

AONM Newsletter April 2023



With Lyme Month coming up in May, AONM has many relevant events ahead, which we cover in this newsletter. The circulation of Strep A and Scarlet Fever, especially amongst youngsters, has led to an uptick in cases of PANDAS (*Paediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcal infections*), and Professor Craig Shimasaki will be giving us insights into the latest research and findings on this in the first webinar in May – also highlighting the associations with neuroborreliosis.

The mitochondrial testing that AONM is spearheading proceeds apace, with new tests being introduced every month. Please dip into our resources, as AONM has so many webinars and articles on these fascinating miniscule orchestrators of our entire organism.

Please see our upcoming events section for information on the wide range of events ahead – both in person and virtual – ahead among a wide variety of affiliated associations. The field is really coming alive again after a degree of hibernation in the last three years. Hopefully a sign of times to come!

As always, we welcome your feedback: please contact us on info@aonm.org

CONTENTS

- ▶ **1. PANDAS on the rise due to the increase in group A strep infections**
- ▶ **2. Spotlight on Mycotoxins**
- ▶ **3. May is Lyme Disease Month**
- ▶ **4. New Mitochondrial Tests**
- ▶ **5. Upcoming Events**

1. PANDAS on the rise due to the increase in group A strep infections

Since last September, at least five European countries (the UK, France, Ireland, the Netherlands, and Sweden) have reported a rise in invasive group A streptococcal infections (iGAS). One key factor is likely to be due to decreased exposure to strep A infections during the COVID-19 pandemic, leading to a drop in immunity.

Streptococcus A, otherwise known as Strep A, is a common bacterium found in the throat and on the skin. It can cause a number of different infections,

including tonsillitis, pharyngitis, scarlet fever, impetigo and pneumonia.

Professors Cleary and Agalliu from the universities of Minnesota and Colombia discovered that autoantibodies that are naturally formed to Strep A can migrate into the brain along the nerve that senses smell. The olfactory system bypasses the cellular barriers of the central nervous system and provides a direct portal from the nasal cavity to the olfactory bulb within the brain.⁽ⁱ⁾

There are proteins in the brain with similar receptors to Strep A, and these autoantibodies can cross-react with them and cause autoimmune disease. The tissues that are particularly prone to this “friendly fire” are in the basal ganglia. They are tubulin (the scaffolding of neurons in the brain), lysoganglioside (especially important for modulating cell signalling), dopamine receptors, and several others.

PANDAS, which stands for Paediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcal infections, is a type of autoimmune basal ganglia encephalitis triggered when the autoantibodies to Group A strep have begun to exhibit this crossreactivity. The physical and psychological symptoms are numerous: “PANDAS is characterised not only by the acuity of OCD onset, but also by a complex constellation of co-occurring symptoms, including emotional lability, separation anxiety, adventitious movements [particularly tics and choreiform movements], developmental (behavioural) regression, cognitive decline, and somatic symptoms, including urinary urgency, frequency, and enuresis, as well as insomnia and sleep disruptions.”⁽ⁱⁱ⁾ The Child Mind Institute claims that “Some 86 percent of acute onset OCD cases are linked to strep.”⁽ⁱⁱⁱ⁾

PANS/PANDAS UK has put out a position statement with guidance on PANDAS and the recent increase in scarlet fever and invasive Group A Strep (<https://www.panspandasuk.org/group-a-strep-parents-leaflet#:~:text=PANDAS%20is%20a%20health%20condition,response%20and%20for%20brain%20inflammation>).

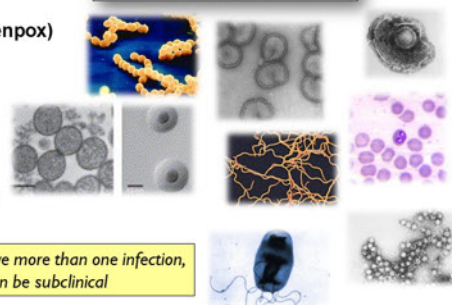
SARS-CoV-2/Covid has of course also exacerbated the situation. A number of studies have evidenced the neurological involvement of SARS-CoV-2, and its tropism to the basal ganglia^(iv), and AONM held a webinar with Professor Craig Shimasaki on this: (<https://www.youtube.com/watch?v=xLJf0xxHPGc>)

Neurological Lyme can also produce the same symptoms via a similar mechanism, as can even influenza (see Fig 1 below).

