

AONM Newsletter September 2014

This month's newsletter follows up on last month's neuroimmune focus with a deeper dive on organophosphates, and a review of Dr. David Bell's seminal monograph "Cellular Hypoxia and Neuro-Immune Fatigue" in commemoration of the thirtieth anniversary of the Lake Tahoe and Lyndonville ME outbreaks. Dr. Bell sees mitochondrial disorder as the underlying factor in neuro-immune conditions such as ME and fibromyalgia, with upregulated nitric oxide a key driver in the different symptoms of these devastating conditions. Our "Spotlight on lab markers" highlights tests for upregulation of the NO/ONOO⁻ cycle. We cover a wide range of further interesting topics, finishing with an outlook on upcoming events held by either AONM or affiliated organisations.

Neuroimmune disorders

- ▶ **Organophosphates: Insights from the front line**
- ▶ **The cellular hypoxia underlying neuroimmune disorders**
- ▶ **Spotlight on lab markers: How to measure an upregulated NO/ONOO⁻ cycle**

Lyme disease and co-infections

- ▶ **Freedom from Lyme Disease: A review**
- ▶ **"Focus on Lyme Disease" Conference**

Cell Symbiosis Therapy: New Meetup group

Corporate Wellness: SuperWellness at Kuoni Events

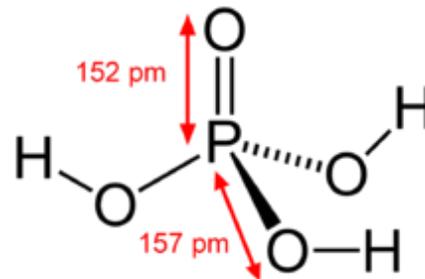
Organophosphates: Insights from the front line

AONM member, Audrey Adcock, wrote in our July newsletter about the May meeting on organophosphates at the House of Commons. This month she reviews the grave impact OPs have sometimes had on the lives of farmers and their families.

I kept sheep in Devon from 1979 - 86. The use of organophosphates (OPs) was widespread during this time not just as agricultural pesticides, but also

because once whales became a protected species and whale oil became unobtainable, OPs with 'slip' were

Organophosphates inhibit **acetylcholine**, a neurotransmitter in the [autonomic nervous system](#), causing poisoning by phosphorylating the serine hydroxyl residue on AChE, which inactivates AChE. AChE is critical for nerve function, so the irreversible blockage of this enzyme, which causes acetylcholine accumulation, results in muscle overstimulation. This causes disturbances across the cholinergic synapses and can only be reactivated very slowly, if at all. [Paraoxonase \(PON1\)](#) is a key enzyme involved in OP pesticides and has been found to be critical in determining an organism's sensitivity to OP exposure.



(Source: Wikipedia)

substituted in lubricants, paints, floor and furniture polish. Licensed by the government, OPs were freely available as fly killers, garden sprays, pet flea treatment, woodworm treatments, and even in some room fresheners. No-one seemed to have any idea that OPs, specifically designed to attack the central nervous systems of mammals, were therefore also a danger to humans. I was aware of the concern about farmers suffering from “dipper’s flu,” and attended a number of meetings called by the County Medical Officer offering an opportunity for farmers to describe their symptoms and the effect their illness had on their ability to run their farms. The stories were all similar. They spoke of increasing physical weakness, exhaustion and their struggle to keep working. They also suffered from ‘brain fog’, loss of memory and concentration – essential paperwork was difficult or impossible.

I became involved with local ME support groups and edited a newsletter for them that was widely circulated. Inevitably I became a ‘listening ear’ for farmers, their wives, people with ME and their friends and relatives, all of whom were perplexed by the lack of treatment available and distressed by the widespread belief – even among doctors – that those suffering from these symptoms were merely depressed, or even that they were malingering.

