

Mt. Equinox, VT – 2016 Gear Up For Lyme Bike Climb

Remarks of Pat Smith, President, Lyme Disease Association, Gear Up for Lyme (VT) 2016

Welcome & thanks to all of you who organized, participated, or supported the bikers in this race today and in the past 11 races, since the first in 2004. From 2004-2014, the Manchester Rotary has raised a total of more than \$71,000 for the LDA for its Lyme disease research programs.

The Manchester Rotary recognized the significance of Lyme in 2004, when only 50 cases were reported from Vermont by the Centers for Disease Control & Prevention (CDC). In 2014, 599 cases were reported, which ranked Vermont #13 nationwide in case numbers. CDC says only 10% of cases are reported, so VT had about 6,000 cases in 2014.

The US total was 33,461 cases, times 10, 334,000+ cases. We have to wait for the official CDC 2015 numbers in about 2 weeks to see if the upward trend continues in VT and nationwide. For the 10 year period from 2005-2014, Vermont ranked # 2 in the US in Lyme disease incidence with 70.5 cases/100,000 population. (Overall US 2014 incidence is 7.9). LDA reports that 30% of Lyme cases are children 0-19 years old.

The Rotary raises both awareness & funds for Lyme by holding this benefit each year. LDA has used those monies to help fund research projects including one supported right here in VT at Lyndon State College, research published in the 2013 journal, Northeastern Naturalist. Dr. Alan Geise & others found *B. burgdorferi*, the bacteria that causes Lyme, in 8.9% of adult black-legged ticks they collected along the CT River in VT. The LDA has also used the monies for research coast-to-coast

including for the Columbia Lyme & Tick-Borne Diseases Research Center in NY, a center partially endowed by LDA, which focuses on chronic Lyme disease. We have provided millions of dollars trying to move the field of Lyme & tick-borne diseases forward and research we supported has been published in 39 peer-reviewed journals to date.

The LDA has many other programs including its annual Lyme & Tick-Borne Diseases continuing medical education conferences for physicians and researchers for which the public is also invited to register, jointly provided by Columbia University. This year, it's being held October 15, 16 in St. Paul Minnesota. It features current research that could alter the field. The Keynote speaker, Dr. Moir from Harvard will present his breaking results on Beta Amyloid, Alzheimer's and Lyme Disease. This will be followed by a talk by Dr. Miklossy, International Alzheimer Research Center, reviewing evidence suggesting a link between spirochetal infection and Alzheimer's disease.

The current Lyme tests are highly inaccurate, but new technologies (proteomics and nanotechnology) for improved Lyme tests has led to development of a nanotrap, presented by Dr. Luchini, George Mason University. A new species of *Borrelia* was recently discovered to cause Lyme in the US; this will be discussed by Dr. Pritt from the Mayo Clinic. Dr. Zhang from Johns Hopkins will discuss new in vitro antibiotic strategies to eradicate "*Borrelia* persists," that offer promise for more effective interventions for human Lyme disease. Dr. Aucott from Hopkins will present new findings regarding the human immune response in Lyme disease.

In the area of prevention, a novel mouse vaccine under development will be discussed by Dr. Zatechka, US BIOLOGIC. Work so new it is generating discussions from scientists around the world on the impact it might have on ecology in general will be presented by Dr. Esvelt, from MIT Sculpting Evolution Lab, his talk will address Community-Guided

Ecological Immunization to Prevent Tick-Borne Disease using CRISPR technology. Other speakers will address other tick-borne diseases, neurologic, arthritic and cardiac Lyme disease, and the spread of the ticks that transmit Lyme to ~50% of the counties in the US.

Last year, the International Lyme & Associated Diseases Society, ILADS, doctors who believe in and treat chronic Lyme, published in peer review their new long-awaited clinical guidelines for treating chronic Lyme disease. Those have been published on the federal government's National Guidelines Clearing House. They allow for long-term antibiotic Lyme treatment, if necessary. So today, please help us celebrate these hard fought victories for Lyme patients by helping yourselves remain physically fit and at the same time, raising funds for Lyme disease research. Thanks to the Rotary and its President Susan Howard, and to all of you from the LDA and the Lyme Community.