Some Infectious Triggers that are Associated with PANDAS or PANS

- Group A streptococci
- Influenza A
- Varicella (chickenpox)
- Mycoplasma
- Lyme disease
- Babesia
- Bartonella
- Coxsackie virus

Yes, You Can Catch Insanity
A controversial disease revisits the debate about the immune system and mental illness.



Courtesy of Moleculera Labs, Oklahoma

1

Professor Craig Shimasaki, CEO of Moleculera Labs, which detects signs of this autoantibody attack in the blood, will be giving a webinar on these topics on May 3rd at 7.00 pm UK time, called “*The Rise in Other Infections Post-COVID and our Immune Response: What impact can these have on an increase in autoimmune encephalitis?*”. Please do register at the following link:

https://us02web.zoom.us/webinar/register/WN_RM1BdD2iR9SYR7wR7er1Hg#/registration

i. Dileepan T, Smith ED, Knowland D, Hsu M, Platt M, Bitner-Eddy P, Cohen B, Southern P, Latimer E, Harley E, Agalliu D, Cleary PP. Group A Streptococcus intranasal infection promotes CNS infiltration by streptococcal-specific Th17 cells. *J Clin Invest*. 2016 Jan;126(1):303-17; Dando SJ, Mackay-Sim A, Norton R, Currie BJ, St John JA, Ekberg JA, Batzloff M, Ulett GC, Beacham IR. Pathogens penetrating the central nervous system: infection pathways and the cellular and molecular mechanisms of invasion. *Clin Microbiol Rev*. 2014 Oct;27(4):691-726

ii. Chain Jennifer L., Alvarez Kathy, Mascaro-Blanco Adita, Reim Sean, Bentley Rebecca, Hommer Rebecca, Grant Paul, Leckman James F., Kawikova Ivana, Williams Kyle, Stoner Julie A., Swedo Susan E., Cunningham Madeleine W. “Autoantibody Biomarkers for Basal Ganglia Encephalitis in Sydenham Chorea and Pediatric Autoimmune Neuropsychiatric Disorder Associated With Streptococcal Infections.” *Frontiers In Psychiatry*, vol. 11, 2020, p. 564; <https://www.nimh.nih.gov/health/publications/pandas>

iii. <https://childmind.org/guide/parents-guide-to-pans-and-pandas/>

iv. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7255547/>
<https://www.nature.com/articles/s41467-022-29440-z>
<https://onlinelibrary.wiley.com/doi/full/10.1111/ene.15217>

2. Spotlight on Mycotoxins

Direct immunochemical detection of multiple mycotoxins

TOXIPLEX BASIC **DIRECTLY** detects Aflatoxin B1 (AFB1), Deoxynivalenol (DON), Fumonisin (FUM), Ochratoxin A (OTA), and Zearalenone (ZEA).

TOXIPLEX BASIC **DOES NOT** detect human antibody responses (IgA, IgG, IgE, etc.) against AFB1, DON, FUM, OTA, and ZEA.

TOXIPLEX BASIC **DOES NOT** measure mycotoxins in human urine because,

1. The use of human plasma or serum is five times more common than urine in literature (PubMed)
2. Variation in urine volume requires creatinine normalization
3. Daily mycotoxin intake variation demands 24hr sampling

ArminLabs now has a mycotoxin test available - ToxiPlex. The test provides a quantitative and qualitative in-vitro assay for mycotoxins in human serum. This means it provides a direct immunochemical detection of mycotoxins, identifying the presence of mycotoxins rather than the antibody response to mycotoxins. It is the first of its kind globally that simultaneously tests five of the most common mycotoxins on an ELISA platform with outstanding analytical performance. The test has a significantly lower threshold of detection: detection limit = 0.15 ppb to 19.53 ppb ("parts per billion").

