Guildford ME/CFS Support Group
(& West Surrey)

Newsletter

Autumn 2011

Future dates

The following ME meetings are open to all members and carers.

Booking required !

Christmas Dinner
5th December (Monday) 7pm
The Seahorse, Guildford
The Street, Shalford, Guildford GU4 8BU

We have booked seats at the Seahorse. If you would like to come please contact Maggie Lilley There are limited seats so we are taking bookings on a first come first served basis.

17th January 2012 (Tuesday) 3pm Home of Mair Ellis (Member)
Willowhayne, Barnett Lane, Wonersh, Surrey, GU5 0IU

22nd February (Wednesday) 7.30pm Anchor Pub Restaurant
Pyrford Lock, Wisley, GU23 6QW

23rd March (Friday) 11am Guildford Holiday Inn
Egerton Road Guildford GU2 7XZ

MIT's universal antiviral could transform 21st century medicine

Source: ProHealth.com, August 11, 2011
Original source: Massachusetts Institute of Technology News release, Aug 10, 2011

"DRACOS" drug killed off virus infections in every test, from cold, flu & GI viruses to polio and hemorrhagic fevers - with no harm to uninfected cells.

Most bacterial infections can be treated with antibiotics such as penicillin, discovered decades ago. However, such drugs are useless against viral infections, including influenza, the common cold, and deadly hemorrhagic fevers such as Ebola.

Now, in a development that could transform how viral infections are treated, a team of researchers at MIT's Lincoln Laboratory has designed a drug that can:

- identify cells that have been infected by any type of virus,
- then kill those cells to terminate the infection.

Killed off every viral infection in tests

In a paper published July 27 in the journal PLoS One, the researchers tested their drug against 15 viruses, and found it was effective against all of them - including rhinoviruses that cause the common cold, H1N1 influenza, a stomach virus, a polio virus, dengue fever and several other types of hemorrhagic fever. [See free full text article, "Broad Spectrum Antiviral Therapeutics"]

The drug works by targeting a type of RNA produced only in cells that have been infected by viruses. "In theory, it should work against all viruses," says Todd Rider, a senior staff scientist in Lincoln Laboratory's Chemical, Biological, and Nanoscale Technologies Group who invented the new technology.

Because the technology is so broad-spectrum, it could potentially also be used to combat outbreaks of new viruses, such as the 2003 SARS (severe acute respiratory syndrome) outbreak, Rider says.

Other members of the research team are Lincoln Lab staff members Scott Wick, Christina Zook, Tara Boettcher, Jennifer Pancoast and Benjamin Zusman.

Working to fill a big antiviral void

Rider had the idea to try developing a broad-spectrum antiviral therapy about 11 years ago, after inventing CANARY (Cellular Analysis and Notification of Antigen Risks and Yields), a biosensor that can rapidly identify pathogens. "If you detect a pathogenic bacterium in the environment, there is probably an antibiotic that could be used to treat someone exposed to that, but I realized there are very few treatments out there for viruses," he says.

There are a handful of drugs that combat specific viruses, such as the protease inhibitors used to control HIV infection, but these are relatively few in number and susceptible to viral resistance.

Inspired by study of cells' natural immune defense

Rider drew inspiration for his therapeutic agents, dubbed DRACOs (Double-stranded RNA Activated Caspase Oligomerizers), from living cells' own defense systems.

> When viruses infect a cell, they take over its cellular machinery for their own purpose - that is, creating more copies of the virus. During this process, the viruses create long strings of double-stranded RNA (dsRNA), which is not found in human or other animal cells.
>
> As part of their natural defenses against viral infection, human cells have proteins that latch onto dsRNA, setting off a cascade of reactions that prevents the virus from replicating itself.
>
> However, many viruses can outsmart that system by blocking one of the steps further down the cascade.
>
> Rider had the idea to combine a dsRNA-binding protein with another protein that induces cells to undergo apoptosis (programmed cell suicide) - launched, for example, when a cell determines it is en route to becoming cancerous.
>
> Therefore, when one end of the DRACO binds to dsRNA, it signals the other end of the DRACO to initiate cell suicide.

Combining those two elements is a “great idea” and a very novel approach, says Karla Kirkegaard, professor of microbiology and immunology at Stanford University. “Viruses are pretty good at developing resistance to things we try against them, but in this case, it’s hard to think of a simple pathway to drug resistance,” she says.

Uninfected cells unharmed
Each DRACO also includes a “delivery tag,” taken from naturally occurring proteins, that allows it to cross cell membranes and enter any human or animal cell. However, if no dsRNA is present, DRACO leaves the cell unharmed.

Infected test animals treated & cured without harm
Most of the tests reported in this study were done in human and animal cells cultured in the lab, but the researchers also tested DRACO in mice infected with the H1N1 influenza virus. When mice were treated with DRACO, they were completely cured of the infection. The tests also showed that DRACO itself is not toxic to mice.

Licensing of technology to pave way for human trials
The researchers are now testing DRACO against more viruses in mice and beginning to get promising results. Rider says he hopes to license the technology for trials in larger animals and for eventual human clinical trials.

This work is funded by a grant from the National Institute of Allergy and Infectious Diseases and the New England Regional Center of Excellence for Biodefense and Emerging Infectious Diseases, with previous funding from the Defense Advanced Research Projects Agency, Defense Threat Reduction Agency, and Director of Defense Research & Engineering (now the Assistant Secretary of Defense for Research and Engineering).

Our group website – changed address

Our group website has recently changed address. The old address was www.rescue.f2s.com.

The new address is: www.rescue.myzen.co.uk
The password for the members area is still: letmein

Olanzapine – for extreme anxiety

It is not uncommon for ME sufferers to have various degrees of anxiety. Caused by the ME experience but also chemically. Anti-depressants (such as SSRIs) are commonly prescribed and effective. However, for some they are not enough. Benzodiazepines may also be used. One of our members has fought anxiety for many years with various medications with various success. Recently, nothing was stopping the extreme anxiety until Olanzapine was tried. An overview of Olanzapine is included below.

Olanzapine (trade names Zyprexa, Zalasta, Zolafren, Olzapin, Oferta, Zypadhera or in combination with fluoxetine Symbyax) is an atypical antipsychotic, approved by the FDA for the treatment of schizophrenia and bipolar disorder.

