluten free diets by complementary medicine practitioners.

Dr Joanna Harnett¹, Dr Janet Schloss², Dr Catherine Rickwood¹, Ms Claudine Van de Venter², Dr Erica McIntyre²

¹The University of Sydney, Sydney, Australia, ²Australian Research Centre in Complementary and Integrative Medicine, Sydney, AUSTRALIA

Objectives: Excluding gluten containing foods from the diet is medically indicated for the management of coeliac disease. It has been suggested that 70% of individuals who are recommended GF diets by complementary medicine practitioners have not had coeliac disease adequately excluded. The aim of this study was to describe the diagnostic and clinical management practices of naturopaths, Western herbalists and nutritionists (non-dietetic) associated with recommending GF diets.

Methods: A cross-sectional 40-item questionnaire was developed and administered online to 145 Australian naturopaths, nutritionists (non-dietetic) or Western herbal medicine practitioners via professional associations and a practice based network (PRACI) between February and April 2017. Demographic data and practice information related to recommending GF diets was collected.

Results: A total of 56.5% (82/145) practitioners reported that in the majority of cases they did not undertake any recommended diagnostic process, and 48% (71/145) of practitioners referred to a general practitioner to exclude medical conditions related to gluten ingestion prior to recommending a GF diet. A total of 10% (15/145) ordered coeliac serology through local laboratories, and 17% (24/145) through functional pathology companies. Non-coeliac gluten sensitivity was diagnosed by 56% (82/145) through an elimination and reintroduction diet, and 61% (88/145) used a diet and symptom diary. IgG antibody tests were used by 23% (33/145) of practitioners, and 5% (7/145) used kinesiology prior to recommending a GF diet.

Conclusion: Clinical guidelines for the diagnosis of gluten related disorders are not followed by a substantial number of complementary medicine practitioners prior to recommending a GF diet.

The Cinderella Principle in Energy Medicine Diagnosis & Practice

Ms Judy Jacka

Introduction: This paper will explore some concepts that have been largely ignored in orthodox medicine but which feature in the philosophy, diagnosis and treatment related to energy medicine over many decades.

Background: Naturopathic philosophy has always considered the lowering of energy and vitality, plus accumulation of toxins as the twin pillars influencing health and disease. These concepts include the human

energy field and its assessment in health and disease. The discussion leads to factors which may influence the function and health of our energy field or etheric body as it is often called. Such factors include genetic, nutritional, psychological and electromagnetic influences and point to the need for a new clarifying language in the area.

Focus: Included in the factors influencing the health or disease of the energy field are the challenges from the toxic elements in our environment and in particular, the effects of technology which has produced microwave levels many thousand times stronger than fifty years ago. A simple example of energy assessment is presented to test the energy field and the main environmental factors such as food, supplements and other influences in our environment.

Implications: We need to be aware of those environmental and personal factors which influence the human energy field apart from the usual scientific parameters. Therapists need training to equip them to diagnose the energy field and to be able to make a synthesis of environmental and treatment guidelines for the patient.

2. Clinical treatment decisions

Using Herbal Medicines to Modify the Microbiota

Dr Jason Hawrelak¹

¹University of Tasmania, Hobart, Australia, ²University Of Technology Sydney, Sydney, Australia, ³University of Western States, Portland, USA, ⁴Goulds Natural Medicine, Hobart, Australia

Introduction/background: Research demonstrating the vital importance of the gastrointestinal tract (GIT) microbiota to human health has been growing exponentially over the past two decades. Recent research has also highlighted that many herbal medicines, long used to optimise health and treat disease, have the capacity to alter the composition and functioning of this microbiota.

Focus of discussion: In this presentation, I will provide a brief overview of the importance of the GIT microbiota and highlight some of the research that has assessed the impact of herbal medicines on the GIT microbiome. This includes in vitro research conducted by me, as well as research conducted by other research teams. Herbs that appear to nurture and nourish the microbiota will be discussed, as well as herbal preparations that may cause negative alterations to this vital human ecosystem.

Implications: It is important for clinicians to be aware of the broader implications of their herbal prescribing. Many herbs in our materia medica have a nourishing effect on the GIT microbiota, but some, those with broad anti-microbial effects, should be used prudently.

Treatment interventions for the management of intestinal permeability: A cross-sectional survey of complementary and integrative medicine practitioners

Mr Bradley Leech^{1,2}, Dr Janet Schloss², Dr Amie Steel^{1,2}

¹Australian Research Centre in Complementary and Integrative Medicine, University Of Technology Sydney, Sydney, Australia, ²Office of Research, Endeavour College of Natural Health, Brisbane, Australia

Background: This study aims to explore the treatment interventions complementary and integrative medicine (CIM) practitioners use in the management of increased intestinal permeability (IP) and the influence these methods have on the observed time to resolve this condition.

Methods: A cross-sectional survey of naturopaths, nutritionists and Western herbal medicine practitioners was undertaken (n=227) through the Practitioner Research and Collaboration Initiative (PRACI) network.

Results: Thirty-six CIM practitioners responded to the survey (response rate 15.9%). CIM practitioners were found to use a multimodal approach in the management of IP with 92.6% of respondents using three or more categories of treatment interventions (nutritional, herbal, dietary, lifestyle) with 43.0±24.89 individual ingredients frequently prescribed. The main treatments prescribed in the management of IP were zinc (85.2%), probiotics: multi-strain (77.8%), vitamin D (75.0%), glutamine (73.1%), Curcuma longa (73.1%) and Saccharomyces boulardii (70.4%). CIM practitioners also advocate patients with IP to reduce alcohol (96.3%), gluten (85.2%) and dairy (75.0%) consumption. Reviewing antibiotic (75.0%) and nonsteroidal anti-inflammatory drugs (73.1%) prescriptions were frequently advised by CIM practitioners. A longer observed time to resolve IP was seen in CIM practitioners who abstained from recommending a reduction of intense exercise in the management of IP (p=0.02).

Conclusions: The numerous treatment interventions frequently prescribed by CIM practitioners align with research evidence in published literature, emphasising the evidence-based approach to practice reported by CIM practitioners. The findings of this study lay the foundations for the implementation of clinical research in the management of IP which considers multiple concurrent treatments.

Targeting the Gut-Immune interface to simultaneously address Immune and Metabolic disease.

