

# Samento®: New Remedy For An Ancient Enemy—Lyme Disease

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Lyme disease was first recognized around 1975, when a mysterious outbreak of juvenile rheumatoid arthritis occurred around Lyme, Connecticut.<sup>1</sup> In 1982, the causative agent of Lyme disease was discovered by Willy Burgdorfer. It turned out to be a spirochete (spiral-shaped bacterium) from the genus *Borrelia*, subsequently named *Borrelia burgdorferi* (Bb).<sup>1</sup>

As Lyme disease expert Jo Anne Whitaker, M.D., notes: "Lyme disease is called the 'New Great Imitator' because, like syphilis [the original 'Great Imitator'], it attacks multiple organ systems and mimics many diseases. Both diseases are caused by spirochetes."<sup>2</sup> Originally believed to be spread only through bites by the tiny deer tick (*Ixodes dammini*), it is now known to be potentially spread by many tick species, as well as bot-flies, mosquitoes and fleas.<sup>3,4</sup>

And in a recent article with 224 references, physicians W.T. Harvey and P. Salvato have offered persuasive evidence that Lyme disease is transmitted sexually and congenitally (by birth from an infected mother), as well as through breastfeeding.<sup>1,4</sup> They also provide evidence that Lyme disease may be a hidden epidemic, affecting as much as one-sixth of the human race, if not more.<sup>4</sup> By 1994, Lyme disease experts Brian Fallon and Jenifer Nields could already state: "Now the most common vector-borne [spread by ticks and insects] infection in the United States, Lyme disease is increasing in incidence and geographic spread."<sup>5</sup>

## **Lyme: One Disease, Many Symptoms**

Lyme disease is believed to cause, mimic, manifest as, be misdiagnosed as, or contribute to more than 300 conditions and diseases.<sup>6</sup> About 60 percent of those bitten by Bb-infected ticks or insects will develop a characteristic "bull's-eye" rash (erythema migrans), yet many confirmed Lyme disease patients never develop such a rash.<sup>13</sup>

There may be few initial symptoms other than a flu-like syndrome, yet within weeks to years a diversity of symptoms may occur. These may include fatigue, low grade fevers, night sweats, migrating joint pains or arthritis, muscle pains, sleep disturbances, frequent and/or severe headaches, numbness or tingling in hands or feet, nerve pains, brain fog, hypersensitivity to lights, sounds, tastes or smells, memory and concentration problems, speech difficulties, depression, irritability, mood swings,<sup>7</sup> heart, eye, respiratory and gastrointestinal problems,<sup>2</sup> to name just a few. Symptoms may come and go, varying in intensity. The Bb spirochete may penetrate into the brain as early as three weeks after infection.<sup>8</sup>

## **Lyme: Difficult and Controversial Diagnosis**

Lyme disease has become a surprisingly controversial disease.<sup>9</sup> Even famed novelist Amy Tan has been drawn into the controversy, after a belated Lyme disease diagnosis in her own case. She complained about being tested even for syphilis and ALS (Lou Gehrig's disease) before anyone thought to test her for Lyme disease.<sup>10</sup> Why the controversy? The CDC (United States Centers for Disease Control and Prevention) has set up a rather strict formal set of criteria for Lyme disease diagnosis. The CDC is not directly involved in disease treatment. Its criteria are designed as part of its mission to track and assess disease patterns in the United States.

Many conservative physicians use the CDC's Lyme disease surveillance criteria as clinical diagnostic criteria. A key part of the CDC criteria is a requirement for laboratory confirmation through ELISA (enzyme-linked immunosorbent assay) and/or Western blot antibody testing.<sup>8</sup>

Yet as Lyme disease expert Brian Fallon has written in America's most prestigious psychiatric textbook: "Although laboratory testing is a valuable component of the

diagnostic assessment, negative test results cannot be used to exclude Lyme disease in a patient with typical clinical features and a history of exposure to a Lyme disease endemic area.... Because the laboratory tests for chronic Lyme disease are not sufficiently reliable to document the presence or absence of persistent infection, decisions regarding treatment should be based primarily upon the physician's clinical judgment."<sup>8</sup>

For those wishing an accurate laboratory confirmation of Lyme disease, Dr. Jo Anne Whitaker, M.D., has developed a new "Quantitative-Rapid Identification of *Borrelia burgdorferi*" test (QRIBb®). Using a fluorescent antibody technique, Whitaker has confirmed Lyme disease in 3,500 blood specimens from ill patients. Her results in many cases were checked by world-renowned microbiologist Dr. Lida Mattman, who was able in every case to culture and identify live Bb spirochetes from the blood samples the QRIBb test had already certified as Bb-positive. Dr. Whitaker can be reached at 727-937-9077.