GPs were mystified mainly, I believe, due to their lack of knowledge of toxicology and their sense that any product licensed for use must be safe. One farmer told me that when he blamed OP sheep dip for his illness his GP said: “The government would never let you use anything so dangerous.” Some GPs were sympathetic but bewildered; patients with these conditions were – at best – offered antidepressants. Some who argued with their doctors were banned from the surgery.

It soon became apparent to me that the symptoms of people with ME and farmers affected by agricultural chemicals were so similar that it was worth finding out whether there was any connection. I used to take a detailed history of where the ME sufferers who contacted me lived and worked, what they did in leisure time and many other details. Most pinpointed the onset of ME as “a ‘flu-like’ illness” from which they never recovered, but on further questioning most recalled an occasion, weeks or months previously,

when they had had contact with chemicals or fumes that had caused transitory symptoms. Two carpet fitters, for example, found that they felt unwell after fitting wool carpets. Both got worse and finally had to give up work. One became bedridden. An auctioneer felt headachy after selling sheep during the compulsory dipping period, later developing ME. A couple in their forties who moved into an old cottage where the beams on their bedroom ceiling had just been treated for woodworm both became ill: the wife with ME, while her husband was diagnosed with Parkinson’s Disease.

At the time, none of these people associated their initial, transient headachy or flu-like symptoms with chemicals in their environment: they put them down to being tired after a busy day or undertaking unusual activity. Later – after a few weeks, or a month or two – they became ill, when (I suspect) an opportunist infection took advantage of their weakened immune system. This illness varied; ‘flu was common, also glandular fever. Few recovered from this often severe illness that they generally considered (in retrospect) to be the start of their ME. Farmers would have to give up their livelihoods, some meeting an early death. Cancer was not unusual in all categories.

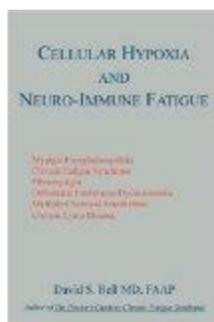
Professor Vyvian Howard’s essay, “Chemical Mixtures and Synergism - the end of Traditional Toxicology?” (1997) highlighted research showing that mixtures of chemicals had greater potency than the sum of each chemical alone, even when some of the ingredients were ‘inert’, (surfactants, etc). Doris Jones was researching the causes of ME at the same time as I was, though we did not meet until a few years later. Her report “A Constellation of Events in ME Onset” lists infections plus stress, interactions between infections and vaccinations, exposure to toxic chemicals, pesticides or environmental toxins, hypersensitivity or allergic reactions, with the inappropriate use of antibiotics relevant in the first two categories.

The mystery of why some people are unaffected by environmental toxins may be due to the protective effects of the enzyme paraoxonase (PON1, 2 &3). See the work by C.E. Furlong and Dr Bert la Du (paraoxonase was also covered in July’s “Spotlight on lab markers”).

Audrey Adcock

The cellular hypoxia underlying neuroimmune disorders

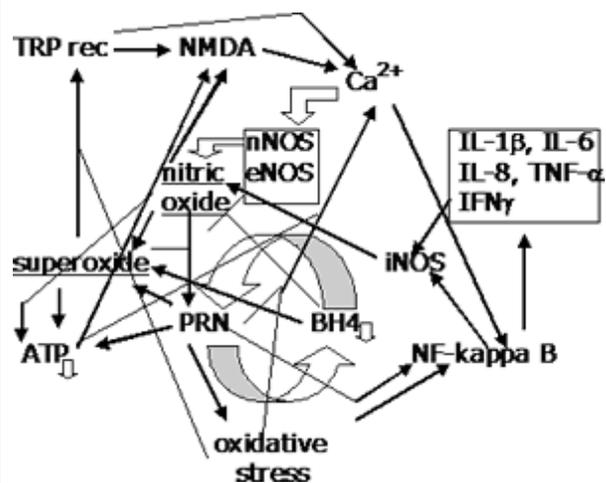
Dr. David Bell, the GP from Lyndonville, experienced the outbreak of ME that affected 212 inhabitants of the small rural town near Buffalo, NY, in 1984 - 87, and was instrumental – together with Dr. Cheney and Dr. Peterson from Lake Tahoe – in putting ME on the map internationally. His book “Cellular Hypoxia and Neuro-Immune Fatigue” is a unique insight into the possible drivers of the condition. He explains how he sees neuro-immune fatigue as resulting from a series of events beginning with a viral or bacterial infection, toxic exposure or neurologic (CNS) injury. “These initiating events in a genetically sensitive person lead to immune system abnormalities and cause an excess production of nitric oxide or inability to eliminate it properly.” In discussing ME/CFS and fibromyalgia, he writes “...they actually do fit a pattern that makes sense, and I would define this pattern by dividing the symptoms into three groups. The groups follow from the immune and metabolic cascade ... where nitric oxide and its effect upon mitochondrial function becomes critical.” He has dedicated chapters on the vascular effects of nitric oxide, central sensitisation, and cytopathic hypoxia (oxygen starvation within the cell).



