

# Lyndonville News

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Information and Support for the ME/CFS/FM Community  
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## AUTOIMMUNE DYSAUTONOMIA?

### Introduction

I am really not much of a political person. I don't like politics, mainly because I do not like it when people are not honest. And politicians are rarely honest. They can convince themselves that they mean to be honest, but expediency usually wins out. Having said that, I could not be a politician because there are too many hard choices to make. How do you spend \$100? On education? On health? On new roads? Give it to starving people in the third world? I could not decide this, so my solution is to avoid politics as much as possible.

But not today. The world of ME/CFS is in chaos in this country. It is getting better in other countries. So I would like to devote some of this issue of the *Lyndonville News* toward politics and activism. Without voices like yours, ME/CFS will stay an invisible illness.

### History

ME/CFS has been around in the "modern world" since a 1938 outbreak in Los Angeles. There have been over 50 recorded outbreaks or clusters, and well over 1,000 scientific papers on it in recent years. Yet it remains unknown, scorned, doubted and ridiculed. Persons with this illness face daily discrimination, perhaps a greater condemnation of our societal beliefs than anything else. As a country, we consider ourselves compassionate and religious, yet we are so obsessed with increasing our personal wealth that we easily neglect the education of our children, the basic needs of the poor, and the health of the sick. If you can't tell, I just read a book on the Sermon on the Mount.

The most effective way to continue the apathy which the ME/CFS world experiences is to get into more arguments with ourselves. Lets condemn the CFIDS association or the NCF. Lets fight over the name, lets...

One thing that persons with ME/CFS patients have never learned is that they do not have enough energy to fight each other **and** do something constructive. So, after a few years they burn out and disappear. Not many years ago there were lots of state organizations, hundreds of support groups. Now? Everything is so quiet. Its not about money, it's about will and determination.

There are some patients who are ready to do whatever is necessary to help government (CDC, NIH) and the medical world tackle ME/CFS. They are the 40 year old women and men with CFS who are seeing the signs of the illness in their children. The NIH and CDC say that this illness does not run in families. Every clinician who studies ME/CFS knows that it does. Not all children get it, but a lot do. Those parents with the illness who see it developing in their children have extra motivation to do something about it.

There are probably six known genes that could be involved in ME/CFS (see below). Is the NIH studying it? I have fifteen families in my practice where parent and children are ill. Anyone out there want their blood? Why is this not important – and don't say its because of subtleties in the diagnostic criteria. I think that is merely an excuse to do nothing. I would say to the CDC, pick your criteria and study it. To the NIH – fund some studies. You complain that there is so proof, but no one will put up the money to do a study. By the way, I just read that the NIH has funded five Botanical Research Centers for five years each to look at botanicals from flaxseed to tarragon.

This is one of the great advances of “evidence-based medicine.” A study on high blood pressure (ALLHAT) cost 300 million dollars and found out that high blood pressure is bad for you. Wonderful. Evidence-based medicine is a concept that increases corporate income because it increases sales of drugs – more people will take ACE inhibitors for their blood pressure. But it also ensures that nothing new or complicated can be studied. Sounds like sour grapes from a clinician, medical observations are not worth much anymore.

I am not suggesting that the treatment for high blood pressure not be improved. I am suggesting that the enormous personal and societal costs of invisible illnesses should no longer be ignored.

What do you do? If you are a patient, figure out something to do that you can do with your meager allocation of energy. Maybe write a letter. Or write a letter every day (Florence Nightingale did that) Change the name. Or have a support group meeting. Or have a fund raiser. Support a national patient organization, or two or three. They don't have to be clones of each other. But do something, if you can.

And if you are getting better, be grateful, but don't forget about ME/CFS. I just talked with a young lady whom I had not seen for nearly eighteen years. She got better, almost. But like many persons who almost get better, she did not recover and then began to slide again. For ten years she could forget about the illness, but not any longer. Sorry to be discouraging, but the time has

come – we have to do something about this horrible illness. I believe it is both curable and preventable, someday.

