## AT A GLANCE

Ticks Bite and We Fight!



### **Our State News**

By Sherry Sievewright, Board President

The Wisconsin Lyme Network is pleased to share that although it is only the end of January, we already have a big year planned for 2019.

We have already sent out one doctor to NY for Lyme training, are co-sponsoring a Patients Lyme Workshop in LaCross with the MN Lyme Awareness group and are in the early stages of planning a Lyme 5K/Walk in Southeastern Wisconsin for fall.

The amazing people that are supporting our cause through volunteering their time and making donations have simply been incredible. It goes without saying that we are ever so grateful for all of you and look forward to 2019 and future planning.

As we continue to bring awareness and education to our communities in WI, we value input from our advocates on how we may better serve our WI residents. If you have something to contribute or would like to be involved, please let us know.

-Sherry

IN THIS ISSUE

### **OUR STATE NEWS**

### LYME DISEASE RESEARCH

### WE HAVE PRETREATED SOCKS

### **UPCOMING EVENTS**





### Lyme Research

There continues to be more and more research coming out that correlates with the link between neurological dysfunction and psychological impairments that are linked with Bb and various tick borne illnesses. So much so that one begins to wonder when the research and the medical community treating these patients are going to finally work together to eradicate misguided information on diagnosis and treatments. It baffles the mind to think that the research is out there, yet, no one wants to take the research as scientific proof.

Once again, there are more studies coming out to warrant the outcry of lyme patients suffering from brain fog and the misdiagnosis of so many neurological maladies.

Dr. Alan McDonald, a pathologist, has been doing studies on the plaques of Alzheimer's patients since 1985. For more information on his research, please take a look at this site: https://alzheimerborreliosis.net/research/.

# Looking for some great volunteer opportunities? Wisconsin Lyme Network needs you!

The Wisconsin Lyme Network is in need of individuals who are interested in leading the way in the State of Wisconsin to educate, bring awareness and share with others the debilitating effects of Lyme disease.

Through educating our communities, we will be sure to heighten awareness so that our medical facilities and health care professionals can no longer look past the symptoms and dismiss the cause. We need people who are willing to step up within the entire state, working with the Wisconsin Lyme Network.

If you feel this to be your calling, please sign up through our website or email us to let us know where you are located. Send us some of your ideas of how you can get assist us in this cause. We need more volunteers who are up to the task, who know Lyme disease and who are willing to share their stories.

Hope to meet you soon!

-WLN Board of Directors



### Lyme Research cont...

Most recently from the Bay Area Lyme Foundation, we link some of the more recent studies in this area:

NEW STUDY PROVIDES INSIGHT RELATED TO LYME BRAIN FOG

January 24, 2019 | Lyme Stories, News, Symptoms, Treatment

By Bay Area Lyme Foundation

 Bonnie Crater, founder and vice-chair of the Board of Directors, Bay Area Lyme Foundation

"I was driving down a road that I've driven 1,000 times and suddenly I had no idea where I was or where I was going. So, I pull over to the side of the road to get myself oriented, and then 5-10 minutes later, I remembered and drove to my destination."

Several friends affected by Lyme have told me of this same experience. It's caused by the brain fog symptom of Lyme disease, which is often called "mild cognitive impairment" by physicians. I first learned about brain fog when my friend Laure and I founded the Bay Area Lyme Foundation. She explains it like this:

"My nature is to be prompt, attentive and on top of things. It's important to me to remember people and conversations, and follow up later. Brain fog makes me feel like my brain is muffled with cotton, and it turns me into a "flake" which is very frustrating and hard for me to accept. There are times my brain has been so confused and my spatial awareness is so poor that I've actually walked right into a wall. Often, when I am experiencing brain fog, I have to read paragraphs numerous times, and can't comprehend the content or remember the beginning of the paragraph by the time I've gotten to the end."

As you can imagine, experiencing brain fog—and the cognitive dysfunction involving memory problems, lack of mental clarity, and poor concentration that comes along with it—is very scary for Lyme patients.

Continued on page 4...





### Lyme Research cont...

So, what is brain fog? Brain fog can affect your ability to think, can cause you to feel confused or disorganized and make it difficult to focus or put thoughts into words. So, why do Lyme patients suffer from it? To unpack this a bit, let's look at some research. Nearly 20 years ago in 2000, Dr. Diego Cadavid and other researchers published a study in Nature where they explored the dissemination of the Lyme bacteria Borrelia burgdorferi (Bb) in non-human primates. They found the bacteria in several organs including the skeletal muscle, heart, aorta, and bladder. They also found the bacteria in the primate brains (pictured below).

Localization of B. burgdorferi: A, spinal cord leptomeninges; B, anterior nerve root; C, dorsal root ganglia; D, epineurium

Some Lyme patients are experiencing brain fog that

Some Lyme patients are experiencing brain fog that looks a lot like some phases of Alzheimer's disease, and the Bb was discovered in a large percentage of Alzheimer's brain cases in this study. If they are connected, that raises an interesting question: How might Bb on the brain be causing brain fog?

In 2012 I met Jay Rajadas at Stanford University. His father-in-law sadly had Alzheimer's disease, and Dr. Rajadas became very interested in studying amyloid plaques found in the brain of Alzheimer's patients, and found a connection to Bb. To gain more insight, Dr. Rajadas initiated a study and Bay Area Lyme Foundation and the L.K. Whittier Foundation funded this initial research. By 2015, Dr. Rajadas had started collaborating with additional researchers. Together, they conducted laboratory and mouse studies to understand the impact Bb may have on neurons in the brain. They hypothesized that the lipopeptides, fatty compounds that are sloughed off by the Bb bacteria, may interfere in the communication between neurons. They conducted PET scans on mice and tested the effect of the presence of a synthetic lipopeptide on the communication of neurons.