She has found many patients were given a false diagnosis (e.g., ALS) who turned out to have Lyme disease, and in many cases recovered from "incurable" ailments after antibiotic treatment.<sup>11</sup>

### **Lyme: Treatment Controversies**

When Lyme disease is diagnosed, it is normally treated with antibiotics. Fallon states that for early Lyme disease without central nervous system (CNS) involvement, three to four weeks of oral doxycycline, amoxicillin or cefuroxime is recommended.<sup>8</sup>

For Lyme disease with CNS involvement, a four-to-six-week intravenous treatment with ceftriaxone or cefotaxime is recommended.<sup>8</sup> Fallon recommends that for relapsing patients, longer and repeated courses of antibiotic treatment may be useful.<sup>8</sup> He notes, "Failure to treat Lyme disease early in its course or for a sufficiently long duration may lead to a chronic illness characterized by persistent waxing and waning neuropsychiatric disturbances, arthralgias [joint pains], myalgias [muscle pains], sensory-hyperacutities, and severe fatigue."<sup>8</sup>

Yet many conservative physicians treating Lyme disease give only a two-to-threeweek course of antibiotics, frequently only orally. Because intravenous antibiotic care may cost tens of thousand of dollars, medical insurers and medical benefit managers often discourage or deny such treatment.

Not everyone approves of massive antibiotic treatment for Lyme disease. Dr David Jernigan, co-author with his wife of a recent book on Lyme disease, observes that "It is not enough simply to take an antibiotic: even intravenous antibiotics will only kill 85 percent of the bacteria at best, leaving 15 percent alive and now antibiotic resistant.... Most people with chronic Lyme disease have already used many antibiotics with limited success or may be intolerant and allergic to them."<sup>12</sup>

Fallon and Niels point out "*B. burgdorferi* has been shown to be capable of persisting in human hosts despite extensive antibiotic treatment.... Several features are known to contribute to an organism's resistance to standard lengths of antibiotic treatment. These features include an intracellular location, long replication time, genetic variability, and the ability to become sequestered in difficult-to-penetrate sites. *B. burgdorferi* appears to possess all of these characteristics."<sup>5</sup> Bb has been shown able to live inside various cells, including fibroblasts, macrophages, and endothelial cells, as well as in antibiotic- and immunologically-privileged sites, such as CNS, joints and the interior chamber of the eye, which protect it from immune cells and antibiotics.<sup>5</sup>

### **Samento®**

Given the recognized difficulty of successfully treating Lyme disease with standard antibiotic therapy, an alternative treatment that is natural, nontoxic, well-tolerated, effective, and can be taken orally for as many months or years as needed, would be a welcome remedy in the Lyme war.

Fortunately, such a remedy has been available since 2001. It is an herbal extract called "Samento," made from a Peruvian vine called "Uncaria tomentosa," also known as "cat's claw," "una de gato," and "Vilcacora."<sup>14</sup> Samento is made from a rare chemotype of *U. tomentosa* that is rich in pentacyclic oxindole alkaloids (POA)

and is guaranteed free of tetracyclic oxindole alkaloids (TOA). It is the TOA-free nature of Samento, combined with its POA potency, that gives Samento its unique effectiveness.

#### **Oxindole Alkaloids**

Most cat's claw products on the market contain a mixture of POA and TOA, in unknown proportions. Yet K.-H. Reinhard has noted "...the root of *Uncaria tomentosa* is a valuable drug only when its pentacyclic chemotype is used without admixture of the tetracyclic chemotype. The pentacyclic oxindole alkaloids act on the cellular immune system. They raise the rate of phagocytosis [germ-killing] by granulocytes [a type of white blood cell]... and they induce the release of a factor from endothelial cells [which line the heart, blood and lymph vessels] that regulates the proliferation of lymphocytes [germ-killing white cells].... The secretion of the factor was effected by the pentacyclic alkaloids but not by the tetracyclic alkaloids. Rather, it was shown that the tetracyclic alkaloids act antagonistically on the release of the factor."<sup>15</sup>