## **Appendix:**

Genes that may play an important role in ME/CFS, partial listing

1. Polymorphism in *PON1* gene encoding paraoxonase/arylesterase, an enzyme that hydrolyzes organophosphate poisons to harmless products (Haley R, Billecke S, La Du B. Association of low PON1 type Q (Type A) arylesterase activity with neurologic symptom complexes in Gulf War veterans. *Toxicol Appl Pharmacol* 1999;157:2129-2137).
2. Familial corticosteroid-binding globulin deficiency, due to null mutation in globulin gene (Torpy D, Bachmann A, Grice J, Fitzgerald S, Phillips P, Whitworth J, et al. Familial corticosteroid-binding globulin deficiency due to a novel null mutation: association with fatigue and relative hypotension. *J Clin Endocrinol Metab* 2001;86:3692-3700).
3. Hypofunction of 5-HT system due to long allelic variants in the serotonin transporter (5-HTT) gene promoter (Narita M, Nishigami N, Narita N, Yamaguti K, Okado N, Watanabe Y, et al. Association between serotonin transporter gene polymorphism and chronic fatigue syndrome. *Biochemical and Biophysical Research Communications* 2003;311:264-266).
4. Myoadenylate deaminase (*AMPD1*) mutation cause of myopathy.
5. Carnitine palmitoyltransferase (*CPT2*) gene mutation causing myopathy.
6. I/D polymorphism in ACE gene (*DCP1*) (Vladutiu G, Natelson B. Association of medically unexplained fatigue with ACE insertion/deletion polymorphism in Gulf War verterans. *Muscle Nerve* 2004;30:38-43.)
7. Polymorphism of the corticosteroid binding globulin Ser/Ala 224 (Torpy D, Bachmann A, Gartside M, Grice J, Harris J, Clifton P, et al. Association between chronic fatigue syndrome and the corticosteroid-binding globulin gene ALA SER 224 polymorphism. *Endocrine Research* 2004;30(3):417-429.

## **American Association for CFS (AACFS)**

The AACFS has now been in existence for over a decade. It is a scientific association devoted to furthering the science and provision of medical care to persons with ME/CFS. It is a good organization. Its heart is in the right place. It has made mistakes, it is weak, it is too soft-spoken, it is too complacent...yes, there have been lots of difficulties. It could be better, and hopefully it is getting better.

It is run by Dr. Nancy Klimas, president, Dr. Leonard Jason, vice president, Dr. Lucinda Bateman, secretary, Dr. Dharam Ablashi, past president, and the Board of Directors which I happen to be on. Other board members come from Japan, Sweden, and Belgium, so it is not just yanks. I do not think it should be called the American Association for CFS. All board members are volunteers, and I think it should stay that way. It used to be that only professionals such as physicians and researchers could be members, but that is now changed and members of the public are invited. And we need input and help from members of the public.

Most illnesses have professional societies that are devoted to study, teaching, fund raising, and awareness. The MS society is very powerful, influencing the direction of millions of dollars in research. American Heart Association, American Cancer Society... These organizations have done more for the illnesses they serve than anyone could have ever imagined. We need this kind of help/activism in ME/CFS. The organization really started from the financial contribution of Governor Rudy Perpich. A conference is held every two years, and other events are held if possible in between. The AACFS newsletter is by e-mail only and is directed toward clinicians in an attempt to improve patient care. It may be informative for members of the public, but it is directed toward clinicians.

Now we need the help of the patient organizations and the patients themselves. We need funds, suggestions, organizational leadership, new ideas. If you wish to become an individual supporting member it is \$40 and you would receive their newsletter for one year. If you have tons of money you could send more. We need you. Anyone interested can call or e-mail [Admin@aacfs.org](mailto:Admin@aacfs.org) or write to 27 N. Wacker Dr. 416 in Chicago, Ill, 60606. Lets put ME/CFS on the map, and not allow it to languish on the periphery as a disreputable form of hypochondriasis.

## Literature Review

Antibodies to the Muscarinic Acetylcholine Receptor in CFS. Presented In: International Conference on Fatigue Science 2005; Karuizawa, Japan, 2005. David E. Bell, BS, Aristo Vojdani, PhD, David S. Bell, MD

**Background:** Patients with chronic fatigue syndrome experience severe fatigue, orthostatic intolerance and numerous other symptoms that are similar to known illnesses of the autonomic nervous system. Because of these similarities it is possible that disruption of autonomic nervous system nerve transmission may play a role in the symptoms of the illness. In a recent paper, researchers noted that 50% of patients with CFS had antibodies to the muscarinic acetylcholine receptor (Tanaka S, et al. Autoantibodies against muscarinic cholinergic receptor in chronic fatigue syndrome. *Int J Mol Med* 2003;12:225-230.) The presence of an autoimmune dysautonomia with autoantibodies to the muscarinic acetylcholine receptor is a theoretical etiology for some patients with CFS. If autoimmune dysautonomia exists and can be effectively recognized, therapeutic implications for this group of patients may be developed. **Objective:** The present study was designed to examine IgG, IgM, and IgA antibodies to the neuromuscular acetylcholine receptors (AR) and to muscarinic receptors (MR) in patients with chronic fatigue