Off-label uses
Case-reports, open-label, and small pilot studies suggest efficacy of olanzapine for the treatment of some anxiety spectrum disorders (e.g. generalized anxiety disorder, panic disorder delusional parasitosis, post-traumatic stress disorder); however, olanzapine has not been rigorously evaluated in randomized, placebo-controlled trials for this use and is not FDA approved for these indications. Other common off-label uses of olanzapine include the treatment of eating disorders (e.g. anorexia nervosa) and as an adjunctive treatment for major depressive disorder without psychotic features. It has also been used for Tourette syndrome and stuttering. Olanzapine is also used in many addiction clinics as a sleep aid (usually 2.5–5 mg) due to its low abuse profile and zero addictive properties.

Phenergan – for intermittent sleeping

Various sleep problems are common with ME. One problem is not being able to stay asleep (e.g. only being able to sleep 3 hours at a time). A few members have reported that using Phenergan has helped to solve this sleeping problem. An overview of Phenergan is included below.

Phenergan is a brand name for Promethazine and is an antihistamine. It has a strong sedative effect and is used for insomnia. It is available over the counter in the UK.

Phenergan is also used to treat allergy symptoms such as itching, runny nose, sneezing, itchy or watery eyes, hives, and itchy skin rashes. Phenergan also prevents motion sickness, and treats nausea and vomiting or pain after surgery. It is also used as a sedative or sleep aid.

International consensus criteria

Page one of our last newsletter contained an article about the International Consensus Criteria and how ME (myalgic encephalomyelitis) was the most correct and appropriate name for the illness, in contrast to CFS (Chronic Fatigue Syndrome), because the name ME indicates an underlying pathophysiology.

The following is part of a pre-release article that explains the formation of a new diagnostic criteria for ME. A full version of the article is available at the following link.

Source: www.prohealth.com/me-cfs/library/showarticle.cfm?libid=16404

The Canadian Consensus Criteria were used as a starting point, but significant changes were made. The six-month waiting period before diagnosis is no longer required. No other disease criteria require that diagnoses be withheld until after the patient has suffered with the affliction for six months. Notwithstanding periods of clinical investigation will vary and may be prolonged, diagnosis should be made when the clinician is satisfied that the patient has ME rather than having the diagnosis restricted by a specified time factor. Early diagnoses may elicit new insights into the early stages of pathogenesis; prompt treatment may lessen the severity and impact.

Using "fatigue" as a name of a disease gives it exclusive emphasis and has been the most confusing and misused criterion. No other fatiguing disease has "chronic fatigue" attached to its name – e.g. cancer/chronic fatigue, multiple sclerosis/chronic fatigue - except ME/CFS. Fatigue in other conditions is usually proportional to effort or duration with a quick recovery, and will recur to the same extent with the same effort or duration that same or next day. The pathological low threshold of fatigability of ME described in the following criteria often occurs with minimal physical or mental exertion, and with reduced ability to undertake the same activity within the same or several days.

The International Consensus Criteria (Table 1) identify the unique and distinctive characteristic patterns of symptom clusters of ME. The broad spectrum of symptoms alerts medical practitioners to areas of pathology and may identify critical symptoms more accurately. Operational notes following each criterion provide guidance in symptom expression and contextual interpretation. This will assist the primary clinician in identifying and treating ME patients in the primary care setting.

Table 1

Myalgic Encephalomyelitis: International Consensus Criteria
Adult and Pediatric, Clinical and Research

Myalgic encephalomyelitis is an acquired neurological disease with complex global dysfunctions. Pathological dysregulation of the nervous, immune and endocrine systems, with impaired cellular energy metabolism and ion transport are prominent features. Although signs and symptoms are dynamically interactive and causally connected, the criteria are grouped by regions of pathophysiology to provide general focus.

A patient will meet the criteria for post-exertional neuroimmune exhaustion (A), at least one symptom from three neurological impairment categories (8), at least one symptom from three immune/gastro-intestinal/genitourinary impairment categories (C), and at least one symptom from energy metabolism/transport impairments (D).

A. Post-Exertional Neuroimmune Exhaustion (PENS pen [I]-e) Compulsory

This cardinal feature is a pathological inability to produce sufficient energy on demand with prominent symptoms primarily in the neuroimmune regions. Characteristics are:

1. Marked, rapid physical and/or cognitive fatigability in response to exertion, which may be minimal such as activities of daily living or simple mental tasks, can be debilitating and cause a relapse.
2. Post-exertional symptom exacerbation: *e.g. acute flu-like symptoms, pain and worsening of other symptoms*
3. Post-exertional exhaustion may occur immediately after activity or be delayed by hours or days.
4. Recovery period is prolonged, usually taking 24 hours or longer. A relapse can last days, weeks or longer.
5. Low threshold of physical and mental fatigability (lack of stamina) results in a substantial reduction in pre-illness activity level.

Operational Notes: For a diagnosis of ME, symptom severity must result in a significant reduction of a patient's premorbid activity level. Mild (an approximate 50% reduction in pre-illness activity level), moderate (mostly housebound), severe (mostly bedridden), or very severe (totally bedridden and need help with baskfunctions). There may be marked fluctuation of symptom severity and hierarchy from day to day or hour to hour. Consider activity, context and interactive effects. Recovery time: e.g. Regardless of a patient's recovery time from reading for,% hour, it will take much longer to recover from grocery shopping for,% hour and even longer if repeated the next day – if able. Those who rest before an activity or have adjusted their activity level to their limited energy may have shorter recovery periods than those who do not pace their activities adequately. Impact: e.g. An outstanding athlete could have a 50% reduction in his/her pre-illness activity level and is still more active than a sedentary person.

Continued on the next page….

Table 1 continued…

B. Neurological Impairments

At least one symptom from three of the following four symptom categories…

1. Neurocognitive impairments
   - **a.** Difficulty processing information: slowed thought, impaired concentration e.g. confusion, disorientation, cognitive overload, difficulty with making decisions, slowed speech, acquired or exertional dyslexia
   - **b.** Short-term memory loss: e.g. difficulty remembering what one wanted to say, what one was saying, retrieving words, recalling information, poor working memory

2. Pain
   - **a.** Headaches: e.g. chronic, generalized headaches often involve aching of the eyes, behind the eyes or back of the head that may be associated with cervical muscle tension; migraine; tension headaches
   - **b.** Significant pain can be experienced in muscles, muscle-tendon junctions, joints, abdomen or chest. It is non-inflammatory in nature and often migrates. e.g. generalized hyperalgesia, widespread pain (may meet fibromyalgia criteria), myofascial or radiating pain