Dr Christine Houghton³

¹University of Queensland, St Lucia, Australia, ²Centre for Translational Genomics, Capetown, South Africa,

³Cell-Logic Pty Ltd, Cleveland, Australia

The relationship between the microbiome and its human host is the subject of intensive research, revealing a complex interconnectedness extending well past the boundaries of the gut itself. Progressively over the past decade, the gut as a target continues to be considered a 'gateway' to addressing disease. The highly-sophisticated cells of the intestinal epithelium (IECs) are in constant communication with the thousand or so unique microbial species inhabiting the gut. The healthy immune system is carefully-balanced to respond appropriately to threats which include diet-derived antigens and toxins as well as those of microbial 'invasion'. The immune system must precisely balance the tools it uses to control infection from 'over-run' that could lead to chronic inflammation, creating a constant tendency towards a pro-inflammatory state. The ecology of the gut is largely governed by the interactions between the IECs and its microbial inhabitants. Both the IECs and their microbial companions need appropriate nutrition and rapid changes in the gut microbial population can occur with diet. Restoring homeostasis to the gut ecosystem can normalise gut barrier via enhancement to the tight junctions, secretion of mucous, anti-microbial compounds, immunoglobulins and more. This presentation addresses the important relationship between the intestinal epithelial cell and its underlying immune network. Targeting the gut-immune interface simultaneously addresses inflammation, infection control, autoimmune dysfunction and allergy. Furthermore, the healthy gut ecosystem activates complex signalling pathways linking the gut-immune interface to cardiometabolic and other systemic disease. This strategy reinforces the clinical importance of addressing chronic disease upstream, at the cellular level.

Kyolic Aged Garlic Extract improves Gut Microbiota, Inflammation & Cardiovascular Health in Hypertensives: The GarGIC trial

A/Prof Karin Ried^{1,2,3}, Mr Nikolaj Travica¹, Prof Avni Sali¹

¹National Institute of Integrative Medicine (NIIM), Hawthorn, Melbourne, Australia, ²Bond University, Robina, Gold Coast, Australia, ³University of Adelaide, Adelaide, Australia

Background: Kyolic-aged-garlic-extract has demonstrated effectiveness in reducing blood pressure in a large proportion of hypertensive patients similar to first-line standard antihypertensive medication. High blood pressure has been linked to gut dysbiosis, with a significant decrease in microbial richness and diversity in hypertensives compared to normotensives. Furthermore,

gut dysbiosis has been associated with increased inflammatory status and risk of cardiovascular events.

Methods: A total of 49 participants with uncontrolled hypertension completed a double-blind randomised placebo-controlled trial of 12-weeks, investigating the effect of daily intake of aged-garlic-extract (1.2g containing 1.2mg S-allylcysteine) or placebo on blood pressure, pulse wave velocity and arterial stiffness, inflammatory markers, and gut microbiota.

Results: Mean-blood-pressure was significantly reduced by 10±3.6 mmHg systolic and 5.4±2.3 mmHg diastolic compared to placebo. Vitamin-B12-status played a role in responsiveness to garlic on blood pressure in 17% of patients. Kyolic garlic significantly lowered central blood pressure, pulse pressure and arterial stiffness by an equivalent of 5 years' of ageing ($p<0.05$), important risk factors for cardiovascular morbidity. Furthermore, aged-garlic-extract improved gut microbiota, evident by higher microbial richness and diversity with a marked increase in *Lactobacillus* and *Clostridia* species after 3 months of supplementation.

Conclusions: Our trial suggests aged-garlic-extract to be effective in significantly reducing blood-pressure in patients with uncontrolled hypertension, has the potential to improve central hemodynamics including arterial stiffness, inflammation, and gut microbial profile. Aged-garlic-extract is highly tolerable with a high safety profile as a stand-alone or adjunctive antihypertensive treatment, with beneficial effects on a variety of cardiovascular risk factors and gut health.

The Methane Conundrum: SIBO or LIBO?

New insights into the diagnosis and treatment of methane dominant constipation

Dr Nirala Jacobi¹

¹www.thebiomeclinic.com, Wilsons Creek, Australia,

²www.thesibodoctor.com, Wilsons Creek, Australia,

³www.SIBOtest.com, Wilsons Creek, Australia

Constipation is a frequent complaint from patients and often resistant to long term resolution without the aid of laxatives. Methane dominant small intestinal bacterial overgrowth (SIBO) is well known to cause constipation. Breath tests are useful in helping to diagnose these patients by the diagnostic rise in methane after 90 minutes. But what about patients whose methane levels are high but do not show a typical rise in methane? New terminology of "IBS-C methane positive" has been introduced to differentiate these cases from true methane SIBO. In this talk Dr Jacobi will present data so practitioners can differentiate methane SIBO from methane dominant large intestinal bacterial overgrowth (LIBO) which requires different treatment. Treatment options, including herbal antimicrobials, dietary interventions and other strategies are discussed to help resolve even the toughest treatment resistant constipation.

Fasting for health and longevity — from calorie restriction to intermittent fasting and the fasting-mimicking diet

Mr Michael Thomsen¹

¹L-Nutra Australia, 29 Macfarlane Street, South Hobart, Australia

Introduction: Calorie restriction (CR) of 25% has been shown to increase lifespan of yeasts, worms and rodents. Intermittent fasting has emerged as an alternative for improving health and longevity in humans.

Methods: A narrative review of recent scientific literature on CR and fasting. Results. The effects of severe CR in the experimental Biosphere 2 suggests that while some biomarkers did improve, long-term CR is not beneficial for humans. Alternate day fasting and 5:2 diets have failed to produce significant results beyond the effects of simple CR. The Buchinger fast (4 to 21 days) is safe and well tolerated. It improves emotional and physical well-being, cardiovascular and general risk factors. The fasting-mimicking diet (FMD) was shown in mice to lower IGF-1, extend longevity, lower visceral fat, reduce cancer incidence, and rejuvenate the immune system. Re-feeding was associated with elevated number of stem cells and tissue regeneration. FMD promotes hippocampal neurogenesis and cognitive performance. FMD for 5 days/month/three months reduced risk factors for metabolic syndrome and other age-related diseases in a RCT.

Discussion: Five days of water fasting is required to achieve mild ketosis and autophagy. Autophagy is the natural process of recycling old and worn out cells. Research has shown that the re-feeding phase is associated with a surge in adult stem cells that induce regeneration. The Buchinger or FMD may be safer alternatives to water fasting.

Conclusions: Strategic use of intermittent fasting has significant benefits and is quite simple to administer and incorporate into daily life.

The effects of a 7-day Buchinger Type Fasting Intervention on Cognitive Function in adults with and without Type I Diabetes Mellitus.