syndrome (CFS) and healthy matched controls. Methods: Twenty-five adults with CFS were matched with healthy community controls for age and sex. After informed consent, venous blood samples were drawn and sent to Immunosciences Laboratory in a blinded manner. The testing procedure was the same as previously described. Results: Five of the antibodies studies (IgA\_AR; IgM\_AR; IgG\_AR; IgM\_MR; and IgG\_MR) showed no differences between patients and controls. However the IgA\_MR was statistically higher in patients than in controls (0.43 vs. 0.33,  $p = 0.031$ ). Conclusions: Our studies are in agreement with the studies of Tanaka et al (1) that autoantibodies against muscarinic receptors may be an important marker in a group of patients with CFS. Further studies should be undertaken to further characterize these autoantibodies and to determine specifics of the subgroup to which they may apply. If this proves to be a consistent finding, therapy directed toward the acetylcholine neurotransmitter system may be of benefit in this group of patients.

## **Rookie Section and comment**

What does this mean? First of all, the above paper was presented at a conference and discussion was held around the poster. A manuscript is being prepared for publication, but it has not been published. It is exciting, but in medical research, things move very slowly.

In an earlier *Lyndonville News*, I reviewed Tanaka's paper (Lynnews 1:3). His paper is suggesting that ME/CFS is an autoimmune dysautonomia, and our paper is in agreement. So, what exactly is an autoimmune disease?

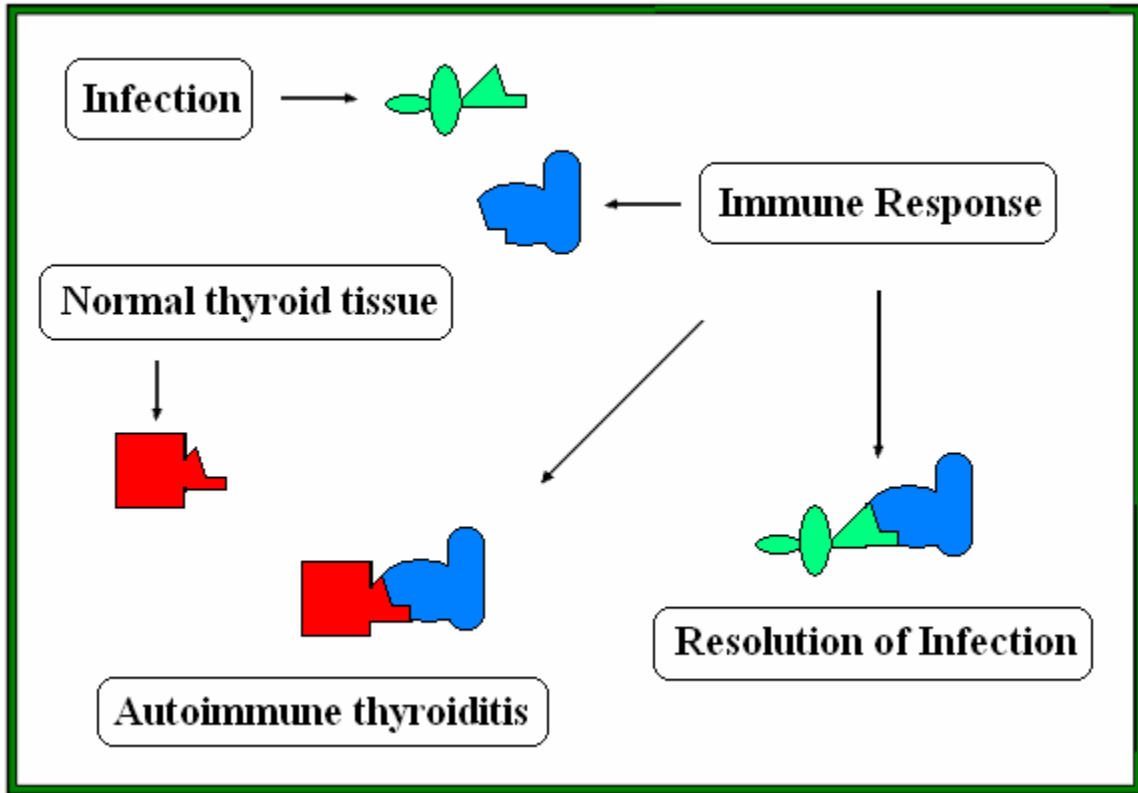
Autoimmune diseases, (for example multiple sclerosis, rheumatoid arthritis, lupus, etc.) are illnesses where a person's own body attacks themselves. It is an immune system with suicidal tendencies. Auto = self, immune = immune reaction. It is a person's immune system allergic to itself. In rheumatoid arthritis, the body attacks its own joint tissue. In MS, it attacks the brain. Most persons with hypothyroidism are so because the body destroyed its own thyroid gland, and so on.

