## Abstract Submission - 90-minute workshop

1. Your full name and your current email address/es

Dr Olivia Ly Lesslar

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1. A brief (100 word) biography of each presenter

Dr Olivia Ly Lesslar is an Australian medical practitioner who has been working in preventative medicine, psychoneuroimmunology, neurodegeneration, cancer, and longevity medicine for most of her medical career. Her unique skill set is in problem-solving complex, chronic conditions. She works with innovative, high-profile international clinics, including the preeminent Los Angeles celebrity concierge company LifeSpan Medicine, and Cingulum Health - a brain health optimization clinic founded by renowned neurosurgeon Prof Charles Teo - which curates personalized programs of synergistic adjuncts including hyperbaric oxygen therapy and photobiomodulation, along with AI-driven, targeted Transcranial Magnetic Stimulation.

1. Your current qualifications in abbreviated form e.g. BSc (please omit any full stops)

BIR, MBBS

1. A good quality high resolution head-shot photograph (preferably smiling)



1. Abstract

The “threat” detection system is made up of intertwined biochemical networks that are activated by various stimuli within certain (subjective and objective) parameters. These inform the cells, and eventually the nervous system, about the internal and external environments nanosecond to nanosecond, second to second, hour to hour. The conscious mind is barely involved in the split-second decision-making process about whether receptors have been activated by a true threat or benign stimuli.

The body and nervous system will respond to threats - real and perceived - in whatever way the animal is predisposed to react. In a virgin system, this would fall back on evolutionary behaviours or “primitive reflexes”, but eventually lived experiences can affect the receptor activation thresholds which may initiate physical and emotional responses.

I would like to introduce the audience to the wide world of threat detection networks. I will only briefly touch on these systems: endocannabinoid, acetylcholine, HPA.

I will go more in-depth into these threat detection networks: Advanced Glycation End Products and receptors of advanced glycation end products (RAGEs); Transient Receptor Potentials (TRPs).

I would specifically like to discuss these networks’ role in food sensitivity and gastrointestinal issues which are usually pronounced when there is a lack of perception of safety. No system works on its own, and the crosstalk between neurons, epithelial cells, and immune cells induced by activation of TRP channels and RAGEs orchestrates the immunologic response.

1. Goals and Objectives
* To understand that there are numerous threat detection networks
* To have an appreciation of the AGE and TRP systems
* To appreciate that these threat detection networks are the bridge between emotional agitation and gastrointestinal issues and responses
1. Learning outcomes
* Rationale - In understanding the biochemical underpinnings to seemingly disparate organ systems or “unrelated” issues (eg: anxiety and food sensitivity), one is better able to empower clients with knowledge and formulate novel treatment solutions.
* Understandable - I will use plain language where possible and frequently remind the audience about the new abbreviations and concepts used in my presentation. I also have a great graphic from Nature which I will probably improve and expand on. (see end of document). Invite the audience to discuss examples in their own practice where perception of threats may have led to physiological dysfunction.
* Achievable - I will present a couple of case studies at the end of the presentation and invite the audience to think critically about the various drivers involved and the various non-pharmaceutical treatment options