3. Sleep disturbance
   - **a.** Disturbed sleep patterns: e.g. insomnia, prolonged sleep including naps, sleeping most of the day and being awake most of the night, frequent awakenings, awaking much earlier than before illness onset, vivid dreams/nightmares
   - **b.** Unrefreshed sleep: e.g. awaken feeling exhausted regardless of duration of sleep, day-time sleepiness

4. Neurosensory, perceptual and motor disturbances
   - **a.** Neurosensory and perceptual: e.g. inability to focus vision, sensitivity to light, noise, vibration, odour, taste and touch, impaired depth perception
   - b. Motor: e.g. muscle weakness, twitching, poor coordination, feeling unsteady on feet, ataxia

Notes: Neurocognitive impairments, reported or observed, become more pronounced with fatigue. Overload phenomena may be evident when two tasks are performed simultaneously. Abnormal reaction to light - fluctuation or reduced accommodation responses of the pupils with retention of reaction. Sleep disturbances are typically expressed by prolonged sleep, sometimes extreme, in the acute phase and often evolve into marked sleep reversal in the chronic stage. Motor disturbances may not be evident in mild or moderate cases but abnormal tandem gait and positive Romberg test may be observed in severe cases.

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Table 1 continued…

C. Immune, Gastro-intestinal & Genitourinary Impairments

At least One Symptom from three of the following five symptom categories

1. Flu-like symptoms may be recurrent or chronic and typically activate or worsen with exertion. e.g. sore throat, sinusitis, cervical and/or axillary lymph nodes may enlarge or be tender on palpitation
2. Susceptibility to viral infections with prolonged recovery periods
3. Gastro-intestinal tract: e.g. nausea, abdominal pain, bloating, irritable bowel syndrome
4. Genitourinary: e.g. urinary urgency or frequency, nocturia
5. Sensitivities to food, medications, odours or chemicals

Notes: Sore throat, tender lymph nodes, and flu-like symptoms obviously are not specific to ME but their activation in reaction to exertion is abnormal. The throat may feel sore, dry and scratchy. Faucial injection and crimson crescents may be seen in the tonsillar fossae, which are an indication of immune activation.

D. Energy Production/Transportation Impairments: At least One Symptom

1. Cardiovascular: e.g. inability to tolerate an upright position - orthostatic intolerance, neurally mediated hypotension, postural orthostatic tachycardia syndrome, palpitations with or without cardiac arrhythmias, light-headedness/dizziness
2. Respiratory: e.g. air hunger, laboured breathing, fatigue of chest wall muscles
3. Loss of thermostatic stability: e.g. subnormal body temperature, marked diurnal fluctuations; sweating episodes, recurrent feelings of feverishness with or without low grade fever, cold extremities
4. Intolerance of extremes of temperature

Notes: Orthostatic intolerance may be delayed by several minutes. Patients who have orthostatic intolerance may exhibit mottling of extremities, extreme pallor or Raynaud's Phenomenon. In the chronic phase, moons of finger nails may recede.

Paediatric Considerations

Symptoms may progress more slowly in children than in teenagers or adults. In addition to postexertional neuroimmune exhaustion, the most prominent symptoms tend to be neurological: headaches, cognitive impairments, and sleep disturbances.

1. Headaches: Severe or chronic headaches are often debilitating. Migraine may be accompanied by a rapid drop in temperature, shaking, vomiting, diarrhoea and severe weakness.
2. Neurocognitive Impairments: Difficulty focusing eyes and reading are common. Children may become dyslexic, which may only be evident when fatigued. Slow processing of information makes it difficult to follow auditory instructions or take notes. All cognitive impairments worsen with physical or mental exertion. Young people will not be able to maintain a full school program.
3. Pain may seem erratic and migrate quickly. Joint hyper-mobility is common.

Notes: Fluctuation and severity hierarchy of numerous prominent symptoms tend to vary more rapidly and dramatically than in adults.

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Table 1 continued…

Classification

_____ Myalgic Encephalomyelitis

_____Atypical Myalgic Encephalomyelitis: meets criteria for post-exertional neuroimmune exhaustion but has two or less than required of the remaining criterial symptoms. Pain or sleep disturbance may be absent in rare cases.

Exclusions:

As in all diagnoses, exclusion of alternate explanatory diagnoses is achieved by the patient's history, physical examination, and laboratory/biomarker testing as indicated. It is possible to have more than one disease but it is important that each one is identified and treated. Primary psychiatric disorders, somatoform disorder and substance abuse are excluded. Paediatric: 'primary' school phobia.

Co-morbid Entities:

Fibromyalgia, Myofascial Pain Syndrome, Temporomandibular Joint Syndrome, Irritable Bowel Syndrome, Interstitial Cystitis, Raynaud's Phenomenon, Prolapsed Mitral Valve, Migraines, Allergies, Multiple Chemical Sensitivities, Hashimoto's Thyroiditis, Sicca Syndrome, Reactive Depression. Migraine and irritable bowel syndrome may precede ME but then become associated with it. Fibromyalgia overlaps.

Underlying problems of inconsistent findings in research studies have been identified and include a need for studies to be based on larger sample sizes with a more clearly defined phenotype; in particular one that recognizes the likely existence of significant subgroups within the patient population. In a study of the Reeves empirical criteria [16], Jason et al reported that thirty-eight percent (38%) of patients diagnosed with Major Depressive Disorder were misclassified as having CFS and only ten percent (10%) of patients identified as having CFS actually had ME. Accordingly, the primary goal of this consensus report is to establish a more selective set of clinical criteria that would identify patients who have neuroimmune exhaustion with a pathological low-threshold of fatigability and symptom flare in response to exertion. This will enable like patients to be diagnosed and enrolled in research studies internationally under a case definition that is acceptable to physicians and researchers around the world.

A. Post-Exertional Neuroimmune Exhaustion (PENE pen'-e)

"Malaise - a vague feeling of discomfort or fatigue" is an inaccurate and inadequate word for the pathological low-threshold fatigability and post-exertional symptom flare. Pain and fatigue are crucial bioalarm signals that instruct patients to modify what they are doing in order to protect the body and prevent further damage. Post-exertional neuroimmune exhaustion is part of the body's global protection response and is associated with dysfunction in the regulatory balance within and between the nervous, immune and endocrine systems, and cellular metabolism and ion transport. The normal activity/rest cycle, which involves performing an activity, becoming fatigued, and taking a rest whereby energy is restored, becomes dysfunctional.

