SATURDAY 28 September 2019

Associate Professor Margreet Vissers (PhD)

*Update on vitamin C: New roles in vitality, immune function and stress responses*

Vitamin C (ascorbate) is an essential nutrient for humans, primates and a few other species that have lost the capacity to generate this molecule from glucose. Ascorbate is readily oxidised in air and is a well-known reducing agent. These properties underpin its many biological functions. As an antioxidant, ascorbate protects the body from damaging radicals generated by solar radiation and reactive oxidants. In addition, ascorbate can reduce and chelate transition metals, and this property underpins its capacity to act as a co-factor for many metal-containing enzymes throughout the body. These enzymes include those that regulate the body's response to hypoxia, that synthesise adrenaline and carnitine, that generate serotonin and collagen and that determine gene expression by epigenetic regulation. The identification of many new enzymes that require ascorbate for activity has led to a renaissance of interest in this vitamin, with profound implications for its role in health and disease. It is becoming apparent that the health impact of sufficient vitamin C intake far exceeds the requirement for the prevention of the deficiency disease, scurvy.

With newly identified mechanisms for the regulation of immunity and cell stress, there is a growing interest in understanding the biochemistry and biology of this essential micronutrient and its impact on human health.

Paul Kern (Nat)

*Cytokine sickness behaviour and use of biological response modifiers (BRMs)*

New research indicates specific natural bioactive molecules from beta-glucans have an immune modulating activity when needed but remain immune neutral when not required. Beta-glucans are biological response modifiers (BRMs) and may show promise for cytokine sickness behaviour. Balanced cytokine activity is important for healthy immune cell signalling, during and following infections. Their release affects the behaviour of all cells and when dysfunctional, can lead to detrimental and cyclic inflammatory cascades affecting neuroimmune systems. This is often the case when stealth infections have not been properly cleared from the body. Biological response modifiers support exactly at the point of weakness without unnecessary or inappropriate stimulation, working to improve immune adaptivity and resilience.
Sharon Erdrich (MHSc, Nat)

A gut-focused approach to moderate-severe eczema

Eczema is a chronic condition, requiring long-term management strategies. Onset in adulthood is less common and may have a different aetiology than typical atopic eczema. Standard medical approaches are often unable to adequately control the symptoms, which can have significant impacts on the quality of life of the patient. A detailed case study of a client with moderate-severe eczema, onset in adulthood, which had failed to respond to a range of medical treatments is presented. An overview of the clinical reasoning behind the diagnostic approaches followed and treatment strategies employed for managing the condition are outlined, as well as a brief look at the genetic contributors, which enhances understanding of the case. The role of diet and in particular, specific compounds in food is presented. The role of the gut is examined.

The client has had complete resolution of what was a long history of moderate-severe eczema.

Sarah Brenchley (B.Nat)

WNF’s Anti-Microbial Resistance Initiative – an update

The World Health Organisation (WHO) has identified Antimicrobial Resistance (AMR) as the leading global public health issue. It threatens the effective prevention and treatment of a growing range of infections, it compromises safety and survival of surgical and cancer patients and cost of health care will grow exponentially to cope with the care of patients with resistant infections. In 2016, 490,000 people developed multi drug resistant TB globally and is starting to complicate the treatment of malaria and HIV.

In 2013, there were 100,000 AMR-related deaths in US hospitals and 80,000 in China. It is estimated that the annual death toll due to AMR could climb to 10 million deaths if nothing is done.

As a result of this the World Naturopathic Federation (WNF) set up an AMR Working Group in 2018 to create a naturopathic response to this. This includes the creation of practitioner resources (website and poster) and dialogue with the WHO on how naturopathy is essential in the fight against AMR.

Sarah has been on this working group from the onset and will be discussing the resources and how we can utilise them and also updating us on recent accomplishments and goals.

Adjunct Professor Jonathan Wardle (PhD)

Global policy, practice and regulatory developments in the naturopathic profession: lessons for New Zealand and beyond

The naturopathic profession has undergone significant professional development over the course of the last decade. Whilst there remain numerous challenges for the naturopathic profession – including age-old issues of medical dominance, lack of integration, variable standards and poor recognition by governments and other stakeholders – there are also many positive developments, such as the inclusion of naturopaths as one of only two traditional medicine systems in the development of the Astana Declaration of Primary Health Care. Whilst improved recognition and professional growth is important to the naturopathic profession, it is important that this does not come at the expense of the holistic principles-based philosophical tenets of the naturopathic profession. Global experience has shown that there have been many successes in respectful integration and recognition, but also some cautionary tales where the profession has not achieved its ultimate aims. Many of these case studies have direct relevance to regulatory, education and policy initiatives affecting the New Zealand profession. This presentation explores global policy, practice and regulatory developments in the naturopathic profession – including insights from the World Naturopathic Federation – and examines what these may mean for New Zealand and beyond.