Ms Diana Koblos², Dr. phil. Bettina Berger, Prof. Dr. med. Dr. phil. Michael Rapp

¹Institute of Integrative Medicine, University of Witten/Herdecke, Germany, Witten/Herdecke, Germany,

²Social and Preventive Medicine, University of Potsdam, Germany, Potsdam, Germany

Background: Buchinger Type Fasting (BF) means total abstinence from any food for a set period of time. Lipolysis of adipose tissue results in the production of ketone bodies of which β -Hydroxybutyrate is known to have

beneficial effects on neurological and cognitive disorders such as epilepsy and mild cognitive impairment. Type 1 Diabetics (T1DM) are at greater risk to develop cognitive impairment due to microvascular complications.

Aim: To investigate the effects of a 7-day BF on cognitive performance (CF) in the domains of learning, memory, processing speed, executive function and working memory in relation to serum ketone levels within a group of 29 fasting adults with and without T1DM.

Method: The study on CF was a sub-study of a larger trial investigating the feasibility of BF in T1DM. Serum ketone levels were measured four times daily over the course of the intervention period. CF was tested before and after the BF or daily (working memory). t-tests and Wilcoxon Signed Rank tests were applied as appropriate.

Results: CF improved after the BF in some domains (highly) significantly. Serum ketone levels increased steadily. They did not surpass physiological levels ($< 6 \text{ mmol/L}$). Working Memory Scores increased along with the serum ketone levels and significantly improved after the fast.

Conclusion: BF shows to be a promising avenue of investigation regarding its cognitive health benefits in populations at elevated risk as well as in healthy populations. This could have implications on overall health, the health

Naturopathy stakes its claim: Fasting the whole person

Ms Sally Mathrick¹

¹Sound Medicine, 324 Queens Parade, Clifton Hill, Australia

Background: Mounting scientific evidence backs fasting as a therapeutic tool for many health issues. Fasting can be a useful therapy within naturopathic practice, for a range of presentations. Differing levels of evidence exist for the range of fasting approaches to positively impact obesity, diabetes type two, arthritis, high blood pressure, as well as general preventative medicine and optimal wellbeing.

Focus: The range of fasting approaches – intermittent, chrono (time based), dry, water and modified (juice or other liquid) – and their current evidence base will be delineated for clarification. The importance to understand contraindications, the need for adequate preparation, safe monitoring and managing adverse reactions for successful, safe fasting therapy will be outlined. To ascertain safe fasting states, ketone and glucose monitoring will be highlighted as a functional test that can be carried out in a clinic or retreat setting. The impact of the excretion of industrial pollutant toxicants from the body burden during fasting will be flagged as a future concern. The role that naturopathic management plays

in treating the whole person is an important element of fasting therapy.

Implications: This talk will provide delegates: a professional understanding of fasting benefits and current evidence base - clarity regarding the safety concerns of fasting therapy - confidence that naturopathic tenets must be applied to individual fasting therapy

Effectiveness of herbal medicine for weight loss: a systematic review and meta-analysis of randomised controlled trials

Mrs Alison Maunder¹

¹The University of Sydney, The Boden Institute of Obesity, Nutrition, Exercise & Eating Disorders, Sydney Medical School, Charles Perkins Centre, Camperdown, Australia, ²Endeavour College of Natural Health, Sydney, Australia

Introduction: The problem of excess weight has reached epidemic proportions. Research shows that while increased exercise and decreased energy intake are essential in the treatment of obesity, these alone do not promote sufficient and sustained weight loss. Herbal medicines have a long history of use in health maintenance including weight loss. Many papers have reviewed commonly used herbal medicines for weight loss however, it has been more than fifteen years since a comprehensive review of the literature was conducted. This review aims to critically review the potential benefits and adverse effects of herbal medicines for weight reduction.

Method: A systematic review and meta-analysis of herbal medicines for the treatment of excess weight was conducted in accordance with PRISMA guidelines with a search of four electronic databases (Medline, Embase, Cinahl and Web of Science). The literature search was constructed around search terms of obesity or overweight; weight loss; and herbal medicines. RCTs that compared herbal medicines with a placebo were eligible.

Results: Fifty clinical trials met the inclusion criteria and were included in this review. Meta-analyses were conducted for each herbal medicine (if at least four studies were available) including *Garcinia cambogia*, *Camellia sinensis*, *Phaseolus vulgaris*, and *Ephedra sinica*. While these herbal medicines demonstrated a statistically significant reduction on bodyweight ranging from 1.33kg to 1.85kg, the effects were not of clinical significance (at least 2.5kg).

Conclusion: Currently there is insufficient evidence to recommend any of the herbal medicines for the treatment of obesity and overweight from a clinical perspective.

Herbal medicine plus lifestyle for overweight women with polycystic ovary syndrome: a randomised control trial.

Dr Susan Arentz^{1,2}, Prof Caroline Smith¹, Prof Jason Abbott³, Prof Alan Bensoussan¹

¹NICM, Western Sydney University, Sydney, Australia,

²Endeavour College of Natural Health, Sydney,

Australia, ³School of Women's and Childrens Health, UNSW, Sydney, Australia

PCOS is the most common reproductive endocrinopathy of women, the most common cause of ovarian infertility and cause of significant distress. Lifestyle modification (dietary and exercise) is first-line evidence based treatment however there are barriers to success for this form of self-care and women often seek adjunct therapies including herbal medicines. This pragmatic, randomized controlled trial (RCT), delivered in communities of Australia in overweight women with PCOS, compared the effectiveness and safety of naturopathic herbal medicine plus lifestyle intervention against lifestyle alone.

122 overweight women with PCOS participated in this RCT. The herbal medicine consisted of two tablets; tablet one contained *Cinnamomum verum*, *Glycyrrhiza glabra*, *Hypericum perforatum* and *Paeonia lactiflora* and tablet two contained *Tribulus terrestris*. The primary outcome was oligo/amenorrhea. Secondary outcomes were hormones, anthropometry, quality of life (QoL), depression, anxiety and stress (DAS), pregnancy, birth outcomes, and safety.

At three months, women in the herbal medicine plus lifestyle group recorded a reduction in oligomenorrhoea of 32.9% (95% CI, 23.3-42.6, $p < 0.01$) compared to controls, estimated as a large treatment effect size ($\eta_p^2 = 0.11$). Other significant improvements were found for body mass index ($p < 0.01$), insulin ($p = 0.02$) and luteinizing hormone ($p = 0.04$), blood pressure ($p = 0.01$), QoL ($p < 0.01$), DAS ($p < 0.01$) and pregnancy rates ($p = 0.01$).

This trial provides evidence of improved effectiveness for lifestyle intervention when combined with herbal medicines in women with PCOS.