Accuracy was proven in a study (below) to be $\geq 93\%$, It has lower cross-reactivity compared to other tests, and using human serum also compensates for fluctuations in daily mycotoxin uptake.

Exposure to mycotoxins is via food (both consumed directly and the food that animals we eat have been fed) and indoor environments. The toxins detected in these tests are found in both: aflatoxin B1 (AFB1), deoxynivalenol (DON), fumonisin (FUM), ochratoxin A (OTA) and zearalenone (ZEA) in human serum. An October 2022 peer-reviewed article in a highly reputed MDPI scientific journal "Toxins" substantiates the methodology used in this test: <https://www.mdpi.com/2072-6651/14/11/727>

A link to a recent AONM webinar on this test, and the PDFs of the slides, can be found here: <https://aonm.org/mycotoxin-webinars/>

Please refer to our webpage for further details: <https://aonm.org/mycotoxin-testing/>

3. Lyme Disease Month

May is Lyme Disease Month, to commemorate the many millions around the world who are suffering, and help them find solutions.

AONM will be holding a number of different webinars in May dedicated to Lyme Disease Month. The first, on May 3rd, features Professor Craig Shimasaki, who will be talking about the different infections that can lead to autoimmune encephalitis, including Neuroborreliosis (see lead article).

Professor Leona Gilbert will be giving a presentation on May 16th called "*Scientific Evidence to Support the Use of Phytochemicals for Lyme Borreliosis*". Professor Gilbert has a doctorate in biotechnology and a very long experience in bio-innovation and bio-business. She will be accompanied by Markus Berger, who will give a brief overview of the Phytobox products that AONM now stocks for Borreliosis and coinfections (see the AONM Shop).

On May 23rd at 7.00 pm we will have Professor Robert Bransfield, highly reputed psychiatrist with a

specialism in Lyme and coinfections, and Dr. Joe Jemsek, an Infectious Disease specialist famous for his work with Tick Borne Diseases. They will be sharing together their wisdom gained over their combined decades of experience, with insights from their direct clinical practice (please see their previous talks at: <https://aonm.org/webinars/>).

On May 31st at 7.00 pm we are delighted to have Dr. Armin Schwarzbach, who will be giving an overview on the occurrence of Lyme and coinfections over the Pandemic – particularly the reactivation of past infections that he and his worldwide network of laboratories and doctors have noticed. This will be an interview with Gilian, and questions from the audience.

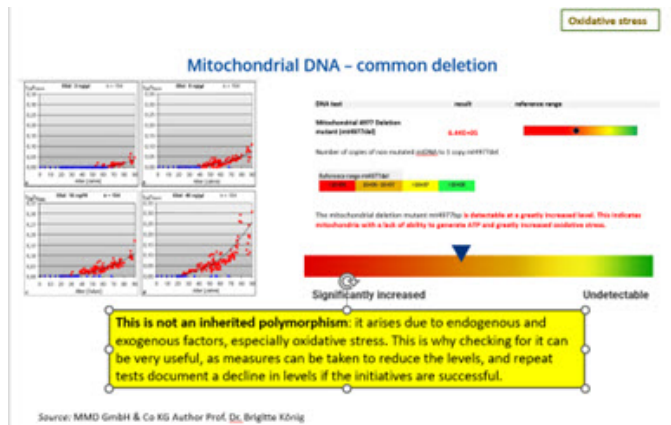
Watch out too for the Herbalist Julia Behrens, who will be talking about her new book on Tuesday June 6th, "*Lost in Lyme: The Therapeutic Use of Plants in Supporting People with Lyme Disease*".

Please see "Upcoming Events" for how to register for these exciting webinars.

4. New Mitochondrial Tests

AONM is now offering a test of mitochondrial oxidation that can be performed via fingerprick, the **Mito Stress Test**. This test, highly stable as a bloodspot in a special kit now available in the UK, reveals the oxidative stress that your (or your patient's) mitochondria are suffering, and whether any DNA damage has already occurred. This can be remedied with specific interventions, and healthy mitochondria can be nurtured to take the place of those that are damaged. This is particularly useful and practical for athletes/sports studios to check the results of physical training and avoids overtraining.

