

## AONM Newsletter November 2024



### Introduction

As another year full of learning draws to a close, we are delighted to highlight some of the recent nuggets that AONM has been privileged to share in. Two articles cover M.E. and Long Covid from different but overlapping angles. One outlines Professor Scheibenbogen’s groundbreaking discoveries in the field of autoantibodies associated with M.E. and Long Covid as well as POTS and small fibre neuropathy. The other reviews a book by long-standing AONM member Dr. Ray Perrin just out last week: “Through the Looking Glass: Diagnosing and Treating Long COVID using the Perrin Technique”, with fascinating insights from the latest research combined with his team’s clinical work.

This issue also spotlights the BSEM’s recent 40th Anniversary Conference on “Unravelling Brain Health”, which took us on an intriguing journey through the latest metabolic and mitochondrial approaches to mental health. We also provide an outlook on the BSEM’s upcoming training day on the Ecological Approach to Infections.

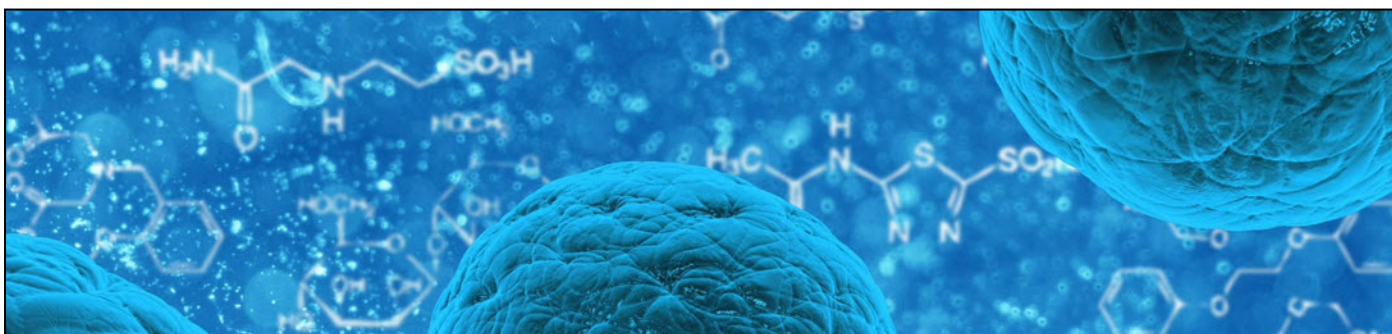
A Part II webinar on Kryptopyrroluria was also a November highlight, with Part II of “The Mitochondria and Chronic Health Conditions” scheduled for early in 2025. As always, the newsletter concludes with other details of upcoming events.

*We wish all our readers seasonal greetings, and look forward to any feedback you may have: please contact us on [info@aonm.org](mailto:info@aonm.org).*

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## A Unifying Hypothesis for M.E.?



Most of our organ functions are controlled unconsciously via the autonomic nervous system (ANS). To activate and inhibit organs, signals are transported by neurotransmitters via the synaptic cleft (connection between nerve cells and sensory or muscle cells) to the organ being controlled. Central neurotransmitters of the ANS are noradrenaline and acetylcholine, which bind to adrenoceptors and acetylcholine receptors during signal transmission. Important subclasses of these receptor types are the beta-adrenergic receptors ( $\beta$ -AdR) and the muscarinic acetylcholine receptors (mAChR), for instance.

A number of studies have shown that these receptors can be impaired in M.E. sufferers. For example, experiments in which acetylcholine (ACh) was administered to patients through the skin show that the increased blood flow to tissues induced by ACh lasts longer in M.E. than in other diseases or healthy controls (Spence et al., 2004). A Japanese study using positron emission tomography also demonstrates reduced binding of neurotransmitters to the mAChR in the brain in those M.E. patients who have elevated titres of autoantibodies against the m1-AChR (Yamamoto et al., 2012).

In addition to the ANS, adrenoceptors are also found on blood and immune cells. Kavelaars et al. (2000) were able to show that agonists binding to the  $\beta$ 2-adrenoceptor affect the cytokine production of monocytes differently in M.E./CFS to healthy controls. The study by Hartwig et al. (2020) found a lower influence of immunoglobulin G (a subclass of antibodies) on the cytokine production of monocytes in M.E./CFS sufferers, with increased autoantibody titres against the  $\beta$ 2-AdR than in healthy controls.

