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## New and Exciting Lyme Disease Research

By Lyn Hanshew, M.D.

Some of the most ill people I have tried to help have been diagnosed with Lyme disease. Conventionally, the diagnostic and treatment options are not good. Serological testing has been disappointing and confusing. The use of short-term and long-term antibiotics is problematic. The alternative approach of the parenteral use of parental hydrogen peroxide and Vitamin C has provided improvement, but these agents are very harsh on the veins and poorly tolerated long-term.

The history of Lyme disease begins in 1949; Dr. Sven Hellerstrom from the Dermatological Clinic of Karolinska institute in Stockholm, Sweden presented the paper "Erythema chronicum migrans Afzelius with meningitis" at the 43rd Annual Meeting of the Southern Medical Association in Cincinnati, Ohio. He presented convincing evidence that both the erythema and subsequent meningocerebrospinal symptoms may develop following a tick bite.

He also reported on the successful treatment of his patient with penicillin, a drug shown previously by his colleague Dr. Hollstrom to be effective in the treatment of Erythema chronicum migrans (ECM).

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In the United States, ECM was first reported in 1970 on a physician bitten by a tick in northeastern Wisconsin. The attending physician, Dr. Rudolf Scrimenti, recognized the similarity of the patient's skin reaction to the lesions of European ECM and successfully treated the patient with penicillin.

The treatment of three additional patients with penicillin and of one with erythromycin resulted in complete resolution of symptoms within 48 to 72 hours.
Since 1972, residents in the eastern Connecticut towns of Lyme, Old Lyme, and East Haddam had been suffering from an illness characterized by recurrent attacks of asymmetric swelling and pain in large joints, especially the knee. Since such arthritic conditions were not known to be associated with ECM in Europe, the illness was thought to be a new clinical entity and was named Lyme arthritis, later changed to Lyme disease when it was determined that arthritis was only one of several manifestations of this disease.

The diagnosis of Lyme disease is a clinical one and is based on the development and recognition of the skin lesion a few days, weeks, or even months, after the bite of an infected tick. Unfortunately in up to 40% of the patients, the skin lesion does not develop or is not recognized. Without treatment, the organism spreads throughout the body and may affect the muscular, skeleton, cardiac and nervous systems. Because of the difficulty in culturing Borrelia bacteria in the laboratory, diagnosis of Lyme disease is typically based on the clinical exam findings and a history of exposure to endemic Lyme areas. The ECM rash, which does not occur in all cases, is considered sufficient to establish a diagnosis of Lyme disease even when serologic blood tests are negative. Serological testing can be used to support a clinically suspected case but is not diagnostic by itself. Many researchers have found no correlation between levels of specific B. burgdorferi antibodies detected with a recombinant antigen ELISA and the number of protein fractions developed with these antibodies by immunoblot. Moreover, Lyme patients who have live spirochetes in body fluids may have low or negative levels of Borrelia antibodies in their sera.

Diagnosis of late-stage Lyme disease is often difficult because of the many symptoms that can mimic other diseases. Lyme disease may be misdiagnosed as multiple sclerosis, rheumatoid arthritis, fibromyalgia, chronic fatigue syndrome, lupus, or other autoimmune and neurodegenerative diseases.

The search for effective antibiotics in the treatment of Lyme disease began in 1982 with Dr. William Burgdorfer's discovery of the spirochete now known as Borrelia burgdorferi as the causative agent of Lyme disease, ECM and related disorders (acrodermatitis chronica atrophicans, lymphadenosis benigna cutis) in Europe.

The antibiotics initially found to be effective include tetracyclines (doxycycline, minocycline), penicillins (penicillin G, amoxycillin), cephalosporins (cefotaxime, ceftriaxone), and erythromycin. Use of these drugs depends on the timeframe of diagnosis. Early Lyme disease is conventionally treated orally, whereas late Lyme disease uses parenteral or a combination of parenteral and oral applications. Treatment failures have been reported for each of these drugs particularly for the tetracyclines that are only temporarily effective unless they are applied over long periods of time, i.e. months to years. The difficulties with long-term antibiotic protocols include the expense, lack of insurance coverage, side-effects, potential for development of resistance and lack of

studies demonstrating efficacy.
Due to the obvious and desperate need for an effective anti-Borrelia agent and that Advanced Cellular Silver (ACS) 200® in previous studies has been proven to be a safe and effective anti-bacterial, anti-viral and anti-fungal agent, the following independent studies were conducted.