## **Old-Timer's Section (Graduate Studies)**

Persons with certain types of illnesses are more likely to develop autoimmune diseases. Certain infectious diseases are known to set off immune system problems. Strep causes rheumatic fever, parvovirus causes fatigue and joint pain. And there are many others. There are several known mechanisms, one of which is molecular mimicry. In this mechanism, a virus or bacteria has a section that looks much like normal body tissue. The immune system then develops antibodies against the infectious agent but these antibodies then attack the body as well.

The biggest problem in assessing autoimmunity such as suggested by the muscarinic receptor autoantibody study mentioned above is to know whether the autoantibody is actually causing the problem or is it just happened to be there. For example, 25% of ME/CFS patients have a positive

Antinuclear antibody (ANA) but they do not have lupus. The presence of this antibody in such high numbers in ME/CFS could hint toward the fact that ME/CFS patients are more prone to developing other antibodies. Lots of work to be done in this area.



## Lyndonville Research Group Report

A number of questions have come in regarding the LRG, what it is, and what we do. We are a group of odd, disparate persons, many of us in the throes of a mid-life identity crisis, seeking to help the ME/CFS/FM cause in one way or another. At present we number roughly ten people, but the number varies dependent upon everyone's circumstances: presence or absence of a relapse, other life stresses, or the waning or waxing of enthusiasm. We like to think of our group as rather "fluid".

People who volunteer to the LRG bring the skills that they possess. One person may be a scientist, another person may be a 'gofer'. For those of you who do not know about the "gofers" in medical research, they are the most important members of the team. They go-fer stuff. For example, one study we recently did involved pulling out every record of persons with ME/CFS/FM who had a blood volume study. This was, of course, done by the "gofers", and I was one of them. My particular role that evening was to "go-fer" the pizza. The data that we collected in this study was presented at the AACFS meeting in October in Madison, Wisconsin. It is a nice little clinical study. Not earth shattering, not brand new, but a few observations about

a packet of clinical experience we have accumulated in the office. All-in-all, we have about five projects that are in various states of disrepair.

Our budget is limited. So far it comes to roughly twenty six dollars spent entirely for pizza. In future issues of the *Lyndonville News* I would hope to describe some of the specific projects. They may not be good enough to publish in a medical journal but they are interesting.

Recently, the LRG has been more active. One project has been to draw and send blood samples, as well as score the questionnaires on the muscarinic acetylcholine studies which were presented above. We are working on a couple of papers for publication, as no one will ever believe something that has not been published. It's like the Turkish astronomer in *The Little Prince*.

Another area of concentration is the school nurse project. We have completed two lectures to school nurses at different meetings, and have another scheduled. I see this as very urgent because school nurses are in a position to help young persons with ME/CFS almost more than anyone else. The school nurse is in a position to influence the school administration, psychologists, and physicians, which will hopefully lead to better overall management. I know of several instances where the diagnosis of ME/CFS was first made by the school nurse and only reluctantly later on by the pediatrician.

We had a lovely evening at the Stages concert, and they very kindly donated the proceeds of the event to the LRG. There have been a few other donations as well and we are very grateful. More pizza at our meetings. Actually, I am reluctant to even talk about this because we do not need lots of money. We seem to be doing pretty well as a volunteer organization, and I am nervous of the responsibility of accepting the hard earned money of people who are broke. I cannot know if our use of donations will be worth productive. I certainly hope they will be, and we are sincere, but who knows? The first donation I ever received for a CFS study (a big donation) was given to a researcher for an important study. The researcher bought a fancy computer, then didn't do the study for many years. When the study was finally published, it was irrelevant. This is another reason I could never be a politician.

## **Question and Answer:**

***Can you tell me if orthostatic intolerance causes breathlessness on standing and is there any mechanism through which diazepam could help this?***

Good question. Orthostatic intolerance certainly causes breathlessness, and this symptom is often mistaken for asthma in patients with ME/CFS. One easy way to tell the difference is that the asthma medicines do not work. The cause of the breathlessness is probably a reduction in blood flow through the heart and lungs, but this may be different for every "type" of CFS. I have definitely noticed benzodiazepines (Valium® or Xanax®) help this symptom but do not know why. The usual answer is that it reduces the respiratory rate by reducing anxiety, and the reduced respiratory rate improves carbon dioxide balance. But I have my doubts that this is correct. It is related to the observation that patients with ME/CFS cannot hold their breath as long as healthy

people. This was first noted by Dr. Paul Cheney, but I have never been happy with the explanations I have heard to attempt to explain it.

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