Numerous papers document abnormal biological responses to exertion, such as loss of the invigorating effects of exercise, decreased pain threshold, decreased cerebral oxygen and blood volume/flow, decreased maximum heart rate, impaired oxygen delivery to muscles, elevated levels of nitric oxide metabolites, and worsening of other symptoms. Patients reach the anaerobic threshold and maximal exercise at a much lower oxygen consumption level.

Reported prolonged effects of exertion include elevated sensory signalling to the brain that is interpreted as pain and fatigue, elevated cytokine activity, delay in symptom activation and a recovery period of at least 48 hours. When an exercise test was given on two consecutive days, some patients experienced up to a 50% drop in their ability to produce energy on the second evaluation. Both submaximal and self-paced physiologically limited exercise resulted in post-exertional malaise.

B. Neurological impairments

Some viruses and bacteria can infect immune and neural cells and cause chronic inflammation. Structural and functional pathological abnormalities within the brain and spinal cord suggest dysregulation of the CNS control system and communication network, which play crucial roles in cognitive impairment and neurological symptoms.
Neuroinflammation of the dorsal root ganglia, gatekeepers of peripheral sensory information traveling to the brain, has been observed in spinal autopsies. (Chaudhuri A. Royal Society of Medicine Meeting 2009) Identified cerebrospinal fluid proteomes distinguish patients from healthy controls and post-treatment Lyme disease.

Neuroimaging studies report irreversible punctuate lesions, an approximate 10% reduction in gray matter volume, hypoperfusion and brain stem hypometabolism. Elevated levels of lateral ventricular lactate are consistent with decreased cortical blood flow, mitochondrial dysfunction and oxidative stress. Research suggests that dysregulation of the CNS and autonomic nervous system alters processing of pain and sensory input. Patients' perception that simple mental tasksrequire substantial effort is supported by brain scan studies that indicate greater sourceactivity and more regions of the brain are utilized when processing auditory and spatial cognitive information. Poor attentional capacity and working memory are prominent disabling symptoms.

C. Immune impairments

Most patients have an acute infectious onset with flu-like and/or respiratory symptoms.
A wide range of infectious agents have been reported in subsets of patients including Xenotropic murine leukemia virus-related virus (XMRV) and other murine leukemia virus (MLV)-related viruses, enterovirus, Epstein Barr virus, human herpes virus 6 and 7, Chlamydia, cytomegalovirus, parvovirus B19 and Coxiella burnetti. Chronic enterovirus infection of the stomach and altered levels of D Lactic acid producing bacteria in the gastrointestinal tract have been investigated. Possibly the initial infection damages part of the CNS and immune system causing profound deregulation and abnormal responses to infections.

Publications describe decreased natural killer cell signalling and function, abnormal growth factor profiles, decreased neutrophil respiratory bursts and Th1, with a shift towards a Th2 profile. Chronic immune activation, increases in inflammatory cytokines, pro-inflammatory alleles, chemokines and T lymphocytes, and dysregulation of the antiviral riboneuclease L (RNase L) pathway may play a role in causing flu-like symptoms, which aberrantly flare in response to exertion.

D. Energy production/transport impairments

The consistent clinical picture of profound energy impairment suggests dysregulation of the mitochondria and cellular energy metabolism and ion transport, and channelopathy. A biochemical positive feedback cycle called the 'NO/ONOO- cycle' may play a role in maintaining the chronic nature of ME, the presence of oxidative stress, inflammatory cytokine elevation and mitochondria) dysfunction, and result in reduced blood flow and vasculopathy.

Findings of "small heart" with small left ventricular chamber and poor cardiac performance in patient subsets support previous reports of cardiac and left ventricular dysfunction, which predispose to orthostatic intolerance.

Low blood pressure and exaggerated diurnal variation may be due to abnormal blood pressure regulation. Altered control and reduced cortisol production during and following exercise may be involved. Orthostatic intolerance is associated with functional impairment and symptom severity. Measurable vascular abnormalities suggest that the brain is not receiving sufficient circulating blood volume in an upright position, which is intensified when standing in one place such as a grocery store check-out line.

Significant reduction in heart rate variability during sleep is associated with poor sleep quality and suggests a pervasive state of nocturnal sympathetic hypervigilance.

"Cleane" - acne treatment system

Part of my ME experience unfortunately included significant acne on my back and shoulders. Many months of the anti-biotic Oxytetracycline did nothing, neither did many months of the antibiotic Erythroped A. Finally, the anti-biotic Trimethoprim worked for about 80%. I was left with 20% on-going until I've recently used the Cleane treatment which has worked. Obviously it's only effective if you can access the area with the device or someone helps you. Neil (Newsletter Editor)

The Cleane acne therapy device is based on blue light therapy and thermal pulses which wipe out the bacteria within your blemish and soothe your dermis' reaction. The device has been medically proven to lower the visibility of spots by ninety percent in twenty-four hours and treatment just takes two minutes.

The product is absolutely safe, painless, chemical free and fits in any pocket or purse. It's comparable in size to a lipstick.

The genius of this technology is that as soon as you feel a spot or pimple starting to form, you can deal with it. There are no side effects, no risk of scarring, and the Cleane device will carry enough battery life to counter 45 spots per charge. Then you simply recharge it by joining it to any PC or Mac with the handy USB wire.

The system has been medically tested, it carries full FDA approval, CE mark as a medical device, and is manufactured under cGMP certification and ISO 9001.

Medical tests confirmed that on average, the visibility of acne is lessened by ninety percent in one day of just 1 application. Better yet, you can carry out treatment wherever, whenever. Simply power the device on, wait for a minute (until the device is at the right temperature) then treat the area by pressing the Cleane Acne Therapy Device onto the spot for two minutes. The device beeps so you don't have to keep time.

Available on amazon uk for £56.