What they found is that in the presence of the lipopeptide, the density of the communication sites between neurons were significantly lower and there was a disruption in the synaptic signaling. This result suggests that some neural pathways might get disrupted—thus the brain fog.

What does this mean for Lyme patients? This week, results of years of hard work were published in the Journal of Neuroscience that provide clues that answer this question. For the first time, researchers have demonstrated that lipopeptides associated with Bb persist for a very long period and cause dysfunctions in the brain. It also gave us more to consider.

We now have a new hypothesis to test: Do lipopeptides disrupt neural pathways? And, if we can keep Lyme patients free of lipopeptides in the brain, will they stop having brain fog symptoms? While the lipopeptide effect is exciting new information, more research is needed to confirm these findings and find solutions for Lyme patients. The work today offers another clue about how Lyme disease works and another piece of information we can use to solve the Lyme disease problem.

Our hope is that one day Lyme disease will be easy to diagnose and simple to cure.



### **WE HAVE PRETREATED** SOCKS

Community Outreach

The Wisconsin Lyme Network has been able to partner with a company that manufactures factory bonded repellent socks.

We have Womens/girls socks that are more colorful and look similar to the ski socks as well as mens/boys crew socks.

If you are interested, please go to our website and you can order them directly from our web store. If you have any questions, you may email us at info@wisconsinlymenetwork.org.

Remember: Prevention is key to protecting yourself.







insect • shield

sect shield



**Wisconsin Lyme Network** wisconsinlymenetwork.org

## Learn about LymeWorkshop

Lyme and other tick-borne diseases continue to rise in our area. Hear from experts in this field, who will share evidenced-based information and education on this rapidly growing health concern. Whether you are looking for prevention tips or are suffering the effects of a tick-borne disease, this day is for you. Please join us as we discuss the number one vector-borne disease in the United States.

Date: Saturday, March 23, 2019

Time: 9am to 4pm

Location: Black River Beach Neighborhood Center

1433 Rose Street, La Crosse, WI

Cost per Participant: \$10

\*Gluten Free/Dairy Free lunch is included.

To register for this workshop, please visit our City of La Crosse Parks & Recreation website at or, call 608-789-8640.

https://www.cityoflacrosse.org/Parks

\*\*Registration Deadline: Monday, March 18, 2019

Guest Experts Include:
Dr. Elizabeth L. Maloney
Rebecca Keith, Family Nurse Practitioner
Phillip Pratt, Coppe Laboratories
Erika Schlick, IIN Certified Health Coach Cookbook Author & Blogger

This event is supported by the Wisconsin Lyme Network and the Minnesota Lyme Association. Workshop Presenters:

**Dr. Elizabeth L. Maloney** is the President of Partnership for Tick-Borne Diseases Education, a non-profit organization providing online and live evidence-based continuing medical education programming and materials on tick-borne diseases for physicians and other healthcare professionals. She is a graduate of the University of Minnesota Medical School and its affiliated Family Medicine residency.

Dr. Maloney also acts as a consultant to government agencies and private organizations. She recently served on the Pathogenesis, Transmission and Treatment subcommittee of the federally mandated Tick-borne Diseases Working group. She frequently speaks to the general public on tick-borne diseases, emphasizing the need for primary and secondary prevention.

#### Rebecca Keith, Family Nurse Practitioner

Keith obtained both her undergrad and graduate degrees from the College of St Scholastica in Duluth, MN. Having spent most of her life in Wisconsin and actively enjoying the outdoors, ticks and insects are no strangers to her. Rebecca began paying more attention to Lyme and coinfections by 2008. After experiencing success in treating patients she opened her practice in 2010. Rebecca primarily sees patients in Minong, WI. Rebecca is a member of ILADS, Lymedisease.org, and the American Academy of Nurse Practitioners. She utilizes integrative medical approaches in treating Lyme and the multi system dysfunction which accompanies it.

Erika Schlick, IIN Certified Health Coach | Cookbook Author and Blogger

Erika Schlick is a Certified Health Coach and Author of the Wandering Palate which features 28 days of travel inspired paleo meals to make it easy to stay on track and eat healthy. She herself was affected by Lyme in 2012 and was diagnosed in 2014. After 3 years of treatment, she has been in remission for over 2 years and has made it her life mission to help others affected by Lyme.

She is also the voice behind The Trail To Health () which is a health and wellness blog documenting her journey with Lyme disease and everything she learned about health along the way. www.thetrailtohealth.com

### Phillip Pratt, Coppe Laboratories

Coppe Laboratories is dedicated to discovering and providing diagnostic and treatment solutions for illnesses caused by infectious agents. We offer quality diagnostic testing that exceeds regulatory expectations and provides clear answers with actionable results. We strive to eliminate barriers experienced by physicians and patients in the diagnosis and management of disease through scientific research and innovative diagnostic assays. Coppe Laboratories uses their scientific expertise to transform novel procedures routinely used in the research setting into high-complexity, CLIA-certified diagnostic tests. This work, in conjunction with groundbreaking research and development, makes Coppe Laboratories a leading provider of diagnostic tests for arthropod-borne disease, women's health and transplant.