Professor Carmen Scheibenbogen from the renowned University Hospital Charité in Berlin has significantly contributed to understanding the role of these autoantibodies in various diseases, particularly in the context of conditions like M.E., as well

as in POTS (postural orthostatic tachycardia syndrome), small fibre neuropathy and Long Covid.

Professor Scheibenbogen and team in their first of a triad of articles linking autoantibodies to M.E. focused on the beta-2 adrenergic receptor (B2AdR). B2AdR is indeed a heavy duty receptor. Found in the blood vessels in the brain, the skeletal muscles and the heart, it is a downstream mediator of the sympathetic nervous system (fight or flight system), which controls blood flow among other things. Studies by Professor Scheibenbogen et al have shown that autoantibodies to the B2AdR receptors are present in a significant subset of M.E./CFS patients (i), with auto-antibodies against the muscarinic cholinergic receptors 3 and 4 (M3 and M4) also elevated. They draw a vast model of cardiovascular dysfunction that could produce many, if not all, of the symptoms of M.E. Their seminal article “A Unifying Hypothesis of the Pathophysiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): Recognitions from the finding of autoantibodies against  $\beta$ 2-adrenergic receptors” posits an imbalance between vasoconstriction and vasodilation in the blood vessels: one vasodilator, bradykinin, may be responsible for multiple effects, including the inability of the renin-angiotensin-aldosterone system to increase blood volume to proper levels, intracranial hypertension, small fibre neuropathy, sleep apnea and sleep issues.

The results of a study on these antibodies have been published in *Brain, Behavior and Immunity* (“Antibodies to  $\beta$  adrenergic and muscarinic cholinergic receptors in patients with Chronic Fatigue Syndrome”) (ii). The teams have found further correlations of these autoantibodies with symptom severity, autonomic dysfunction and disability in M.E./CFS, as for example in their article “Autoantibodies to Vasoregulative G-Protein-Coupled Receptors Correlate with Symptom Severity, Autonomic Dysfunction and Disability in Myalgic Encephalomyelitis/Chronic Fatigue

Syndrome”.(iii)

The laboratory CellTrend together with Professor Carmen Scheibenbogen have developed immunoassays able to indicate physiological markers for Myalgic Encephalomyelitis (M.E.), Postural Orthostatic Tachycardia Syndrome (POTS), small fibre neuropathy, and Long Covid based on these findings. AONM is delighted to represent this renowned laboratory in the UK: please contact [info@aonm.org](mailto:info@aonm.org) for further details.

i. *A Unifying Hypothesis of the Pathophysiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): Recognitions from the finding of autoantibodies against  $\beta$ 2-adrenergic receptors.* Klaus Wirtha, Carmen Scheibenbogen, *Autoimmunity Reviews*, 2020

ii. *Loebel M, Grabowski P, Heidecke H, Bauer S, Hanitsch LG, Wittke K, Meisel C, Reinke P, Volk HD, Fluge Ø, Mella O, Scheibenbogen C. Antibodies to  $\beta$  adrenergic and muscarinic cholinergic receptors in patients with Chronic Fatigue Syndrome. Brain Behav Immun. 2016 Feb;52:32-39.*

iii. *Freitag H, Szklarski M, Lorenz S, Sotzny F, Bauer S, Philippe A, Kedor C, Grabowski P, Lange T, Riemekasten G, Heidecke H, Scheibenbogen C. Autoantibodies to Vasoregulative G-Protein-Coupled Receptors Correlate with Symptom Severity, Autonomic Dysfunction and Disability in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. J Clin Med. 2021 Aug 19;10(16):3675.*

## BSEM's 40<sup>th</sup>: Unravelling Brain Health

The British Society for Ecological Medicine's (BSEM, <https://www.bsem.org.uk/>) 40th Anniversary Conference, Unravelling Brain Health, provided fascinating insights into ground-breaking solutions to challenges traditionally categorised as mental health.

To touch on just a few of the highlights, Harvard Psychiatrist Dr. Chris Palmer, author of “Brain Energy”, described his metabolic and mitochondrial theory of mental illness. His theory posits that mental disorders are, at their core, metabolic disorders of the brain, integrating the biological, psychological and social factors that all contribute. He outlined the disruptions in brain metabolism that can lead to the symptoms and behaviours often termed mental disorders, without due comprehension of the physiological (and other) aspects underlying them.