Breastmilk Microbiome and Glycobiome

Ms Dawn Whitten¹

¹University Of Tasmania, Hobart, Australia, ²Probiotic Advisor, Australia, ³Goulds Natural Medicine, Hobart, Australia

Introduction/background: In recent years there has been a dramatic expansion in the knowledge of the human milk microbiome and glycobiome, both with regards to what they consist of and the role they may play in maternal and child health. Knowledge of these systems stands to inform clinical practice and is arguably essential for practitioners working with mothers and infants.

Focus of discussion: Human milk is a source of diverse bacterial species and may play an important role in seeding the neonate beyond the birth canal. Additionally, human milk contains an abundance of varied oligosaccharides which appear to work hand in hand with the breastmilk microbiome with functions ranging from prebiotic, to specific targeted defence against pathogens (including Group B streptococcus), to immune modulation. Awareness of the potential of an entero-mammary bacterial translocation pathway has sparked new interest in how the gastrointestinal microbiome of the mother may continue to influence her infant beyond birth. Further preliminary evidence indicates that maternal genetics, as well as dietary and lifestyle factors may influence breastmilk oligosaccharide composition and thereby influence infant microbiota.

Implications: Knowledge of iatrogenic and environmental factors, as well as specific therapies, that may impact the breastmilk microbiota and glycobiome can be an asset in perinatal and postpartum care. This presentation will highlight the way these systems work together and discuss some clinical approaches to protecting and optimising their function in the support of infant and maternal health.

Application and exploration of the new PMS guidelines, for the Naturopathic practitioner

Ms Sandra Villella¹

¹Jean Hailes for Women's Health, Level 4/15 Park Street South Melbourne, Australia

Premenstrual syndrome (PMS) comprises of an array of physical and psychological symptoms that occur in the luteal phase and resolve with the onset of the menses. PMS occurs in at least 40% of women, and of these, 5–8% have severe PMS that affects their quality of life. The new PMS guidelines from the Royal College of Obstetricians and Gynaecology UK, updated in 2017, detail the current theories of the aetiology of this syndrome. Although the aetiology is uncertain, it revolves around the ovarian hormone cycle. The two current theories include the understanding that some women are more “sensitive” to endogenous progesterone and (pharmaceutical) progestogens, and the other is an interaction or responsiveness of course the neurotransmitters serotonin and gamma amino-butyric acid (GABA), which are responsive to either oestrogen or progesterone, or allopregnanolone (a metabolite of progesterone) respectively. Importantly, in light of these new accepted theories, the role of herbal and nutraceuticals in the management of PMS, with specific focus on how they may influence these interactions will be explored. The new guidelines include a review of the literature of complementary and alternative medicines (CAM) for the management of PMS, and the relevant therapies, and their respective potential mechanisms, will be discussed. These new guidelines may challenge

some of the current Naturopathic understanding of PMS, give insight as to which treatments may be more effective in light of the theories and provide a future direction of Naturopathic management of PMS.

The role of *Zizyphus spinosa* in resolving tamoxifen (selective estrogen receptor modulator) induced hot flushes and night sweats, through breast cancer case studies

Mrs Shannon Carlin

Women with breast cancer are typically prescribed tamoxifen for five years post treatment. Tamoxifen acts as a selective endocrine receptor modulator to reduce recurrence of hormone dependent breast cancer. Non-adherence to tamoxifen is associated with an increased risk of recurrence and mortality.

Up to half of breast cancer patients discontinue tamoxifen treatment early, not completing the full five year treatment due to side effects; amenorrhea, irregular menstrual cycles, weight gain, sleep disturbances, low mood, hot flushes and night sweats.

Providing adjunctive care to breast cancer patients, working alongside oncologists, Shannon will explore how traditional herbal medicine can be combined in a complementary way to help provide the best outcomes for breast cancer patients.

Five cases will be detailed to illustrate the adjunctive use of herbal medicine to resolve hot flushes and night sweats to provide symptomatic relief safely with tamoxifen, allowing the women to adhere to the recommended treatment plan.

The prescription of herbal medicine is in a combination of *Zizyphus spinosa*, *Withania somnifera* and *Avena sativa* (seed), in varying ratios, was used in all five case studies, most having complete resolution of night sweats and hot flushes, or minimal hot flushes which were manageable.

Caution needs to be applied when utilising herbal medicines alongside tamoxifen and avoidance of using herbs that act as oestrogen mimickers is prudent. *Zizyphus spinosa*, *Withania somnifera* and *Avena sativa* are primarily nervines as primary mode action and have shown clinically to be highly effective without the use of herbs that may impact the efficacy of tamoxifen.

The therapeutic potential of the revered Ayurvedic medicinal herb *Withania somnifera* in Benign Prostatic Hyperplasia-associated nocturia: A case study

Mrs Fiona McCormick

Brisbane, Australia

Introduction/Background: Benign Prostatic Hyperplasia is a histological urological condition highly prevalent among men 50 years and over and associated

with lower urinary tract symptoms that negatively impact quality of life. Drawing on traditional usage and scientific evidence, the current approach to patient care will generally include herbal medicines with anti-prostatic and bladder tonic properties. The value of this case as a learning tool for clinicians is that it highlights the therapeutic potential of *Withania somnifera* to ameliorate the nocturia associated with this condition and thereby expands both clinical understanding and management of patients with this condition.

Case summary: A 57-year-old male presented with Benign Prostatic Hyperplasia and associated chronic nocturia, non-alcoholic fatty liver disease and hypertension. The treatment strategy utilized herbal and nutritional medicine in conjunction with dietary and lifestyle modification.

Outcomes: Following inclusion of *Withania somnifera* in the herbal prescription at the third consultation, the patient reported significant reduction in nocturia. An analysis of treatment and modifications up to that point supports the view that this inclusion might have been the catalyst for this improvement.

Implications: The prevalence of Benign Prostatic Hyperplasia, the impact of its symptomology and the adverse events associated with medical therapy mean that the role of herbal medicine in its management is significant at an individual and community level. The amelioration of associated nocturia, which coincided with the inclusion of *Withania somnifera* in the herbal prescription, highlights its therapeutic potential and supports its utilisation in the management of patients with Benign Prostatic Hyperplasia.

Western Medicinal Plants for the Treatment of Acne: Blending Tradition with Biomedical Science

Prof Kerry Bone¹

¹Integria Healthcare, Warwick, Australia

Introduction: Acne is the most common skin disease, affecting 85% of teenagers and around half of men and women aged between 20 and 30 years. It is characterised by inflamed lesions or whiteheads and blackheads, usually on the face, neck, back and chest. Traditional herbal treatments for acne largely evolved during the 19th and 20th centuries, and mostly focussed on plants assigned with depurative (alterative) properties. With the increased biomedical understanding of the condition, different herbs have been proposed for its management, based on addressing key steps in the pathophysiological process.