A.Prof Jonathan Wardle is also part of our panel line-up at the Conference Dinner.

BOOK NOW: www.naturopath.org.nz/conference-2019
Professor Stephen Myers (PhD, MD)

Auto-immune joint disease: The Nexus between Science and Nature Cure

More details to come
Professor Myers is also part of our panel line-up at the Conference Dinner.

SUNDAY 29 September 2019

Associate Professor Dr Craig Hassed (PhD, MD)

Mindfulness in Practice

The mind, immunity and epigenetics: The field of mind-body medicine has expanded enormously over recent decades. Three major catalysts for the rapid expansion have been the growing interest in psychoneuroimmunology (PNI), mindfulness and epigenetics. PNI relates to the influence of the mind and social factors on brain function and immunity. Mindfulness is both a form of meditation and a way of living and is probably the most influential of all mind-body techniques being used in health-related settings. Epigenetics relates to the way that psychological, lifestyle and environmental factors can influence the way our DNA expresses itself.

In this keynote address I will draw together these three fascinating areas of healthcare. We will explore the relevant science, practice and philosophy and see what lessons can be learned in terms of preventing or managing chronic illness.

A. Prof Craig Hassed is also part of our panel line-up at the Conference Dinner.

Kiran Krishnan (BSc)

The spectacular role of the human microbiome in preventing post-prandial or metabolic endotoxemia, the number one cause of mortality worldwide

You are more bacteria than you are human with 10 trillion human cells outnumbered by over 100 trillion bacteria cells in and on your body. The human genome contributes just 1% genetic material to daily metabolic function compared to the 99% that is contributed by the microbiome. An often-overlooked role of the microbiome is to prevent post-prandial endotoxemia and the inflammatory devastation that follows. This lecture will illustrate the danger of having post-prandial endotoxemia and why this condition is being called the number one cause of mortality worldwide as it sets up the body for virtually every chronic disease. This condition is caused by eating and a failure of the microbiome to protect its host from this response. You simply cannot completely correct any chronic condition without addressing post-prandial endotoxemia.

John Aitken (BSc)

Autoimmune diseases - bacterial involvement in inflammatory bowel disease

Modification of the gut microbiome and dietary controls may modify the course of inflammatory bowel disease (IBD), and new insights will confirm this, and point to new directions for conventional medicine in association with naturopathy. These changes will happen very quickly and will generate a need for different approaches and perspectives in the field of translational medicine.

I will present evidence of bacterial involvement and suggest a multi-discipline, patient centred approach.
Cynthia Hunefield (Nat)

**Holistic antibiotics**

Escherichia coli (E. coli) induced Urinary Tract Infections (UTIs) are the most common infections worldwide and a high level of antibiotic resistance contributes to the frequency, recurrence, and swift disease progression, contributing to an estimated cost of 3.5 billion per year in the US alone. In New Zealand, approximately 10,000 people are diagnosed with a UTI per week.

The root of this problem is that bacteria become resistant to both the antibiotic and the mechanism of action and we desperately need a new type of antibiotic. However, The WHO 2017 report on “Antibacterial Agents in Clinical Development” states that there is a serious lack of treatment options for E. coli induced UTIs and at the moment there are no new treatments in clinical development.

The natural antibiotic project investigates how therapeutic dosages of plant extracts can address multiple target sites providing antibacterial, anti-virulence, immune modulating, anti-inflammatory and antioxidant actions. The presentation provides an overview of how poly-pharmacological actions can potentially delay bacterial resistance and improve treatment outcomes in bacterial infections, including topical infections, respiratory infections, gastrointestinal infections and E. coli-induced UTIs.