This is a fascinating and highly insightful monograph that has not been sufficiently factored into current thinking on these neuroimmune conditions. As lauded for example in the *CFS Treatment Guide*, this is “one of the most concise explanations for the mechanisms of CFS/ME that you will ever find.”
Gillian Crowther

Spotlight on lab markers: How to measure an upregulated NO/ONOO⁻ cycle

Citrulline is formed when excess nitric oxide (NO) is generated as a by-product. Elevated citrulline indicates increased nitric oxide synthesis. This can be measured in the urine and also in expired air. Nitrosylation of tyrosine leads to **3-nitrotyrosine**, which correlates with elevated NO/peroxynitrite (ONOO⁻) generation, as does its breakdown metabolite nitrophenylacetate (full name **4-hydroxy-3-nitrophenylacetate**). These can both be measured in urine. B12 is a nitric oxide scavenger, so reduced levels of B12 can also indicate an upregulated NO/ONOO⁻ cycle. Upregulated **methylmalonic acid** in urine is considered by many experts to be the best measure of intracellular levels of B12 (it is a breakdown product of B12 that we are familiar with here in the UK from e.g. Genova’s Optimum Nutritional Evaluation). Various labs in Germany provide tests of “nitrosative stress” (an upregulated NO/ONOO⁻ cycle) using these markers either individually or in combination. Please contact AONM if you are interested in carrying them out. We work closely with labs that conduct these tests, and have managed to organise very reasonable courier rates for sending specimens abroad.

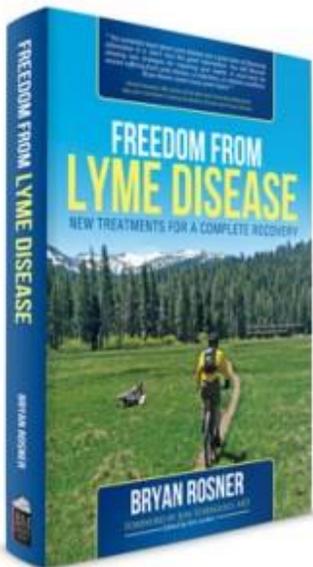


The NO/ONOO⁻ cycle, printed with the kind permission of Professor Martin Pall

“Freedom from Lyme Disease”: A review

Freedom from Lyme Disease by Bryan Rosner is the sequel to his other two books on the Lyme: “The top 10 Lyme disease treatments ,“ and “Lyme disease and Rife machines.”

In my opinion, this latest work of his appears mostly geared towards addressing the last 10% of remaining Lyme Disease (Borrelia), and as such is very good, giving more ideas as to what to add and combine. It is helpful to those already fully initiated into the complexity of Lyme Disease. But I would not consider this a book for patients wishing to get a handle on the spectrum of information available when newly diagnosed. It presents a vast number of options and is not always very systematic. It would probably be better to start with his first book and other books written by ILADS doctors (such as Dr. Richard Horowitz’s “Why can’t I get better: Solving the mystery of Lyme & chronic disease,” see July’s AONM newsletter).