Humour

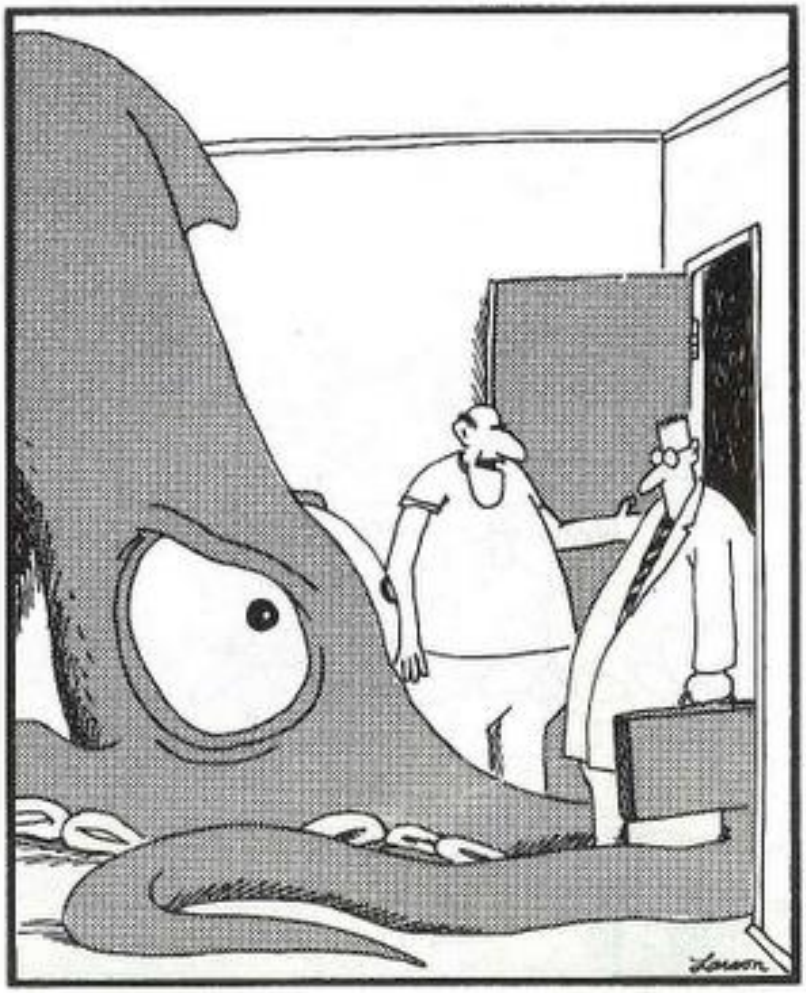
Checked and passed poem

I halve a spelling checker,
It came with my pea see.
It plainly marks four my revue
Mistakes I dew knot sea.

Eye strike a key and type a word
And weight four it two say
Weather eye am wrong oar write
It shows me strait aweigh.

As soon as a mist ache is maid
It nose bee fore two long
And eye can put the era rite
Its rarely ever wrong.

I've scent this massage threw it,
And I'm shore your pleased too no
Its letter prefect in every weigh;
My checker tolled me sew.



"Oh, no he's quite harmless… just don't show any fear … squids can sense fear."

WPI terminates Mikovits contract; speculation & confusion reign

http://www.prohealth.com/me-cfs/library/showarticle.cfm?libid=16556
October 4, 2011

Dr. Jamie Deckoff Jones' blog came out with a post on Sunday, Oct 2 – “X Rx Square One” - stating that “the entire WPI research program has been closed by the Institute’s CEO, and the facility is now locked down.”

Supporters on the WPI Facebook page were confused all-around and found no news on the WPI site. Then Monday, Oct 3, at about 1:30 PM Pacific time, WPI management posted this comment on Facebook:

"The Whittemore Peterson Institute is announcing the departure of Dr. Judy Mikovits from WPI. We wish to thank her for her previous work and commitment. The WPI remains committed to a comprehensive research program. Our research team and program remains active, and our lab open to authorized employees. We will continue the critical work of finding answers to M.E. and related diseases. "We will use the opportunity created by the departure of Dr. Mikovits to do a full evaluation of our research lab and current research projects. WPI is dedicated to the highest standards in research and patient care, and to advocating for the patients, families and caregivers we exist to serve." - Michael Hillerby, Whittemore Peterson Institute

Also Monday, Wall Street Journal ME/CFS reporter Amy Dockser-Marcus posted this article - "Scientist Who Led XMRV Research Team Let Go" - stating that she (Dockser Marcus) had seen a copy of WPI CEO Annette Whittemore's letter to Dr. Mikovits, to the effect that "Mikovits was terminated after refusing Whittemore's direct request that cell lines be turned over to another scientist at the Institute who wanted to do research on them."

Tuesday: Dr. Deckoff-Jones commented in discussion of her Tues, Oct 4 blog post, "No Good Deed Goes Unpunished" that "if anyone would like to reach Dr. Mikovits, she welcomes your emails. Her email address is jamikovits@gmail.com"

Reportedly Dr. Mikovits retains her research grant and intends to continue her research - elsewhere. Meanwhile many speculate about the situation with little to go on, and the ME/CFS world will stay tuned.

Lawsuit filed against CFS researcher by former employer

Source: http://news.sciencemag.org/scienceinsider/2011/11/lawsuit-filed-against-chronic-fatigue.html
Article discovery: James Roberton (Guildford ME Group member)
14 November 2011

The protracted saga of Judy Mikovits, the lead researcher who tied a mouse retrovirus to chronic fatigue syndrome (CFS), has taken yet another dizzying turn.

A little more than 1 month after firing Mikovits, the Whittemore Peterson Institute for Neuro-Immune Disease (WPI) on 4 November filed suit against its former research director. According to WPI, after Mikovits was terminated on 29 September, she wrongfully removed laboratory notebooks and kept other proprietary information on her laptop and in flash drives and in a personal e-mail account. WPI, a nonprofit organization that's based on the campus of the University of Nevada, Reno, also won a temporary restraining order that forbids Mikovits from "destroying, deleting, or altering" any of the related files or data.

Mikovits attorney, Lois Hart, said her client cannot speak to the media about the case, but she strongly denies any wrongdoing. In an e-mail to ScienceInsider, Hart stressed that "Dr. Mikovits' integrity goes to the bone."

Hart rebutted the charges against her client in a 4 November letter to WPI's counsel that appeared on CFS-related Web sites. (Hart said she did not release the letter, but verified its contents to ScienceInsider.) "All of the allegations of theft, misappropriations, withholding of data and various intellectual property, and items, are incorrect, and untruthful," Hart wrote.
The complaint filed by WPI focuses on the laboratory notebooks kept by Mikovits and her assistants, which she stored in a locked desk drawer. WPI had a representative from the company that manufactured the desk open the drawer after her firing and, the complaint states, then discovered that "the Notebooks were missing." The suit, which alleges breach of contract and misappropriation of trade secrets, claims that "Mikovits had the only key to the locked desk drawer in her office."

Hart's rebuttal letter to WPI's counsel contends that Mikovits was not in her office when she received the phone call that told her she was terminated and that she never returned to the institute. "A number of individuals have keys to the office and lab, including the administrative staff, lab staff and custodial," Hart wrote. "Your client's concern as to the location of those notebooks, and intellectual property, should be directed elsewhere."