Focus of discussion: Given that a comprehensive approach to acne management will augment any clinical practice, this presentation will review the following: herbs traditionally assigned for acne from credible sources, herbs which have a role in acne based on our biomedical understanding of this disorder and, finally,

the clinical evidence supporting herbal acne treatments, including by topical application.

Implications: it will be proposed that it is possible to combine both the traditional and science-informed approaches to arrive at a best practice guideline for acne management. Such an approach will be illustrated by an outlined protocol and a case history.

Salvia miltiorrhiza bunge radix (danshen) in the treatment of chronic kidney disease: a review

Ms Jenny Carè¹

¹Independent researcher, Melbourne, Australia

Chronic kidney disease is a significant global public health issue, estimated to affect 850 million people worldwide. No currently known treatment effectively reverses the disease or prevents its progression. Hyperglycaemia, hypertension, acute kidney injury and infection are the main aetiological precursors causing destruction of glomeruli resulting in blood flow changes, activation of the renin-angiotensin-aldosterone system, glomerular hyperpermeability, hyperfiltration, proteinuria, inflammation and oxidative stress. Pharmaceutical interventions, prescribed to achieve blood pressure control and improve the condition, increase the risk of adverse events, and in many patients does not prevent progression to renal failure. *Salvia miltiorrhiza* bunge radix (danshen) has been used in China for over 2000 years. Danshen shows considerable potential in arresting, and perhaps reversing, kidney disease. A computer based search of seven databases was performed to appraise the scientific literature. Clinical research shows *salvia miltiorrhiza*/danshen reduces the incidence of nephropathy ($p=0.018$) and progression to chronic renal failure ($p<0.01$). It has demonstrated improvements in serum creatinine levels ($p<0.05$), Estimated glomerular filtration rate ($p=0.010$), Blood urea nitrogen, collagen iv expression ($p<0.05$), Urinary volumes and creatinine clearance. However not all research demonstrates such positive results and the evidence regarding danshen's safety is conflicting. Well-designed clinical trials are required utilising authenticated and therapeutic-grade danshen extracts and doses to fully explore the efficacy and safety of danshen in kidney disease. The magnitude of kidney disease is immense and the significance of developing a safe and efficacious intervention that addresses the human and financial costs will have wide-ranging impact, locally and globally.

The naturopathic management of interstitial cystitis: a case study

Ms Amy Taylor¹

¹Endeavour College of Natural Health

Introduction/background: The chronic inflammatory condition Interstitial Cystitis (IC) presents as a set of complex symptoms although, specific aetiology remains

unknown. This case explores the interconnectivity of these symptoms and highlights the importance of adopting a holistic approach in a clinical setting to achieve positive outcomes.

Case summary: This case explores the treatment of a set of urinary tract symptoms indicative of IC in a 54-year-old female. Aggravating and sustaining factors including chronic stress, nervous system dysregulation and inflammation, were identified and addressed using herbal medicine. Herbal medicine was prescribed to support HPA-axis regulation, and address inflammatory feedback mechanisms, while no herbs were prescribed which would usually be associated with the urinary tract.

Outcomes: Within two weeks the client experienced a significant alleviation of urinary tract symptoms, as well as a reduction of other, apparently unrelated, symptoms.

Implications: This case demonstrates the importance of understanding a condition from a biomedical perspective then applying naturopathic principals to integrate the interconnected nature of the condition into a treatment approach, which takes the whole person into account. Using this approach herbs which would not usually be associated with the urinary tract, were prescribed and significant improvement was achieved in a remarkably short time frame. Confirming the systemic nature of the condition and demonstrating the efficacy of herbal medicine in treating IC, this case reiterates the importance of naturopathic principles as foundational in a clinical setting.

Adaptogens: Traditional Medicine Helps to Match for Modern Living

Mr Laurence Katsaras¹

¹Metagenics, Brisbane, Australia

Introduction/Background: Herbal adaptogens have long been treasured for their ability to help combat physical and short term psychological stress. However, the stressors of modern living continue to escalate with patients suffering from cumulative stressors from a wide range of sources, which may question the efficacy of adaptogens in today's world.

Focus of discussion: Chronic psychological stress, circadian disruption, metabolic stress, inflammatory load, xenobiotic exposure, and electromagnetic sensitivity all are common in our patients. In this presentation, explore the new science behind adaptogens and learn the complex action they have on neuroplasticity, metabolism, immune function and detoxification - providing pleiotropic actions beyond the traditional view of 'adrenal tonics'.

Implications: Identify the key, and novel, herbal adaptogens that best suit different stressors, enabling your patients to better health in the 21st century.

Breathe Yourself to Better Health – Nervous system nourishment and the clinical application of Buteyko

Ms Carly Woods¹

¹Breath Reset, Ocean Shores, Australia

Introduction/background: Buteyko Breath Therapy supports healing for a wide range of conditions, through activating the parasympathetic response, opening the airways, relaxing smooth muscle, increasing oxygenation to tissues, and decreasing brain excitability.

Workshop topic: Practitioners will be taught 3 Buteyko Breathing techniques and the application of a breath retraining progress tool that they can use immediately in clinical practice to enhance patient outcomes.

Learning objectives of workshop: Practitioners will learn 3 full Buteyko Breathing techniques that can be brought into their practice, as well as a breath retraining progress tool. They will learn the introductory theory and clinical application of Buteyko, and they will experience a harmonic sound experience to enhance nitric oxide production in the nasal cavity.

Implications: "Your breath is your first love - you meet your breath before you meet your mother" Kate Shela.

Practitioners will be taught how to identify dysfunctional breathing, and the impacts that this has on various body systems. They will learn what gases are involved in breathing and how imbalance can contribute to long standing systemic issues.

Practitioners will also learn the importance of correct breathing to support herbal, nutritional, lifestyle, and complementary therapies in the collaborative approach to patient care.

An open-label, pragmatic, clinical pilot trial of MediHerb Boswellia Complex in the treatment of inflammatory joint conditions

Vanessa Vigar¹, Dr Hans Wohlmuth¹

¹Integria Healthcare, Ballina, Australia

Introduction: Osteoarthritis and other joint conditions are common presentations in practice, and herbal medicine has much to offer in this area. The MediHerb product Boswellia Complex (AUSTL186798) contains extracts of *Boswellia serrata*, *Curcuma longa*, *Apium graveolens* and *Zingiber officinale*, all of which have well established anti-inflammatory actions.

Methods: We conducted a 4-week, pragmatic, clinical pilot trial in patients prescribed MediHerb Boswellia Complex by their healthcare practitioner for osteoarthritis or other painful joint conditions. Subjects took Boswellia Complex for 4 weeks at a dose determined by the prescribing practitioner. There were no restrictions on what could be co-prescribed. The primary outcome measure was the WOMAC Index, a validated and widely

used, self-administered survey instrument that assesses pain, stiffness and physical function. Subjects completed the survey at baseline and after 4 weeks.