Professor Ed Bullmore, Professor of Psychiatry at Cambridge University and author of “The Inflamed Mind: A radical new approach to depression”, described the firm link between depression and inflammation of the body and brain, explaining how mental disorders often have their root cause in the immune system.

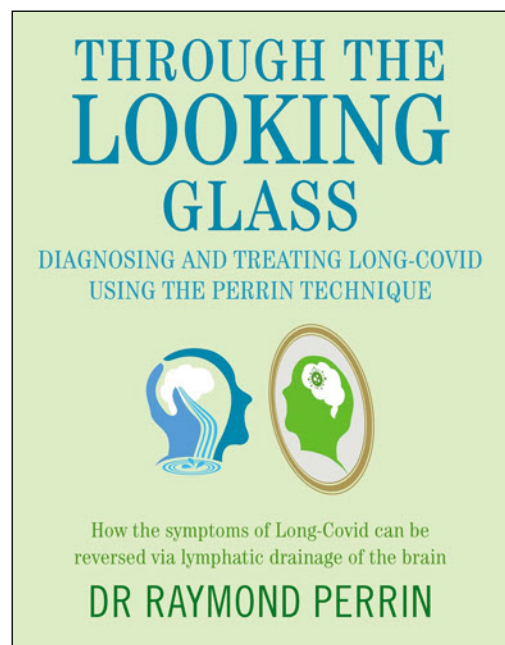
Dr. Iain Campbell PhD from the University of Edinburgh gave us stunning insights into a pilot

study of the ketogenic diet for bipolar disorder. Study participants attained optimal ketosis within 3-13 days, with average readings of 1.3 mmol/L, and remained in ketosis for 91% of the 8 weeks the study ran. They saw significant improvements in weight, BMI and systolic blood pressure. Other results relating to the bipolar condition they were suffering from were also impressive.

Other tremendous speakers were the long-standing BSEM member and author of two recent books Dr. Jenny Goodman, Dr. Damien Downing, Patrick Holford, as well as further panelists. The day was introduced and moderated by Dr. David Jehring, who was a masterful organiser of the event held in conjunction with the Public Health Collaboration (PHCUK, <https://phcuk.org/>).

Please see the following link if you are interested in purchasing the recording of the day/slides: <https://vimeo.com/ondemand/unravellingbrainhealth>.

## Through the Looking Glass on Long Covid



One of the longest-standing members of the Academy of Nutritional Medicine, Dr. Raymond Perrin, has just brought out a new book: **Through the Looking Glass: Diagnosing and Treating Long COVID using the Perrin Technique: How the symptoms of Long-Covid can be reversed via lymphatic drainage of the brain.**

This is a concise account of the structural and neuro-immunological problems that can lead to the symptoms of Long Covid. It had its genesis in an article Dr. Perrin published in Medical Hypotheses



as early as 2020 entitled “Into the looking glass: Post-viral syndrome post COVID-19”, where he and his team of co-authors prophetically described the scenario they saw ahead in the post-Covid era: “Post-mortem SARS research indicated the virus had crossed the blood brain barrier into the hypothalamus via the olfactory pathway. The pathway of the virus seemed to follow that previously suggested in CFS/ME patients, involving disturbance of lymphatic drainage from the microglia in the brain. One of the main pathways of the lymphatic drainage of the brain is via the perivascular spaces along the olfactory nerves through the cribriform plate into the nasal mucosa... This disturbance leads to a build-up of pro-inflammatory agents, especially post-infectious cytokines such as interferon gamma, and interleukin 7, which have been hypothesized to affect the neurological control of the ‘Glymphatic System’ as observed in CFS/ME.”<sup>(i)</sup> Dr. Perrin foresaw even then the long-term consequences of the “likely Post COVID-19 syndrome cases, in addition to existing CFS/M.E. cases”.



Dr Perrin

Dr. Perrin developed his Perrin Technique in 1989, and has seen the mechanisms he posited back then substantiated by research such as that of Iliff et al in 2012<sup>(ii)</sup> and more recently Pessa et al.<sup>(iii)</sup> This book contains an impressive updated explanation of exactly how Dr. Perrin’s unique approach works, building on previous editions of “The Perrin

Technique”<sup>(iv)</sup> with new findings from recent literature and studies. It also contains fascinating insights into related fields, such as acetylcholine-orchestrated neuromodulation in Long Covid, or the subarachnoid lymphatic-like membrane (SLYM), and how critical injury to that can be.