This is a very readable book, and is a real addition for those familiar with Lyme Disease, especially if you are mainly trying to work on your own or are a practitioner. It is particularly informative on the use of Rife machines. Mr. Rosner explains his current position on Rife machine therapy, which is that it can attack free-swimming spirochetes when they emerge from their colonies (something that may be encouraged by the use of antibiotics and herbs), but that it does not appear adequate to completely address

infections that have become entrenched and sequestered behind biofilm in tightly-packed colonies.

Charlotte Bridge

“Focus on Lyme Disease” Conference

Rio Trading are hosting a conference on Lyme Disease in collaboration with CAM Conferences on 25 October 2014 at Cavendish Square, Duchess Mews, London. Dr. Philip Kielman will provide a deep insight into Lyme disease, a highly misunderstood disease that affects millions worldwide. Theodoor Scheepers, the second speaker, is co-owner and director of Microbial Test Laboratory, a private medical laboratory in the Netherlands. He is a lecturer and also a researcher on diagnostic tools to detect Borrelia. He will explain the different types of tests on the market and how to get the most accurate result from Lyme testing. Nutritional therapist and author Christine Bailey will go through a real-life case study and review the promising new CAM possibilities to assist Lyme disease sufferers in their recovery. Dr Fred Kuipers practises bio-energetic and bio-regulative medicine in Holland, and will discuss his approach to degenerative disease. Dr Albin Beck specialises in detoxification at his clinic in Bad Tölz, Germany, and will demonstrate different practical examples for use with chronically ill patients, including Lyme Disease.

Judy Rocher, Education Manager, Rio Trading

Cell Symbiosis Therapy – New Meetup group



We have a new Meetup group for anyone interested in Cell Symbiosis Therapy (CST).

For those not familiar with the Meetup concept: 'Meetup is the world's largest network of local groups. Meetup makes it easy for anyone to organize a local group or find one of the thousands already meeting up face-to-face. More than 9,000 groups get together in local communities each day,

each one with the goal of improving themselves or their communities. Meetup's mission is to revitalize local community and help people around the world self-organize. Meetup believes that people can change their personal world, or the whole world, by organizing themselves into groups that are powerful enough to make a difference.'

Our group has a dedicated space on: <http://www.meetup.com/CST-UK/>. Membership is free.

We will be using Meetup to help enable us to inform and manage networking and educational events for our group beyond dedicated CST training events. This is a great way of bringing like-minded people together and building strong bonds between practitioners and individuals keen to benefit from CST as a therapeutic tool. Contributions from members are encouraged and appreciated.

Our next monthly Meetup is on September 23 at 6.00 at the London Neurology and Pain Clinic, 100 Harley Street: please do sign up to our Meetup group, we would love to see you there! Alternatively, please RSVP to gilian@aonm.org.

Corporate Wellness



Angela Steel's SuperWellness, which works in close collaboration with AONM, has just completed a highly successful new employee wellness programme at the tour operator Kuoni, based in Dorking, covered in a recent press release:

Kuoni Pioneers New Employee Wellness Programme

Travel experts Kuoni have enabled employees to achieve measurable improvements in their wellness levels as a result of completing a programme designed by Sutton-based corporate wellness specialists SuperWellness. The pioneering 3 Month

Nutrition Challenge, which tracked the results of 40 employees, resulted in an average 33% improvement in energy levels across all participants, 23% better concentration, and a total change in metabolic age of 80 years across the company.

The healthy challenge, in which four teams competed for prizes, involved a series of presentations on nutrition topics such as boosting metabolism and improving brain power and stress resilience. Employees also had access to group coaching to keep them motivated and help them introduce lasting lifestyle changes compatible with working life. Healthy options were introduced to the canteen to support the programme.

Prior to starting the nutrition challenge, Kuoni and SuperWellness carried out a survey to pinpoint the specific challenges employees were facing, so that they could be addressed. The survey highlighted that the top areas of concern for the employees were weight management (61%), energy levels (54%) and preventing future illness (50%).

