

Research Unlocking Mysteries Surrounding Lyme Disease

Wall, NJ, March 14, 2011—Researchers recently developed novel diagnostic tools able to distinguish between the various strains of bacteria responsible for causing Lyme disease. For more than a decade, only one strain of *B. burgdorferi* (Lyme bacteria) had been sequenced (mapped), and although that helped research efforts, it was not sufficient to understand the relationship between geographic variations in strains and disease characteristics. Scientists have suspected different strains may infect different parts of the body, causing different symptoms.

The recent completion of the genome sequencing of 13 additional isolates will greatly contribute to the improved understanding of the origins and effects of Lyme disease. Described as a “superb discovery tool,” *Journal of Bacteriology* 2-2011, sequencing will also provide a more solid foundation for detection, diagnostic, and prevention strategies. The study was led by Dr. Steven Schutzer, Dr. Claire Fraser-Liggett, and Dr. Sherwood Casjens. (click link for all authors & affiliations <http://jb.asm.org/cgi/content/full/193/4/1018>).

Lyme Disease Association (LDA) is encouraged that this latest accomplishment will provide a more in-depth understanding of Lyme disease, which in turn will lead to improved patient care. LDA funding often helps to start a project or complements federal funding such as that from the National Institutes of Health (NIH), which was the case here. LDA continues on its mission, having raised over \$5 million to date for Lyme-related research and education, with 100% of incoming funds slated for research going directly to projects such as this latest genome sequencing effort and the groundbreaking study below.

In a separate new study—by examining proteins in cerebrospinal

fluid of Lyme and chronic fatigue patients and normal controls—researchers led by Dr. Steven Schutzer, University of Medicine & Dentistry of New Jersey-New Jersey Medical School, and other scientists, discovered that chronic fatigue syndrome and neurologic Lyme disease are distinct disease entities. Currently, Lyme patients may be misdiagnosed with chronic fatigue syndrome, so this finding will help scientists develop more accurate diagnostic tools and appropriate therapies.

The Columbia Lyme & Tick-Borne Diseases Research Center, Dr. Brian Fallon, Director, provided samples for the above Lyme-chronic fatigue study published in PLoS One 2-23-11 (<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0017287>). The Center was established in part through funding from the LDA. www.LymeDiseaseAssociation.org

ABOUT THE LYME DISEASE ASSOCIATION: The New Jersey-based national Lyme Disease Association has dedicated itself to providing funding for projects which can help prevent and cure Lyme disease. To date, LDA funded studies have resulted in acknowledgement in 22 scientific peer review journal articles, including the two above. The LDA is an all-volunteer national nonprofit, 501 (c) (3), dedicated to Lyme disease education, prevention, raising monies for research, and patient support. It's a part of the 2010 Combined Federal Campaign and an Environmental Protection Agency PESP Partner and offers LymeAid 4 Kids program for children without insurance coverage. LDA is associated with 43 Lyme organizations nationwide, working together to make a difference for Lyme patients.

LYME DISEASE ASSOCIATION

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