Results: 43 subjects completed the study, 43% had osteoarthritis, average dose was 3 tablets daily. All WOMAC measures improved: mean overall symptom score decreased by 24% ($0=0.001$, paired t-test), while subscales for pain, stiffness and physical function decreased by 23% ($p<0.0001$), 28% ($p<0.0001$) and 24% ($p<0.0001$), respectively, over the 4-week treatment period. Only three mild adverse events were reported.

Discussion: Naturopathic/integrative treatment with MediHerb Boswellia Complex for 4 weeks resulted in clinically and statistically significant improvements in the symptoms of osteoarthritis and other painful joint conditions. Being an uncontrolled trial, a causal relationship between the intervention and outcomes cannot be established, but the results are encouraging and suggest that a more rigorous trial of MediHerb Boswellia Complex is warranted.

Hep573 Study, A Randomised, Double-Blind, Placebo-Controlled Trial of silymarin alone and combined with antioxidants to improve vitality and the quality of life in chronic hepatitis C.

Dr Ses Salmond^{1,2}, Professor Jacob George³, Professor Simone Strasser⁴, Dr Karen Byth³, Professor Bill Rawlinson⁸, Professor Trevor Mori⁵, Professor Kevin Croft⁵, Dr Leon Adams⁵, Professor Bob Batey^{6,7}

¹Liverpool Women's Health Centre, Sydney, Australia,

²Arkana Therapy Centre, Sydney, Australia, ³Research and Education Network, Westmead Hospital, Sydney, Australia, ⁴AW Morrow Gastroenterology and Liver Centre, Royal Prince Alfred Hospital, Sydney, Australia,

⁵School of Medicine and Pharmacology, The University of Western Australia, Perth, Australia, ⁶Central Clinical School, Faculty of Medicine, The University of Sydney, Sydney, Australia, ⁷Faculty of Medicine, Flinders University, Adelaide, Australia, ⁸School of Biotechnology and Biomolecular Sciences, The University of New South Wales, Sydney, Australia

Background: Chronic Hepatitis C (CHC) is a viral liver disease characterised by oxidative stress and inflammation leading to fibrosis, liver injury, cirrhosis and increased risk of liver cancer and reduced quality of life (QOL). Antioxidant phytonutrients have potential to limit inflammation and reduce comorbidities associated with CHC. This clinical trial investigated the effects of two naturopathic treatments consisting of antioxidant nutrients and herbal medicines against placebo on liver function and QOL in people with CHC.

Methods: A randomised, double-blind, placebo-controlled clinical trial was conducted in three Australian teaching hospitals in New South Wales. One hundred and eighteen participants with compensated CHC related disease were recruited through liver outpatient clinics and randomised to one of three groups: silymarin; silymarin with 13 other antioxidants (SOX); or placebo. Study duration was 48 weeks: 24 weeks on active treatment or placebo, and 24 weeks follow-up post treatment. Outcome measures included alanine aminotransferase (ALT), F2-isoprostanes (oxidative stress), HCV RNA (viral load), FibroTest (liver damage), and QOL.

Results: The use of silymarin with antioxidants (SOX) achieved a higher rate of ALT normalisation (primary outcome) than placebo ($P=0.02$) or silymarin alone ($P=0.003$) at Week 24. In addition, there was significant improvement in the Hepatitis Quality of Life Questionnaire (HQLQ) Mental Component Summary (MCS) in SOX group ($P=0.002$). There were no significant changes in F2-isoprostanes, HCV RNA or FibroTest.

Conclusions: This Study has shown that the use of a complex naturopathic herbal and nutritional treatment can normalise ALT and improve QOL in participants with compensated CHC related disease.

RESISTANCE MATTERS!

Hepatitis C and the DAAs. The Shadow Side.

Dr Karen Bridgman¹

¹Starflower Pty Ltd and Starflower Herbals, PO Box 1702, Warriewood, Australia

Introduction: Much has been said and written of the success of the new direct acting antivirals in treating the previously incurable disease of Hepatitis C. There have been many documented successes to date - although these DAAs have not been around for long enough for any long-term studies. In the case study presented here the DAAs were not effective. This paper discusses the reasons for this, the issues that should be checked, which genotypes of Hep C are more likely to be a problem, and the medical testing needed to assist in the decision making for current and future treatments.

Case summary: The case study presented is a continuation of the one at the last NHAA Conference where initial results of the treatment was very positive. While she was being treated, mild side effects were experienced, but her liver function tests normalised and the Hep C infection appeared to have cleared. Unfortunately, after the 12 week washout period, the Hep C virus returned at 3 times higher levels than previously, with greater potential resistance to further treatment and with increased risk for hepatocellular carcinoma. When the DAAs were ineffective, a herbal medicine programme was instigated for the subsequent management of the condition - as monitored by medical testing.

Outcomes: The 6 monthly medical testing showed the herbs (and nutrients) contributing to significant improvement in specific organ systems, despite the high Hep C level.

Implications: When the DAAs are ineffective, herbs can improve the medical outcomes but this is an ongoing process.

PEP, PrEP and TasP — What a Naturopath needs to know about HIV in 2019

Mr David Casteleijn¹

¹Herbsonthehill / UTS / Endeavour, Brisbane, Australia

Introduction: Combined antiretroviral therapy (cART) has revolutionized HIV care. Assuming viral load remains suppressed we are no longer treating an immune deficiency so our treatment needs to shift to ensuring good quality of life. Encouraging early diagnosis and medical treatment needs to become part of Naturopathic care of People Living with HIV and at-risk populations.

Focus of discussion: Pre-Exposure Prophylaxis (PrEP) allows HIV negative people to prevent HIV infection; when taken consistently prior to potential HIV exposure, PrEP can reduce the risk by up to 99% and in 2017 it was considered “people living with HIV who take HIV medicine as prescribed ... have effectively no risk of transmitting HIV to their HIV-negative sexual partners” this is Treatment as prevention (TasP).

Implications for practice: Naturopaths and Herbalists need to be up to date with current HIV prevention and treatment options so they can offer their clients best care options.

These major advances in prevention and management along with the potential to prevent the gut leakiness which occurs within the first 6 months of HIV infection should encourage Naturopaths to embrace current HIV treatments. Previously, Naturopaths may have focused on what herbs/nutrients might be antiviral, or supportive of the immune system. However, immune deficiency is no longer an issue for someone on treatment - the focus needs to shift towards addressing chronic immune activation. Naturopathic care for the support of HIV negative people who elects to take PrEP is also an area of great potential.