A new test of **Intact versus Non-intact Mitochondria** can also be combined with other tests to see the extent to which the existing mitochondria are fully functional.



Please see the recent webinar with Professor Koenig, the laboratory doctor who runs MMD, giving an overview of these more specialised tests, and Gilian Crowther explaining how to improve these aspects of mitochondrial function (fourth webinar on the page):

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

JUST ONE OF 70+ WORKSHOPS

🕒 THURSDAY 29 JUNE / 16:30 - 17.00

**Long Covid pathogen reactivation:
Testing and therapeutic options**



Numerous studies have evidenced that COVID is able to reactivate dormant pathogens, this talk will cover the evidence of reactivation, testing options, and also outline therapies that have proven particularly helpful.

Dr Armin Schwarzbach

Managing Director & CEO ArminLabs

Register online ipmcongress.com

Access the **International Exhibition** and full **Workshop Programme** from just £25 per day

Hosted by

arminlabs

Integrative
& Personalised
Medicine 23

29 JUNE - 01 JULY 2023
QEII CENTRE LONDON UK

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

+44(0)3331 210 305 info@aonm.org

Upcoming Events

AONM



Wednesday 3rd May 2023 - 7pm

The Rise in Other Infections Post-COVID and our Immune Response: What impact can these have on an increase in autoimmune encephalitis?

Professor Craig D. Shimasaki, Ph.D, MBA, Co-Founder and CEO of Moleculera Labs

<https://aonm.org/shimasakiwebinar>

Tuesday May 16th - 7pm

Scientific Evidence to Support the Use of Phytochemicals for Lyme Borreliosis

Professor Leona Gilbert and Markus Berger

<https://aonm.org/phytolymewebinar>

Tuesday 9th May 9am or Wednesday 10th May 5pm
Changes in the number of circulating epithelial tumor cells during radiation therapy Participate free at <https://maintrac.de/en/meeting-access2>

International Maintrac Online Forum Q2 2023

Tuesday 23rd May - 7pm

Discussion with Professor Robert Bransfield and Dr. Joe Jemsek on Lyme Disease Link to be announced

Wednesday 31st May - 7pm

Overview on the Occurrence of Lyme and Coinfections over the Pandemic

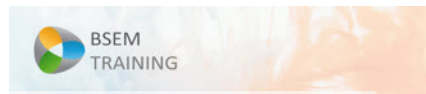
Dr. Armin Schwarzbach. Link to be announced

Tuesday 6th June - 7pm

Lost in Lyme: The Therapeutic Use of Plants in Supporting People with Lyme Disease

Herbalist Julia Behrens <https://aonm.org/lostinlyme>

BSEM - British Society for Ecological Medicine



23 Jun 2022 9:00am - 5:00 pm

Training Day 15 – Beyond Multiple Chemical

Sensitivity - The Hallam Conference Centre

<https://www.bsem.org.uk/events/beyond-multiple-chemical-sensitivity>



<https://betterwayconference.org/> June 1st-4th

Dr. Sarah Myhill will be speaking on June 1st, and Dr. Dietrich Klinghardt is speaking on June 2nd and 3rd.

GNC



Dr. Sarah Myhill

GNC Events – Dr Sarah Myhill gave a webinar to an invited audience on “How to Live to 100”; covering the importance of mitochondria, their energy production and how to prolong their function through diet and lifestyle, the recording is on their website at <https://gncouncil.co.uk/events/> or on their YouTube channel at <https://youtu.be/1Rs5EjTAGDc>

Nutrition Collective



23rd September 9.00 am - 5.00 pm

Metabolic Flexibility: Integrative Oncology in Action

Cavendish Conference Centre London

www.nutritioncollective.co.uk



19-20 May 2023

PHC Annual Conference 2023

The Crucible, Sheffield

See here for the programme and registration:

<https://phcuk.org/phc-conference-2023/>



15th - 17th of September 2023

5th International Conference on Chronic Pathologies

Hybrid academic congress

Exchange of the latest ideas and perspectives in the field of chronic diseases

Town Hall Gilching [near Munich], Rathausplatz 1, 82205 Gilching, Germany. Speakers include Dr. Armin Schwarzbach and Gilian Crowther.