Kuoni Managing Director Derek Jones commented: "For us, running a great business starts with healthy and happy employees. I'm delighted that Kuoni has been able to lead the way by introducing a pioneering new concept in employee wellness which has had really meaningful results." He added: "The positive outcomes have been way beyond improved wellness, enhancing team spirit and motivation, and we are proud to build on last year's achievement of being listed in the Times 100 Best Companies to Work for."

SuperWellness founder Angela Steel, who created the 3 Month Nutrition Challenge, said: "We were really blown away by the level of commitment participants showed to making healthy changes and reaching their goals. It goes to show that given the right information and support, everyone can become empowered to improve their health and wellbeing. The long-term benefits for those involved, their families and their employers, are immeasurable."

The study was also reported on in the HR magazine "Benefits":

<http://www.employeebenefits.co.uk/benefits/healthcare-and-wellbeing/kuoni-boosts-staff-wellbeing-with-nutrition-challenge/105369.article>

Events

Gilian Crowther, Senior AONM therapist, gave a talk entitled “**Mitochondrial Magic**” – a mitochondrial approach to therapy practised at AONM – to the British Longevity Society on 26 August <http://www.thebls.org/meetings.html>. It was very well received. Their next meeting on Thursday 9 October will feature a prominent international speaker from the London Anti-Ageing Conference taking place that same weekend (name still to be confirmed).

Cell Symbiosis Therapy (CST, see <http://www.aonm.org/clinic.html>), is holding a **CST Meetup** on September 23 at the London Neurology and Pain Clinic, 100 Harley Street, London W1G 7JA, from 6.00 pm – 8.30 pm. RSVP please to gilian@aonm.org.

AONM will be at **CAM Expo** this year, October 4th and 5th, at Stand 1017 (<http://www.camexpo.co.uk/>). Please come and visit us, and let us know if you would like a free ticket, as we have a limited contingent to distribute among members.

Professor Basant Puri is speaking at the British Naturopathic and Osteopathic Association (BNOA), <http://bnoa.org.uk/>, on October 12, on the topic “**Lyme Disease: A commonly undiagnosed disease and possible cause of arthritis and joint pain.**” Dr. Ray Perrin, also closely affiliated with AONM, is speaking in the afternoon, on “**CFS/ ME and Neuro-lymphatic Disease: An Osteopathic Approach.**” Please sign up on <http://bnoa.org.uk/cpd.php>

Gilian Crowther is holding an **Introductory Seminar on Cell Symbiosis Therapy** at the Holiday Inn London Regent's Park Carburton Street, London, W1W 5EE on Saturday November 1, from 10.00 - 5.00 pm. Please register on the www.aonm.org/events page, or call 0786 772 6387. The fee is £35 for earlybird registration before October 10, and £45 for later. Members of AONM, BANT and the NNA receive a discount of £5. For further details on Cell Symbiosis Therapy, please see www.cst-academy.co.uk, or contact Gilian on gilian@aonm.org for further information.

UK Nutrition & Wellness Meetup 16th Sept 2014
We are delighted to announce that we have a superb new venue for regular meetups at the NutriCentre London flagship store by Regent's Park, and will be developing a stimulating programme of wellness-focused events with the kind help of their expert nutrition, bookstore and library team. Initially we will be holding a networking/get-to-know-you meetup, kicking off the new term on the 16th September.

Follow our link for more details and to RSVP <http://www.meetup.com/UK-Nutrition-Wellness/events/202034052/>

The store will be open late to help facilitate our group and NutriCentre experts will be available for questions and advice.

We look forward to seeing you there!

Stephen

UK Nutrition & Wellness

<http://www.meetup.com/UK-Nutrition-Wellness>
<https://www.facebook.com/groups/uk.nutrition.wellness>

Please contact us at any time if you are interested in learning more about our services, or exploring how we could work together: info@aonm.org/ 0845 505 1296, or go to www.aonm.org



info@aonm.org/

0845 505 1296

www.aonm.org