The Role of Herbal Immune Modulators in Chronic Infections

Ms Julianne Grant¹

¹Optimalrx, Balwyn North, Australia

Introduction: Clinically, we are seeing a rise in the number of patients with chronic infections, which are often responsible for the development of chronic disease. Pathogenic microbes, particularly stealth infections, have the ability to modulate the immune system and promote inflammation, which is crucial to their long-term survival within the host. These pathogens evade a

normal human immune response via immunosuppression and other virulence factors. Research has found a strong association between infection with pathogens, such as *Mycoplasma* and *Borrelia*, and chronic disease due to the sequelae of events post-infection. Effective management of infections with immune modulators and cytokine modulators is paramount to the long-term health of the patient. Pathogen infection, immunomodulation suppressing innate immunity and Th1 cytokines creates an optimal environment for co-infection and growth of intracellular pathogens. Further suppression of the immune response and enhancing inflammatory cytokine release and immune and inflammatory dysregulation = building blocks for chronic disease. Herbal immune modulators are crucial in the treatment of chronic infections.

Focus: I will discuss the importance of the host's ability to mount an effective immune response, maintain immune-surveillance, and reduce pro-inflammatory cytokine production for the long-term health of the patient.

Implications: Many practitioners focus upon eradicating the pathogen/infection with herbal antimicrobials, underestimating the impact of the infection on the immune system and the resulting sequelae of adverse events. Herbal immune modulators are of prime importance in treating chronic (and acute) infections, particularly when dealing with/aiming to avoid chronic disease states.

3. Clinical practice management

Vitality in business – what is the secret formula?

Ms Charmaine Dennis¹

¹Fertile Ground Health Group, East Melbourne, Australia

The power of the vital force: a key tenet we hold so close, realising its potential through profound healing as naturopaths and herbalists. But why is the concept of the vital force limited to just healing people? How can this energetic concept infuse our business more holistically? Is there a formula to stimulate vitality in an unwell practice? How do we keep the vital force alive in the juggle of everyday life? And year after year?

After 18 years growing and shaping one of Australia's most successful practices, Charmaine shares insights into the vital inspiration for her own leadership and practice development by re-engaging with this value over time. Charmaine is an inspiration, sharing her most challenging learning experiences with raw, open generosity. Through sharing her story, she provides opportunity for deeper insight into our own truths, to feel connected in the challenges we all face and feel our own authentic calling to the next vital steps to take.

Don't Risk More Than You Are Prepared To Lose — Lessons from a failed business venture — A systematic analysis and improvements to practice

Mrs Geraldine Headley¹

¹Highgate Proactive Health, Highgate, Australia,

²Endeavour College, Adelaide, Australia, ³Mentoring with Geraldine, Online, Australia

Introduction: Focusing on the timeline to disaster - 2 years later, one lease and around \$30,000.00 down the drain, this presentation analyses mistakes and discusses the lessons learned after opening a business on the other side of town having run a successful home business for over 10 years.

Looking at the social expectations and why it happened along with the realities that exist in our profession for this to come about. It will look at limiting risk and who to ask for help before things get difficult, the values and limitations of collaboration and your 'inner ugly' and feelings of self-worth.

Case summary: Dealing with difficult partners, differences of opinion, unreasonable expectations and the benefits of diversification. Looking at core values of personal practice, personal style and personal work ethic. Not being discouraged by wasted money but rather the learnings and progress from that loss.

Outcomes: Each point has both a negative event and a positive learning point. The analysis aims to help others learn from those events.

Implications: This is achieved by analysing mistakes and providing a corresponding practical take-home message. The message should be generalizable to any work flow, so you don't lose your shirt!

Transitioning to Practice: Experiences, attitudes and perceptions of recently graduated naturopaths

Dr Amie Steel¹, Ms Kimberley Ryan²,
Dr Matthew Leach³, Dr Jon Wardle¹,
Mr Andy McLintock², Ms Helene Diezel²

¹Australian Research Centre In Complementary Medicine, University Of Technology Sydney, Sydney, Australia, ²Endeavour College of Natural Health, Brisbane, Australia, ³Department of Rural Health, University of South Australia, Adelaide, Australia

Introduction/Background: The future growth and development of the naturopathic profession relies not only on current leaders but also the contribution of the next generation of clinicians. However there is little empirical data that provides insights into the experiences and vision of new graduates, despite the enormous potential benefit this data could have to the profession, the naturopathic educational institutions and industry.

Methods: Semi-structured phone interviews with naturopaths who have graduated from an Australian naturopathic Bachelor degree within the last five years (n=20) were invited to participate in this study. The research aimed to investigate the current practice characteristics of new naturopaths and explore their experiences and perceptions in entering the profession.

Results: Participants shared insights and experiences across three main domains: Characteristics of Practice; Experiences of beginning practice; and Perceptions of their role and place in the profession. They reported diverse occupational settings and practice characteristics extending beyond community-based clinical care. A general optimism towards the future of the profession was shared by most participants although specific areas which they felt needed to be addressed for the success of future practitioners was improved access to mentoring and registration.

Conclusion: The current generation of new naturopaths are committed to the profession as a career and are, in some instances, already taking their place as a health service integrated into the mainstream health service. The wider naturopathic community would gain from engaging directly with the next generation of naturopaths to help shape and future-proof the profession.

Overcoming isolation in practice

Ms Gill Stannard¹

¹Fellow NHAA, 57 Probert St, Camperdown, NSW 2050, Australia

Have you found your tribe? Do you dream of working in a collaborative environment? Would you like to feel more supported in your business and clinical skills?

Regardless of whether you are an emerging or established practitioner, research shows that Australian naturopaths and herbalists often feel lonely and isolated - both within the profession and in the wider healthcare community.

Running your own business and being in clinical practice has many challenges. Over 50% of new mentees state isolation as a significant hindrance, even when working in group practices. This sense of isolation can often be the deal breaker when deciding to stay in, or leave, their business.

But we don't need to go it alone. When we work together as a profession, we thrive.

Whether you're trying to find your voice as a traditional practitioner in an increasingly evidence-based environment or fully embrace the latest technology, this workshop brings together a collective approach to promote our businesses and the profession, together.

This is an interactive session focused on creating practical outcomes, to create the change you crave.

CPE points

The *AJHNM*-based CPE questionnaire system is a voluntary system designed to assist members in the accumulation of NHAA CPE points. Questions are divided into the appropriate subject categories (herbal medicine and medical science) and each question refers to an article in this issue of the *Australian Journal of Herbal and Naturopathic Medicine*. Points accumulated through completion of these questions should be recorded in the NHAA CPE diary. Each completed question is worth one mark in the relevant category. Your completed CPE diary should be returned with your membership renewal at the end of the calendar year. For further information, please see the NHAA CPE Members' Manual on the NHAA website www.nhaa.org.au.