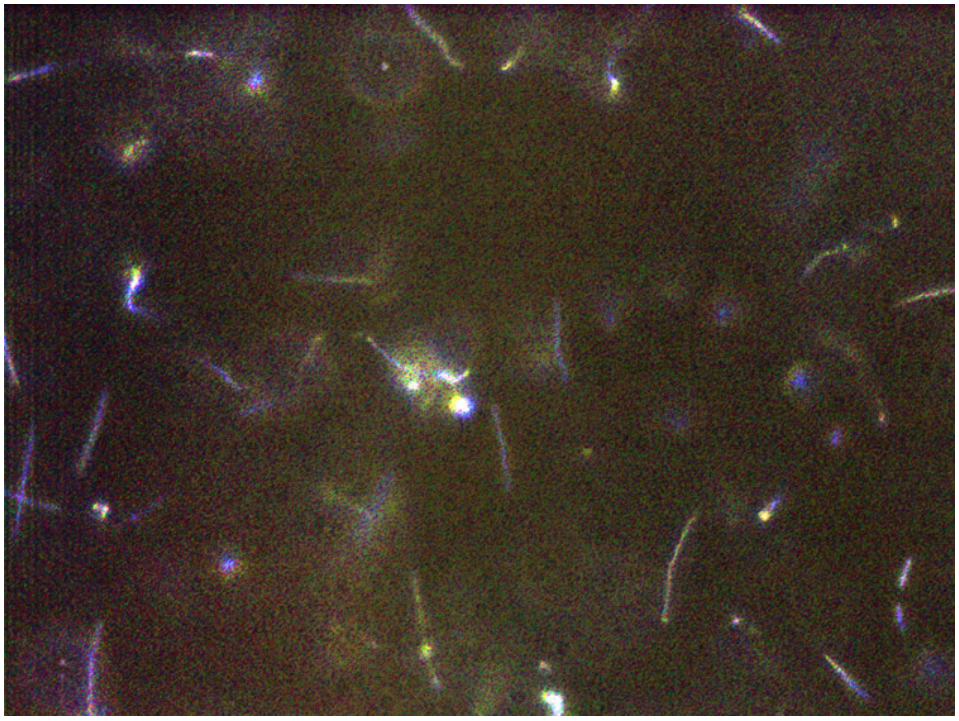
Independent studies performed by Dr. Robison at BYU generated the following kill-time data using ACS 200® against B. burgdorferi. The kill-time studies used loss of motility of the spirochetes as the kill criteria as observed via dark field microscopy. It is important to know that the Borellia kill-time protocol used for this test was originated by Dr. William Burgdorfer.

**B. burgdorferi baseline count:**
Mean number of motile organisms: 130/field. The estimated volume of 1 field is approximately $3.4 \times 10^{6}$ ml. Therefore, the starting concentration of the B. burgdorferi culture was approximately $3.8 \times 10^{7}$ organisms/ml.

| ACS 200 | |
|---|---|
| **Time** | **No. motile organisms** |
| 1.5 min | 17 |
| 4 min | 1 |
| 6 min | 1 |
| 8 min | 0 |

| PSS | |
|---|---|
| **Time** | **No. motile organisms** |
| 1 min | 11 |
| 4 min | 10 |
| 6 min | 3 |
| 8 min | 10 |

Since a 1:10 dilution of the culture was performed in both the test and PSS control suspensions, the number of live organisms observed after 8 minutes in the PSS control was about 77% of that expected.



**Non-motile Borrelia via dark field microscopy**

**Conclusion**
After years of extensive research, ACS 200® has now been shown to achieve complete kill against Borrelia Burgdorferi in only 8 minutes. These test results represent a significant feat as the Lyme disease associated microorganism is extremely difficult to culture, test and kill. Most of the B. burgdorferi motility ceased after about 4 minutes of exposure to the ACS 200® solution. No motility was observed after 8 minutes of exposure.

Dr. Burgdorfer described similar in vitro testing results using a colloidal silver preparation. He surmised that silver disables the enzyme(s) used by bacterial, fungal and viral agents for their oxygen metabolism causing them to suffocate upon contact. There have been reports of elimination of late-stage Lyme symptoms using colloidal silver preparations.

This data provides the scientific basis for using ACS 200® as an effective anti-Borrelia agent. In the clinical setting, many practitioners currently prescribe ACS 200® to their Lyme patients with excellent outcomes. Adding Advanced Cellular Zeolite (ACZ) nano® to reduce toxic body burden is a very powerful adjunct to the ACS 200® protocol. When taken together, these two products are highly effective in broad treatment.

**Clinical Results**
"I have been using the ACS 200 for well over a year and find that I rely on taking it daily. I have the Varestrongylus Klapowi worm that Lyme and CFS patients suffer with and I take 2 ounces, 3 times a week, and it has helped to get the worm under control. I also take 5 sprays by mouth, 3 times daily. ACS 200 is such an important part of my wellness program that I carry a bottle in my purse. It is also great for sinus infections, pink eye and ear infections. Make sure you hold the solution in your mouth for 3 to 5 minutes if you can. Lyme patients have severe dental problems and by holding each dose in your mouth, it helps our gums. I make sure I spray my mouth several times when out in public, especially the movie theater." Linda H.

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## About the Author

Dr. Hanshew practiced medicine on the seaside of Seattle for 15 years. She achieved Board-Certified in Family Medicine and Bariatric Medicine. She also has specialized training in Anti-Aging Medicine, Natural Hormone Replacement and Environmental Toxicity issues relating to the exponential rise in the incidence and successful treatment of Autism, Fibromyalgia, ADD, Chronic Fatigue, Multiple Sclerosis, Obesity, Anxiety, Depression and Cancer.