

For Immediate Release

**LYME DISEASE PROVES EVEN MORE COMPLICATED WITH ASSOCIATED CO-INFECTIONS:
*Time For Lyme urges patients to request testing for three other common tick-borne illnesses***

Greenwich, CT, September 2008 – Lyme disease is renowned for its difficulty to diagnose and its challenge to treat. However, many patients don't know that a Lyme disease diagnosis also comes with a risk for developing one or more co-infections – tick-borne illnesses that can worsen the severity and/or the duration of Lyme symptoms. What's more, these co-infections must be independently diagnosed and treated with entirely different medications and protocols than the primary Lyme infection.

"For most patients, the initial Lyme disease diagnosis is overwhelming and the primary focus is naturally on treating it effectively," explains Debbie Siciliano, co-president of Time for Lyme, a Greenwich CT based Lyme disease advocacy and education group. Dr. Daniel Cameron, president of ILADS, a nonprofit, international, multidisciplinary medical society, dedicated to the diagnosis and appropriate treatment of Lyme and its associated diseases, adds that "the ticks that transmit the bacteria that causes Lyme disease also carry numerous other pathogens that can complicate the treatment and management of the primary infection and lead to a longer-lasting, more devastating illness." Dr Cameron encourages new patients to request testing for the three most common Lyme disease co-infections: Babesiosis and Erlichiosis (HME or HCE), both parasitic infections, and Bartonellosis, an infection caused by bacteria called Bartonella.

Symptoms and treatment of Lyme co-infections are as complex as Lyme itself

Similar to the difficulty with Lyme diagnosis and treatment, Dr Cameron points out that the symptoms of these Lyme co-infections are also non-specific, such as fever, chills, headache and malaise, and the diagnostic procedures often rely on a series of negative tests, since the parasites and bacteria that cause the infections are only detectable in the bloodstream for a short period of time. "This is why it is so critical for patients to have a co-infection workup completed at the time of their initial diagnosis, when the likelihood of an accurate diagnosis is at its highest," he notes.

The National Institutes of Health also recognizes the dangers associated with Lyme disease co-infection, noting that co-infections have the potential to make Lyme diagnosis more difficult and to weaken patients' immune systems, compromising their ability to fight off the initial Lyme infection. In fact, a landmark study* of Lyme co-infections found that patients who were diagnosed with both Lyme disease and Babesiosis had an average of three more symptoms and an average disease duration that was two weeks longer than those who were diagnosed with Lyme disease alone. Researchers found similar complications among patients who were infected with Lyme disease and Erlichiosis.

Time for Lyme and ILADS encourages patients to be aware of the following information and symptoms for these three most common tick-borne co-infections, and to discuss testing and treatment protocols with their physicians:

Babesiosis is an infection caused by a parasite that infects red blood cells. *Babesia microti* is believed to be the most common piroplasm infecting humans, but scientists have identified over twenty piroplasms carried by ticks. Ticks may carry only *Babesia* or they may be infected with both *Babesia* and Lyme spirochetes. The first case of babesiosis was reported in Massachusetts 40 years ago, but cases have been reported all across the U.S., Europe and Asia since then.

Symptoms of babesiosis are similar to those of Lyme disease but it more often starts with a high fever and chills. As the infection progresses, patients may develop fatigue, headache, drenching sweats, muscle aches, nausea, and vomiting. Babesiosis is often so mild it is not noticed but can be life-threatening to people with no spleen, the elderly, and people with weak immune systems. Complications include very low blood pressure, liver problems, severe anemia (a breakdown of red blood cells) and kidney failure.

Ehrlichiosis is common in two forms, both of which are caused by tick-borne parasites called Ehrlichia that infect different kinds of white blood cells. In HME (human monocytic ehrlichiosis), they infect monocytes. In HGE (human granulocytic ehrlichiosis, also called anaplasmosis), they infect granulocytes. Ehrlichiosis and anaplasmosis share the same symptoms: sudden high fever, fatigue, muscle aches and headache. The disease can be mild or life-threatening. Severely ill patients can have low white blood cell count, low platelet count, anemia, elevated liver enzymes, kidney failure and respiratory insufficiency.

Effective diagnosis is difficult, as only two species of these parasites have been identified and scientists believe there may be dozens of other species causing Ehrlichiosis. Ehrlichia parasites multiply inside host cells, forming large mulberry-shaped clusters called morulae which doctors can sometimes see on blood smears, but most often a diagnosis is surmised when patients do not respond well to treatment for Lyme disease.

Bartonellosis is known to be caused by a bacteria carried by fleas, body lice and ticks. Scientists suspect that ticks are a source of infection in some human cases of bartonellosis. People with tick bites and no known exposure to cats have acquired the disease. People who recall being bitten by ticks have been co-infected with Lyme and Bartonella. More research needs to be done to establish the role of ticks in spreading the disease. Bartonellosis is often mild but in serious cases it can affect the whole body.

Early signs are fever, fatigue, headache, poor appetite, and an unusual, streaked rash. Swollen glands are typical, especially around the head, neck and arms. Lymph nodes may be enlarged and the throat can be sore. Polymerase chain reaction (PCR) and tissue biopsy can be used to confirm a diagnosis; however they are insensitive, as are standard blood tests.

Lyme disease is one of the fastest-growing chronic diseases in the U.S., with more than 23,000 diagnoses in 2005 – up from just over 8,000 in 1993. The Centers for Disease Control & Prevention (CDC) estimates that diagnoses make up just 10% of actual cases, suggesting that more than 230,000 Americans may be infected.

About Time for Lyme

Time For Lyme is an organization dedicated to eliminating the devastating effects of Lyme disease and other tick-borne illness. Our mission is to prevent the spread of disease, develop definitive diagnostic tools and effective treatments, and to ultimately find a cure for tick-borne illness by supporting research, education, and the acquisition and dissemination of information. In addition, we will continue to act as advocates for Lyme disease sufferers and their families through support of legislative reform on the federal, state and local levels. For more information on our organization, please visit www.timeforlyme.org.

About ILADS

ILADS www.ilads.org is a nonprofit, international, multidisciplinary medical society, dedicated to the diagnosis and appropriate treatment of Lyme and its associated diseases. ILADS promotes understanding of tick-borne diseases through research and education and strongly supports physicians and other health care professionals dedicated to advancing the standard of care for Lyme and its associated diseases.