Mikovits worked for WPI since its inception in 2007. Established by Annette and Harvey Whittemore, whose daughter has CFS, the institute also studies fibromyalgia, post Lyme disease, and Gulf War illness. The data Mikovits "absconded with," alleged WPI in court documents, could harm the institute's future efforts. "Without these materials, WPI's ability to continue its important research on finding a cure for these terrible diseases impacting over 4 million Americans each year is severely hampered," the complaint states. It contends that a Proprietary Information and Invention Agreement that Mikovits signed states that WPI owned the notebooks that she and others in the lab created.

Robert Charrow, an attorney at Greenberg Traurig in Washington, D.C., who specializes in cases involving scientific research, says academia and industry have different standards about researchers retaining their own notebooks and data. Although Charrow stresses that he is not familiar with the specifics of this case, he says industry typically forbids researchers from taking data with them. "In academic institutions, researchers are requested or required to give a copy of their material or their data to the institution, and they can retain a copy for themselves," says Charrow. "That's how it's usually done and that's why there aren't more pissing matches."
Mikovits and her co-workers made international headlines following Science's online publication on 8 October 2009 of an article in which they reported that they had found a recently discovered mouse retrovirus dubbed XMRV in the blood of 67% of the CFS patients they examined. Several subsequent studies, including one that WPI participated in, could not replicate the finding. A separate study, also published in Science, provided evidence that XMRV was accidentally created in a laboratory experiment with mice and questioned whether it even infected humans. Science's Editor-in-Chief Bruce Alberts issued an Editorial Expression of Concern about the paper's veracity on 31 May. Science later published a partial retraction to the Mikovits's group original paper after one of the labs that contributed to it said a contaminant marred its results.

Nevada's Second Judicial District Court will hear a preliminary injunction against Mikovits on 22 November.

Is ME/CFS an auto-immune disorder?

Source: http://phoenixrising.me/archives/6190
Article discovery: Will Marsden (Guildford ME Group member)
November 6, 2011

Could chronic fatigue syndrome be an autoimmune disorder? The Fluge/Mella Rituximab study was effective in at least temporarily reducing the symptoms of about 60% of the chronic fatigue syndrome patients in the study – a fact that no doubt shocked many who considered CFS purely a neuropsychiatric disorder.

Rituximab started out as a chemotherapy drug but is now being used effectively in a variety of autoimmune disorders and is being studied in even more. Could Rituximab's success mean that a large portion of the ME/CFS community actually suffers from an autoimmune disorder? The Fluge/Mella team suggested so, stating their results indicated that:

"CFS may be an autoimmune disease, often preceded by an infection, and targeting specific parts of the nervous system."

Autoimmune disorders and CFS: A short review
An autoimmune disorder occurs when the immune system mistakes human cells for intruders and begins attacking them. If ME/CFS (or parts of it) is an autoimmune disorder it's not alone; in 2001 the NIH reported that approximately 5% of the US population is believed to have one. Virtually every organ and tissue in the body can end up being attacked by the body and over 80 autoimmune disorders have been identified.

Examples of common autoimmune disorders include Addison's disease, Ankylosing spondylitis, Celiac disease, diabetes mellitus type 1, systemic lupus erythematosus (SLE), Sjögren's syndrome, Hashimoto's thyroiditis, Graves' disease, multiple sclerosis, primary biliary cirrhosis, rheumatoid arthritis (RA), Sjogrens disease, and allergies.

Until the Rituximab studies came out research into the autoimmune aspects of ME/CFS was scanty. A few studies found auto-antibodies (antibodies that attack human cells) in ME/CFS patients but the results varied and a follow-up study failed to confirm the positive results that did pop up. That was before, though, and now more intensive research will surely follow. The CFIDS Association of America, in fact, had a grant proposal to do a comprehensive study of autoimmune issues under review as the Rituximab story broke.

Now that the autoimmune issue has been starkly raised by the Rituximab study we take a look at some indirect evidence for CFS as an autoimmune disorder; if you were to take away the labels and the history and just compared some fundamental aspects of CFS and auto-immune disorders – would you be inclined to fit ME/CFS into the autoimmune disorder category?
It turns out that the answer is perhaps yes. ME/CFS shares at least nine factors with the other auto-immune disorders. They include a gender imbalance tilted towards women, improved symptoms during pregnancy, a strong stress response connection, a high degree of genetic susceptibility, common pathogen triggers, Th2 dominance, high levels of oxidative stress, involvement of the innate immune system, and now symptom improvement using an immune suppressant (Rituximab).

Gender
"It is well established that gender plays a profound role in the incidence of autoimmunity" *Anatoly Rubotskov in 'Genetic and Hormonal Factors in female-based auto-immunity'*

With ME/CFS and autoimmune disorders displaying the same gender imbalance (@75% of those afflicted are women) gender is one of the more intriguing commonalities. Female gender imbalance in illness is not common; outside of gynecological and reproductive disorders it occurs in osteoporosis, depression, anxiety, arthritis, ME/CFS, Fibromyalgia, irritable bowel syndrome, TMJ, Alzheimer's, and many autoimmune disorders.
http://www.phrma.org/research/facts-about-diseasesconditions-affecting-women-united-states.

Check out the gender imbalance in just some auto-immune disorders…

- Systemic lupus erythematosus: 9-to-1
- Antiphospholipid syndrome-secondary: 9-to-1
- Graves' disease: 7-to-1
- Scleroderma: 3-to-1
- Antiphospholipid syndrome-primary: 2-to-1
- Autoimmune thrombocytopenic purpura (ITP): 2-to-1
- Multiple sclerosis: 2-to-1
- Myasthenia gravis: 2-to-1

Why women are more prone to develop autoimmune disorders is not clear but researchers think it probably have to do with two factors; an increased inflammatory response and the involvement of sex hormone, both of which are subjects of interest in ME/CFS. (Interestingly, men with autoimmune disorders often have more severe forms of them.)

Women tend to have more active immune responses than men with higher levels of circulating antibodies, T helper cells and a stronger cytokine response to infections. In general women have a stronger Th1 response, except during pregnancy when they shift to a Th2 pattern. (Researchers, in fact, prefer to use female laboratory animals in their studies because their immune response is so much stronger). The stronger immune response in women would seem to place them more at risk of developing an over-active immune response; ie an auto-immune disorder.

The strong influence female sex hormones have on the immune system provides an interesting feedback loop as the female sex hormone estrogen stimulates B-cell development and auto-antibody production. Progesterone, which is low in some women with ME/CFS, on the other hand, is an immune suppressant. Sex hormones may also play a role in a pattern of altered symptoms during pregnancy that is often seen in ME/CFS and some autoimmune disorders (see below).