<https://chronic-pathologies.com/en>



Integrative and Personalised Medicine 2023

29th June - 1st July

<https://www.ipmcongress.com/>

AONM/Arminlabs will be present with a stand, and Dr. Armin Schwarzbach will be giving a talk.

Discount code AONM-20 for 20% off.

For more detailed information about AONM please see our website

www.aonm.org

+44(0)3331 210 305 info@aonm.org

AONM Shop

AONM has opened its own online shop so as to enable easier test ordering for those who wish to order in this way, as well as to provide a range of nutritional products that are of health benefit.

We have launched two different health items - PhytoBox and Britt's Superfoods.

PhytoBox



PhytoBox offers high-quality food supplements in capsule form. The focus is to support the immune system in chronic disease, inflammation, environmental / toxin pollution, ME/CFS, as well as other multi-infection or multi-system disease.

The products are of very high quality and the range of scientifically based supplements is characterised by the highest possible compatibility and bioavailability.

PhytoBox products are hypoallergenic*. This means that almost all of the products are also suitable for sensitive people, allergy sufferers and those with food intolerances. They are:

- Free from unnecessary additives and preservatives
- Free from sweeteners and flavourings
- Free from lactose, fructose** and gluten
- Free from artificial colourings and coatings
- Free from trans fats and hardened fats
- Free from flow and release agents
- Free from fillers
- Vegan (except PhytoBox 6 & 8 which contain Propolis, and PhytoBox 5 which contains bacterial cultures)

The range of 11 products covers:

PhytoBox 1: Support for Borrelia and intracellular infective pathogens.

PhytoBox 2: Support for neuroborreliosis and neuropathic dysfunctions.

PhytoBox 3: Breakdown of pleomorphic forms and support of detoxification & purification.

PhytoBox 4: Anti-inflammatory and pain relieving.

PhytoBox 5: Synbiotic with prebiotic.

PhytoBox 6: Support in chronic opportunistic virus

infection, especially herpes vividae.

PhytoBox 7: Support in cytokine storms.

PhytoBox 8: Support in Bartonella infection.

PhytoBox 9: Support in Chlamydia Pneumoniae infection.

PhytoBox 10: NK cell support.

PhytoBox 11: Support in Coxsackie and Echovirus infection.

Visit the AONM shop to find out more <https://aonm.org/shop/phytoBox/>

Britt's Superfoods



Britt's Superfoods are a range of juices that are field-grown, organic and freshly frozen. They include some of the most nutritious superfood juices on the market. Because they are frozen immediately after harvesting and juicing, they are natural energy boosters and packed full of all the antioxidants, amino acids and enzymes needed for good health.

Powdered wheatgrass and other juices generally do not retain all of their vital nutrients, but these juices are delivered to your door in frozen daily sachets, ready to be stored in your freezer and be taken daily.

For example, the raw, organic, fresh wheatgrass juice contains higher levels of chlorophyll than any other green vegetable. Due to its exceptionally high nutritional content, fresh wheatgrass juice can contribute to healthy energy levels, reduce tiredness and fatigue, boost physical and mental performance and support a healthy immune system.

The fresh, raw Elixir Vitality juice is an incredible antioxidant and provides a natural energy boost. The high levels of vitamins and nutrients it contains also boost the immune system, support blood cell development and assist with healthy skin, nails and vision.

The range also includes barleygrass, ginger and turmeric, rainbow juice, beetroot, kale and many more to choose from.

See <https://aonm.org/shop/frozen-juice-shots/> for more information.

* In single products, ingredients are obtained from potentially allergenic substances (e.g. plant extracts). These products are marked accordingly.

** In general, the products are free of fructose, but may occasionally contain natural fructose from individual ingredients (e.g. plant extracts).