Dr Christine Houghton (PhD)

**The critical role of the intestinal epithelial as the unsung hero in modulating the dynamics of the gut-immune interface**

The gut ecosystem is emerging as a critical determinant of human health - not just of the gut – but of the entire physiology. A close mutual relationship between the host and its associated microbiota is critical to maintaining homeostasis in the gut ecosystem.¹ Often overlooked is the importance of the intestinal epithelial cell (IEC) in driving that relationship. This single layer of cells which separates the host’s external environment from its underlying immune defences and internal physiology is highly specialised to address the many potential threats it encounters daily from microbes, food and environmental chemicals. The IEC is a direct regulator of gut barrier function and its underlying immune defences; it is also an indirect regulator of metabolic function.² ³

This presentation considers the mechanisms that govern function of the epithelial barrier, examining strategies to optimise the gut-immune interface as a key driver of both intestinal and metabolic health.⁴ Appropriate dietary modification aimed at changing the intestinal milieu favours desirable microbial species,⁵ ⁶ calling into question the need for long-term probiotic supplementation.⁷ The therapeutic potential of nutrigenomically-active food elements is addressed as a corrective approach to restoring and maintaining gut and metabolic health via dietary prescription and other therapeutic recommendations.
Ian Breakspear (Nat)

Olive Leaf –Not All Extracts are Created Equal

Olive leaf extract is widely used by the public in the prevention and treatment of infections, and whilst there is some evidence in support of this usage, an unanswered question is how different extracts compare in their phytochemical profile.

Five practitioner-only and four over the counter (OTC) Australian, and three OTC North American olive leaf extracts, were analysed 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.

Practitioner and over-the-counter olive leaf extracts on the Australian and North American marketplace demonstrated considerable variation in phytochemical profiles, with a more than four-fold difference in oleuropein concentration between practitioner extracts being observed. In contrast, oleuropein concentrations in sampled OTC products were generally more consistent and correlated well with label claims. Significant quantitative differences in other constituents were also observed.

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

Jacqui Finlayson (Nat)

Iodine and the mid-life women who avoids bread

Aim: To investigate if avoidance of iodine fortified bread products by mid-life women results in low iodine status following mandatory fortification of bread with iodised salt in New Zealand in 2009.

Method: Forty-six mid-life women living in Auckland were recruited for assessment of dietary intake of iodine, women were aged between 40-63 years and did not have diagnosed thyroid disease. Dietary assessment of iodine was determined from food frequency questionnaire (FFQ), three-day diet diary (3DDD) and 24-hour urine collection. This cross-sectional study actively recruited women whose consumption of iodine fortified commercially baked bread was less than one slice per day. Urinary iodine concentration (UIC) was determined and daily urinary iodine excretion and daily iodine intake was assessed.

Results: The median urinary iodine concentration was 49 (34.8, 78.0) µg/l, below the 60-70mcg/l cut-off as recommended by Zimmerman and indicates deficiency (M. B. Zimmermann, 2011). The median urinary iodine excretion was 107.9 (73.5, 154.1) µg/day and based on these results, the estimated median iodine intake of 120 (81.7, 171.2) µg/day was extrapolated.

Conclusion: This study showed that mid-life women living in NZ who avoid bread are at risk of inadequate dietary iodine intake. This group does not benefit from the mandatory fortification of bread with iodised salt which highlights the importance of continued monitoring of the NZ iodine fortification programme. Further research should investigate thyroid function and dietary habits of low bread consumers in New Zealand.
Dr Corin Storkey (PhD)

Maca Masterclass – using maca in complex and chronic conditions

Maca is a sacred Incan medicinal plant that is used to treat and manage endocrine function and regulate immunity. Recent studies have demonstrated that the mode of action is dependent on novel fatty acid derivatives called macamides that act in the endocannabinoid system of the brain. Our studies have demonstrated that traditional preparation of maca creates the most potent powder, with different heat treatments and colour combinations providing different ratios of macamides. With the rapid commercialisation of maca most traditions have been lost, leading to many powders lacking in therapeutic activity. Using chromatography methods, we have created quality measures that can be applied to the formulation of more targeted maca treatment options.

In this advanced workshop we will take you through the traditional methods of maca preparation, scientific substantiation and matching your maca to your symptoms in-line with traditional shamanic practices. We will discuss the frequently asked questions regarding the use of maca in cancer (including breast cancer), anxiety, thyroid dysfunction, PCOS, heart disease, diabetes and more. Finally, we will be presenting case studies of various patients treated with different maca regimes for a range of conditions and clinical outcomes (chronic fatigue, menopause/PMS, mental health and anxiety, sexual dysfunction).