It is a tour-de-force to have managed to bring out such a comprehensive publication alongside Dr. Perrin’s full patient schedule – which makes this book all the more valuable, as it is grounded in clinical practice, and contains many insightful case studies.

i. Perrin R, Riste L, Hann M, Walther A, Mukherjee A, Heald A. Into the looking glass: Post-viral syndrome post COVID-19. *Med Hypotheses*. 2020 Nov;144:110055.  
 ii. Iliff JJ, Wang M, Liao Y, Plogg BA, Peng W, Gundersen GA, Benveniste H, Vates GE, Deane R, Goldman SA, Nagelhus EA, Nedergaard M. A paravascular pathway facilitates CSF flow through the brain parenchyma and the clearance of interstitial solutes, including amyloid  $\beta$ . *Sci Transl Med*. 2012 Aug 15;4(147):147ra111.  
 iii. Pessa JE. Ventricular Infusion and Nanoprobes Identify Cerebrospinal Fluid and Glymphatic Circulation in Human Nerves. *Plast Reconstr Surg Glob Open*. 2022 Feb 17;10(2):e4126.  
 iv. <https://www.amazon.co.uk/Perrin-Technique-diagnose-fibromyalgia-lymphatic/dp/1781611491>

## Ecological Health: Approaches to Infections

November 29<sup>th</sup>, Hallam Centre, London

The upcoming BSEM Training Day is focused on infections and their underlying drivers from an ecological medicine perspective. It will be opened by Dr. Damien Downing, the BSEM President, who will provide an ecological medicine perspective on infections, exploring the broader drivers behind them. Dr. Daud Mohamed, an infectious diseases specialist at Breakspear Medical, will share therapeutic strategies for Lyme disease and its coinfections, drawing on his extensive clinical experience. Gilian Crowther, Director of Research at AONM, will discuss the complexities of infection testing,



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**Ecological Medicine Approach to Infections**

Friday November 29th

Central London and Online



Dr Damien Downing



Dr Daud Mohamed



Gilian Crowther



Dr Armin Schwarzbach



Jennifer Derham



Dr Shideh Pouria

especially the stealth infections often overlooked in conventional medicine. She will be followed by Dr. Armin Schwarzbach, an MD as well as founder of ArminLabs, who will present the 3i's approach to therapy: a triad which focuses on addressing Immunosuppression, Inflammation and Infection. The herbalist and nutritional therapist Jennifer Derham will present on Phytotherapy and Nutraceuticals as an ecological approach to infection and immunity.

In the afternoon Dr. Shideh Pouria, BSEM Vice President, will lead a case study session engaging attendees in a collaborative exploration of real-world cases.

Code for 15% off for in-person attendance: AONMVIP15. Please see upcoming events for further details.

## Long Covid-19 Foundation's activities



The Long Covid-19 Foundation (<https://lc19fdn.org/>) (UK registered charity 1193939) was founded by Dr. Valentina Viduto (PhD, NT) with a vision to support those affected by the prolonged effects of Covid-19. Over the past five years the Charity has tirelessly researched the intersection between nutrition and Long Covid. Dr. Viduto's commitment to this field has been a beacon for countless people seeking relief with the charity's extensive resources. Collaborating with scientists, doctors, and therapists, Valentina has led the foundation in uncovering innovative testing methods and therapies to address Long Covid's complex health challenges. With over 160 publicly accessible interviews (found on the Foundation's Youtube channel

<https://www.youtube.com/@LongCovid19Foundation>) conducted over the past four years, the Foundation has created valuable resources for individuals to better understand and apply insights for their recovery. They held an informative interview with Dr. Armin Schwarzbach from ArminLabs about the 3 i's of recovery: countering infections and inflammation, and supporting immunity:

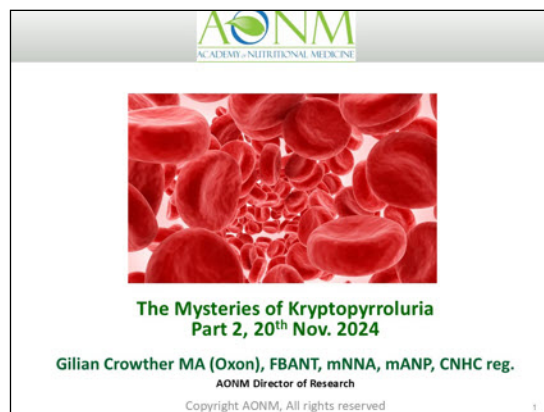
<https://youtu.be/9lTwpulyirs>

The Long Covid-19 Foundation has established a supportive community focused on finding solutions

and regaining health, and will be working closely with the Academy of Nutritional Medicine both for testing and outreach.