Improved symptoms during pregnancy

Symptom improvement during pregnancy in both CFS and several autoimmune disorders suggests that sex hormones may play a role in both. (Symptoms may also improve in auto-immune disorders during parts of the menstrual cycle and/or when using oral contraceptives. Not all autoimmune disorders display this pattern.) Symptom improvement is generally highest during the third trimester when estrogen and progesterone levels are the highest. As noted above, sex hormones such as estrogen have a strong regulatory effects on the immune system and have been shown to increase both normal antibody and autoantibody levels.
The tendency of women with ME/CFS to feel substantially better during part of their pregnancy is well-known.

The Staines/Peterson group working out of Bond University in Australia presented preliminary findings at the IACFS/ME conference in Ottawa in 2011 suggesting that genes involved in pregnancy were being expressed differently in women with ME/CFS. A CDC study by Boneva presented at the same conference suggested startlingly high rates of gynecological abnormalities that may be tied to hormonal imbalances were present in women with CFS.
The tendency of middle aged women to get CFS is intriguing given the fact that being pregnant appears to increase the risk of getting an autoimmune disorder (and ME/CFS?). Given the much lower rate of children with ME/CFS than adolescents and adults one has to wonder if hormonal issues beginning in adolescence play a role. The fact that estrogen levels do not appear to be altered in women with auto-immune disorders, however, suggests that the issue is complicated (tissue receptivity to estrogen is another issue) and that other factors probably also play a role in the gender imbalance.

Interestingly, given how common testosterone treatment for ME/CFS is in some clinics, males with rheumatoid arthritis tend to have lower testosterone levels.

Genetic Susceptibility
"To a large extent, predisposition to auto-immune disease is genetically inherited" *Anatoly Rubotskov in 'Genetic and Hormonal Factors in female-based auto-immunity'*

Several studies have suggested that genetics plays an unusually strong role in autoimmune disorders and an even stronger role in both fibromyalgia and chronic fatigue syndrome. At the recent IACFS/ME conference in Ottawa Dr. Clauw stated that aside from single gene mutation disorders that genetics may play a stronger role in FM than any other disorder. A recent paper by the Lights suggested that ME/CFS may have a similarly strong genetic component. This is intriguing given the theory that autoimmune disorders in women may be largely driven by genetic alterations in their X chromosomes. Could a similar process be occurring in FM and CFS?

The Stress-Autoimmune Response
Of course, stress alone does not cause autoimmune diseases…and removing stress alone does not cure (them). But relaxation can help one's body to heal and to respond to the advanced medications that have been developed in recent years to treat such diseases. The treatment of autoimmune disease should …include stress management and behavioral intervention to prevent stress-related immune imbalance.

Esther Sternberg, MD. "The stress response and autoimmune disease–what have we learned?"
High levels of stress, including infection (see below) and psychological distress, have been shown to commonly precede the development of autoimmune disorders. According to one review many retrospective studies found that a high proportion (up to 80%) of autoimmune disorder patients reported uncommon emotional stress prior to onset suggesting that stress related hormones may play a role in the development of these disorders.

Given the tight interaction between the stress response and immune systems, with both axes of the stress response being important immune regulators, it's no surprise that the neuroendocrine system is a major area of research in autoimmune conditions (as it has been in ME/CFS) and that behavioral interventions to reduce stress are used in both types of disorders to reduce symptoms. (Both axes of the stress, the HPA axis and the sympathetic nervous system, appear to be perturbed in ME/CFS.)

Pathogens
"It is clear that, in many cases, an infection is necessary for the development of overt (autoimmune) disease" *De Logu 'Infectious Diseases and Auto-immunity.'*

Pathogens and infections are, of course, major stressors and infectious triggers have long been associated with both auto-immune diseases and CFS. Auto-immune elements are part of our makeup – but how they go from being an innocuous part of it to ravaging it – is a central question. Animal studies have shown many times that often it's an infection that tips the tables.

Unfortunately, for researchers, often times an auto-immune process often proceeds for some time before it becomes apparent; thus, just as in CFS, an infection may indeed have tipped the balance but identifying what pathogen was responsible was responsible can be difficult.
One theory suggests that pathogens that produce 'super-antigens', which can activate B-lymphocytes en masse – essentially overloading and confusing them into attacking human tissues – can trigger an auto-immune response. Here too we have a CFS tie-in; Dr. Huber is investigating whether HERV's trigger a super-antigen response in people with ME/CFS.

Epstein Barr Virus (EBV) and molecular mimicry
"Viral and bacterial infections are the main candidate environmental factors due to their capacity to elicit strong immune activation and to induce autoimmune diseases in animal models, as well as the correlation of several pathogens with autoimmune diseases in humans." *De Logu "Infectious Diseases and Auto-immunity.*"

The best guess for a pathogen triggered autoimmune condition is EBV. No pathogen has been more closely tied to CFS, and EBV, which maintains its latency in the B-cells Rituximab attacks, has been linked to a number of auto-immune disorders. The high viral loads seen in infectious mononucleosis are associated with an increased risk of getting CFS or multiple sclerosis may be able to activate T cells that attack human tissues.