CPD Questions — Abstracts

TRADITIONAL PRACTICE

With regard to the abstract on clinical application for Kawakawa (*Piper excelsum*), which of the following is incorrect?

- Kawakawa has a long history of use in Maori culture.
- Kawakawa is particularly indicated for conditions affecting the nervous and gastrointestinal systems.
- Kawakawa was one of the most important healing herbs in traditional Maori medicine.
- Kawakawa is not used in modern naturopathic medicine.

PUBLIC HEALTH, POLICY AND COMMUNITY HEALTHCARE

With reference to the challenges and opportunities of naturopathic providers in Australia, which of the following is correct?

- Less than half of patients seeking naturopathic care seek naturopathy as their primary care.
- Diet and lifestyle recommendations are equal in naturopathic consultations and conventional medical practice.
- Patients consider naturopaths to be equally trained and knowledgeable about health issues as conventional medical providers.
- Naturopaths do not have a significant primary care role, and can only offer complementary support to medical practitioners.

PHILOSOPHY AND NATUROPATHIC PRINCIPLES OF PRACTICE

With reference to the seventh principle of holistic medicine, which of the following is correct?

- The American Association of Naturopathic Physicians unanimously approved six naturopathic principles in 1998.
- The seventh naturopathic principle is "first do no harm".
- The wellness economy is a burgeoning business, and is currently worth \$2.4 trillion.
- Seven philosophical tenets are now recognised to form the foundation of naturopathic medicine.

HERBAL MEDICINE PHARMACOLOGY

With reference to the phytochemical comparison of olive leaf extracts, which of the following statements is incorrect?

- Olive leaf can exert positive effects on blood pressure, inflammation, immune function, and insulin resistance.
- Pentacyclic triterpenoid extracts showed significant differences between products, which may be attributed to different solvents used in extraction.
- Oleuropein concentrations showed a 6-fold variation between different practitioner extracts.
- Label claims on OTC products were consistent with measured oleuropein concentrations.

Regarding the synergistic immune modulating activity of a traditional mushroom formulation which of the following statements is incorrect?

- The immune modulating effect of the mushroom combination correlated with glucan content.
- Beta-glucans have been the focus of research on the immune modulating properties of mushrooms.
- The combination of three mushrooms was found to have a synergistic effect on human macrophages.
- Beta-glucans of non-fungal origin were present in extracts and interfered with glucan assays.

NATUROPATHIC AND HERBAL MEDICINE CLINICAL PRACTICE

With reference to the study on Kyolic aged garlic on gut microbiota, inflammation and cardiovascular health, which of the following is incorrect?

- Daily intake of aged-garlic-extract (1.2g containing 1.2mg S-allylcysteine) significantly improved mean systolic and diastolic blood pressure.
- Vitamin B12 status was found to be a key factor in responsiveness to garlic on blood pressure in the majority of patients.
- Central blood pressure, pulse pressure and arterial stiffness were significantly lowered by Kyolic garlic.
- *Lactobacillus* and *Clostridia* species showed a marked increase after 3 months of supplementation.

With reference to the application of the new premenstrual syndrome (PMS guidelines) which statement is correct?

- 40% of women suffer severe PMS, which impairs quality of life.
- One proposed factor in PMS is sensitivity of individuals to endogenous progesterone and (pharmaceutical) progestogens.
- The interaction or responsiveness of the neurotransmitters serotonin and dopamine to either oestrogen or progesterone, or allopregnanolone (a metabolite of progesterone) is another proposed factor in the pathogenesis of PMS.
- The new PMS guidelines from the Royal College of Obstetricians and Gynaecology UK, updated in 2017, indicate no role for complementary and alternative medicines (CAM) in the management of PMS.

With reference to the study investigating silymarin alone or combined with antioxidants in chronic hepatitis C, which of the following statements is incorrect?

- Oxidative stress and inflammation can progress chronic hepatitis C to liver fibrosis and cirrhosis.
- Silymarin with antioxidants (SOX) achieved a higher rate of ALT normalisation than placebo or silymarin alone at week 24.
- Significant changes in FibroTest scores were observed in both the silymarin and silymarin with antioxidants groups.
- Individuals receiving silymarin with antioxidants (SOX) had significant improvement in Quality of Life scores.

Regarding the study investigating women with PCOS that investigated herbal medicine plus lifestyle compared to lifestyle alone, which of the following is incorrect?

- Herbal medicine plus lifestyle was superior to lifestyle alone for pregnancy rates, fasting insulin, lowering LH and improved body weight.
- Herbal medicine plus lifestyle was superior to lifestyle alone for depression, anxiety stress and quality of life.
- Herbal medicine plus lifestyle was superior to lifestyle alone for reduction of androgens, including testosterone, sex hormone binding globulin (SHBG) and free androgen index (FAI).
- Herbal medicine plus lifestyle was superior to lifestyle alone for reduced diastolic and systolic blood pressure.

Regarding breastmilk microbiome and glycobiome, which of the following is incorrect?

- Human milk is not rich in oligosaccharides, therefore limiting its therapeutic benefits.
- The breastmilk microbiome has a role in immune modulation.
- Entero-mammary bacterial translocation may influence an infant's health.
- Maternal genetics, as well as dietary and lifestyle factors may influence breastmilk oligosaccharide composition and thereby influence infant microbiota.

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Chronic disease is spiralling out of control. Mood and neurological disorders, immune dysfunction, arthritis, fatigue, hormonal issues, and obesity have all increased in prevalence at an exponential rate over the past few decades. Unfortunately, the current medical management of many of these disorders is centred on symptomatic reduction, while the underlying drivers continue.

In 2019, discover how newly identified inflammatory mediators are fuelling some of the most frequently presenting complaints. Find out about tomorrow's standards in healthcare technology and patient care that can be applied today. Become one of a new wave of Practitioners armed with the tools and knowledge to free your patients from the burden of chronic disease.

UNWIND AFTER 6



As part of Congress 2019, join the Metagenics team and Congress speakers on the Saturday night to 'Unwind After 6'. Enjoy drinks and a light dinner while:

- Connecting with Practitioners showcasing their case studies and scientific posters;
- Book signing with Dr Jeffrey Bland, Nicole Bijlsma and Professor Satchin Panda; and
- Creating your own flavour of nutritional supplement!

RSVP when making your Congress 2019 reservation.
We look forward to seeing you there!

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Bland



Dr Kara
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