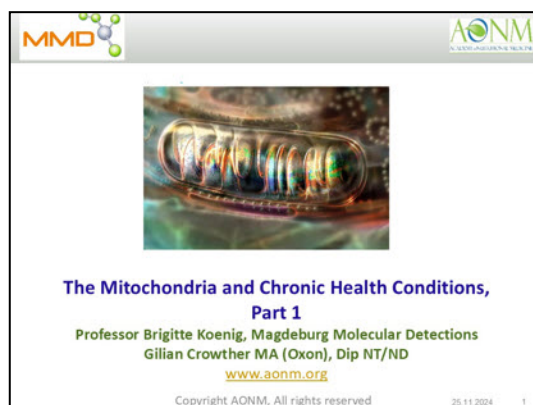
For more information, please contact [helpme@longcovidfdn.com](mailto:helpme@longcovidfdn.com)

## Recent webinars on therapies for KPU and the mitochondria



Gilian Crowther gave a second talk on "The Mysteries of Kryptopyrroluria" on November 20th where she focused on therapies for the condition. She discussed detoxification approaches to dislodge the heavy metals that may have substituted for the lack of zinc in the hundreds of enzymes that require it, and support for the kidneys doing such hard work excreting high levels of pyrroles. Other topics were remedies for replenishing the nutrients the organism has been losing, as well as longer-term approaches that may go to the core of why KPU has been acquired in the first place. The recordings of both Parts I and II can be found here:

<https://aonm.org/kpu-webinar/>



Part I of The Mitochondria and Chronic Health Conditions on 22nd October with Professor Koenig and Gilian explored the fascinating world of mitochondrial testing and discussed initiatives for the various parameters tested. Part II will be held early next year. Please go here for the recording:

<https://aonm.org/mitochondria-webinars/>

## Upcoming events



### **COMPREHENSIVE LABORATORY TESTING & INTERPRETATION: MOLECULERA BIOSCIENCES**

Moleculera Biosciences is best known for its outstanding work in the field of PANS/PANDAS. This session will cover the “Autoimmune Brain Panel” (<https://aonm.org/moleculera/>)

#### **For doctors/therapists**

Training with Gilian Crowther, AONM Director of Research, on the value of this panel, and how it is used.

By Zoom, Wednesday 27th November, 6.00-7.00 pm

[https://us02web.zoom.us/webinar/register/WN\\_JxdfadsTpm0ehS1R3Wm8A#/registration](https://us02web.zoom.us/webinar/register/WN_JxdfadsTpm0ehS1R3Wm8A#/registration)



### **Klinghardt Institute**

A.R.T.® Advanced Training Weekend

Dec. 13th - 15th 2024

Klinghardt Institute, Woodingdean Business Park, Brighton

<https://klinghardtinstitute.com/event/a-r-t-advanced-weekend-december-2024/>

Klinghardt A.R.T.® 1 Beginners Online Programme

Jan 21st - Mar 18th, 2025

<https://klinghardtinstitute.com/event/klinghardt-a-r-t-1-beginners-online-programme-jan-2025/>



### **British Society for Ecological Medicine**

Ecological Medicine: Approaches to Infections

Friday, November 29th

2024 Hallam Conference Centre, London

9.00am - 5.00pm <https://www.bsem.org.uk/>

Dr. Armin Schwarzbach from ArminLabs and Gilian Crowther from AONM will be speaking.

Both in person and remote attendance possible.

15% discount code for AONM (for in-person attendance): AONMVIP15

## **AONM TESTING SERVICES**

**Helping practitioners identify real causes of illness**

**Testing available for a range of chronic illnesses covering:**

**Lyme Disease and co-infections**

**Testing mitochondrial function**

**Cancer monitoring: Testing for circulating cancer cells as well as apoptosis of cancer cells by natural and other substances to help practitioners determine effectiveness of ongoing treatment**

**PANS/PANDAS: Assisting practitioners to identify whether an individual's neurological and/or other symptoms could be caused by an autoimmune dysfunction**

**Food intolerances - various tests available**

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