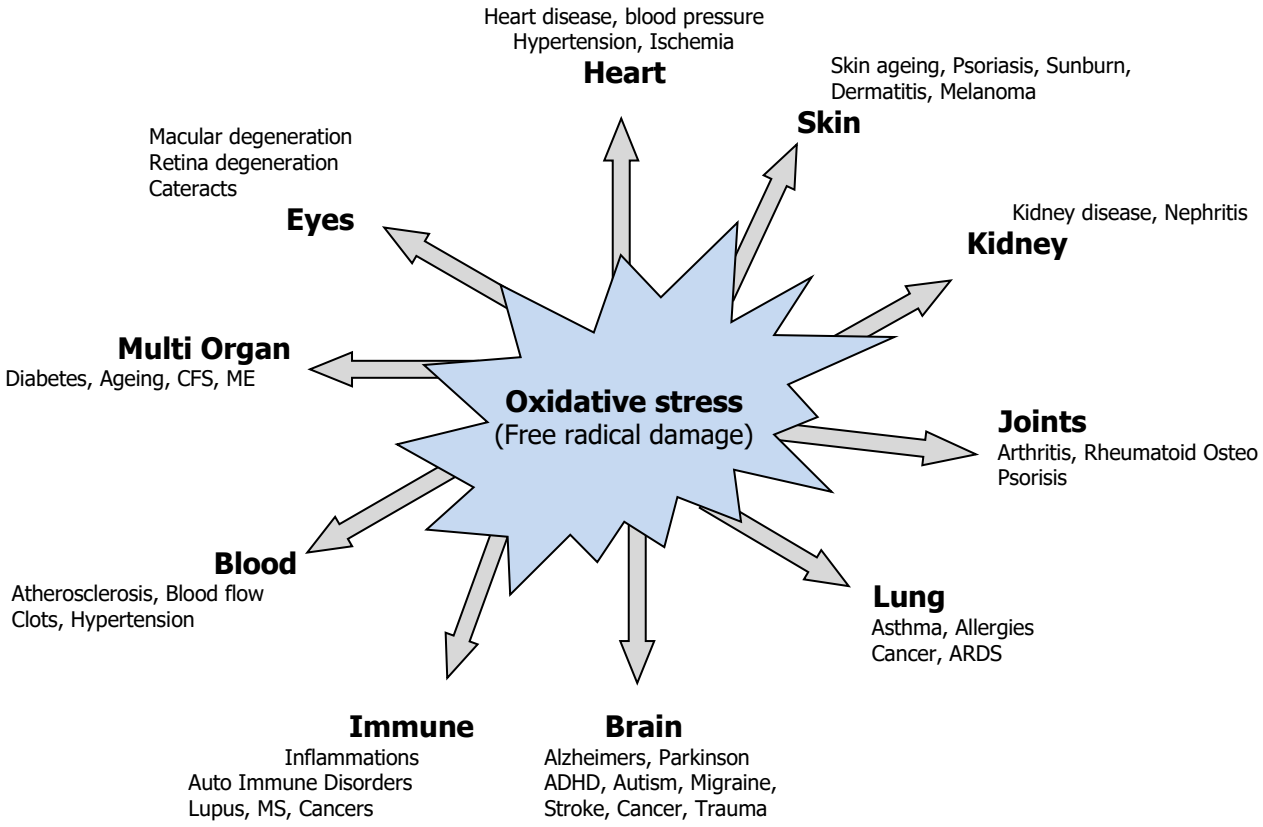
Peterson believes that something called molecular mimicry could be playing a role in whatever autoimmune processes are occurring in ME/CFS. Molecular mimicry occurs when molecules from another organism are so alike to those found in the host that the immune system mounts an attack against both. Dr. Peterson cited a fairly common condition called autoimmune thyroiditis he sees in the patient population that could be caused by molecular mimicry involving EBV.

Others – Other pathogens are associated with other autoimmune disorders. Klebsiella pneumoniae and coxsackievirus B (an enterovirus) have been strongly correlated with ankylosing spondylitis and diabetes mellitus type 1.

Oxidative Stress

High antibody levels can produce increased rates of oxidative stress and high rates of oxidative stress an may also be able to trigger an autoimmune reaction. This could occur when oxidative stress (free radicals) deforms molecules and proteins enough to trigger the immune system – which recognizes them as something damaged; ie – not-self, to attack both them and human tissues that resemble them.

A recent study found auto-antibodies against a protein involved in the transport of glutathione byproducts in several autoimmune disorders. Because glutathione is a key anti-oxidant, the inability to remove its free radical b- products could cause more free radical damage increased oxidative stress, which, of course, is high in CFS.



Some researchers believe that some autoimmune disorders currently believed to be B-cell antibody disorders are actually auto-immune responses to high levels of oxidative stress. Maes has found evidence that this may be occurring in ME/CFS. He has found autoimmune by-products of oxidative stress in both ME/CFS and depression. If Maes is right at least part of the autoimmune process in ME/CFS could be reduced by reducing levels of oxidative stress. Maes reported that he has found strong evidence of autoimmune process in about 30% of ME/CFS patients and more data from him will be upcoming.

‘Auto-immunity’ Redefined-- The paradigm of B and T cell mediated autoimmune problems that has been pervasive in the medical profession for the past 50 years has been taking its knocks of late. The problem is how to account for chronic inflammatory conditions that appear to be caused by immune injury of the body’s tissues (auto-immunity) but which do not display the characteristic auto-antibodies and other problems found in classical autoimmune disorders.

On the Cutting Edge Again? – The Innate Immune System, ME/CFS and Autoimmune Disorders

“We have every reason to believe that therapies that selectively modulate the functioning of the innate system will prove just as valuable as treatments that intervene with the adaptive immune system.”

At the IACFS/ME Conference in Ottawa, Dr. Montoya called for more focus on the ‘early’ or innate immune response in CFS. Interestingly, it’s become clear that many chronic inflammatory and autoimmune disorders don’t display the classic T and B cell responses that immunologists have concentrated on for so long – that something else is going on – and that something else probably involves the innate immune system.

The innate (or early) immune system is characterized by a rapid immune response involving natural killer cell activity, phagocytosis, toll-like receptor activation, the complement system and the production of cytokines, chemokines, nitric oxide and others.

Interferon’s, tumor necrosis alpha and some interleukins including IL-10 appear to be the main drivers of innate immune system driven auto-immunity. (Interestingly interferon administration causes symptoms remarkably similar to those found in ME/CFS).

Innate immune system processes are incredibly complex but some things stand out; at least three regulators of the innate immune system; IL-10, TGF-B and adenosine (a part of the purinergic system), have been highlighted in CFS. A preliminary study by the Staines/Peterson group suggests that the purinergic system may indeed be off kilter. Interestingly, adenosine is often formed in areas with low blood oxygen levels (hypoxia, ischemia) – which, given the low blood volume present in ME/CFS – may be present in CFS and adenosine potentiates IL-10 production, which is usually high in ME/CFS.

The idea that the innate immune system may play in auto-immunity has lead to a revaluation of what autoimmune disorders are and a proposal that a spectrum of autoimmune disorders exists with those driven by classic B-cell responses on one side and one driven by the innate immune system on the other. Where ME/CFS would fall is, of course, unclear but growing evidence of innate immune involvement in the disorder suggests that one reason the autoimmune issue has not been raised much may be because it is a kind of auto-immune disorder that researchers are only now beginning to recognize.

Conclusions

ME/CFS does, in several ways, look like an autoimmune disorder. Whether it comes to be considered one will depend on the results of more studies. With 80 auto-immune disorders identified and more under consideration, the auto-immune research field is an enormous one that receives more than a billion dollars in federal research funding a year. Getting even a part of CFS tied into could reap huge dividends for the disorder in terms of recognition and funding.