Falkiewicz and Lukasiak report that the POA-stimulated endothelial factor activates normally inactive B and T lymphocytes in humans, increasing germ-killing power.<sup>14</sup> K. Keplinger and colleagues found that in humans, the POAs increased lymphocyte counts when they were too low, and lowered them when too high. Thus, the POAs are both immuno-stimulating and beneficially immunoregulating.<sup>16</sup>

#### **Samento: More than POA**

The water-alcohol Samento extract also contains many other beneficial components. Multiple quinovic acid glycosides are present as well. "These compounds are what the latest generation of quinolone antibiotics (such as Cipro®) are based on. The natural compounds provide safe and significant direct antimicrobial effects on Lyme disease."<sup>17</sup> The quinovic glycosides also have shown antiviral activity against rhinoviruses (cold viruses) and vesicular stomatitis virus (oral cold sores).<sup>14</sup>

Samento also contains the triterpenes oleanolic and ursolic acid. These have been shown to have liver-protective, anti-inflammatory, antiviral, antibacterial, anti-ulcer, immunostimulating/modulating and blood sugar-lowering properties.<sup>14</sup> Catechin polyphenols, including epicatechin, with anti-inflammatory and blood sugar-lowering effects, are also present in Samento.<sup>14</sup>

#### **Samento: Powerful Anti-Inflammatory**

Cat's claw extracts have been shown to have powerful anti-inflammatory effects. A 1998 study verified these effects through multiple in vitro and in vivo experiments.<sup>19</sup> The cat's claw extract reduced the production of toxic peroxynitrite, stimulated by a bacterial toxin, and reduced subsequent cell death. Mice given Samento plus the NSAID (non-steroidal anti-inflammatory drug) indomethacin suffered no intestinal lining damage, yet control mice given the same dose of indomethacin without Samento suffered complete destruction of their intestinal lining. The study's authors concluded: "Cat's claw protects cells against oxidative stress and negated the activation of NF-kB [a powerful pro-inflammatory chemical whose production is stimulated by toxins]."

These studies provide a mechanistic evidence for the widely held belief that cat's claw is an effective anti-inflammatory agent."<sup>19</sup> Bb is known to shed membranous materials from its surface that stimulate powerful inflammatory, autoimmune reactions.<sup>5</sup> In a subsequent study, the same research group found that cat's claw extract reduced TNF-alpha expression stimulated by a bacterial toxin 65 to 85 percent, at only nanogram levels of cat's claw. A nanogram is one-thousandth of a microgram! TNF-alpha is one of the most powerful pro-inflammatory cytokines released (often to excess) by white blood cells when challenged by germ toxins.<sup>20</sup>

#### **Samento: Clinical Use**

John Kule, M.D., began using Samento in his practice in March 2002. After treating 60 patients with it, he wrote a report for the British Naturopathic Journal. He used it to treat a broad range of conditions, including chronic fatigue, fibromyalgia, hypertension, irritable bowel syndrome, candidiasis, gastritis, rheumatoid and osteoarthritis, Lyme disease and benign prostatic hypertrophy. Fifty-nine out of 60

showed distinct clinical improvement.

Frequent findings were increased energy, enhanced sense of well-being, lifting of “brain fog,” decreased inflammation, decreased blood pressure in hypertensives, decreased fasting blood sugar in diabetics, reduced fluid retention, and reduced blood pressure medication in hypertensives.<sup>21</sup> He found only few, mild and transient side effects. Several patients did experience the Herxheimer reaction (explained later in this article).

Dr. David Jernigan, D.C., of Wichita, Kansas, uses Samento extensively for Lyme disease and other infections. He has gotten excellent results, and has found it to be nontoxic, active, highly energetic and synergistic with other remedies. It is a key component for his comprehensive program of treating Lyme disease without antibiotics.<sup>12</sup>

Dr. Lee Cowden, M.D., of Fort Worth, Texas, used Samento along with diet, detoxification and supplements with 13 patients with documented Lyme disease, while leaving 14 Lyme disease patients in the control group on their regular antibiotic regimen. Three of the control group members became slightly better, three became worse and eight were unchanged. All of the Samento group experienced dramatic improvements, with 11 of 13 testing negative for Bb at the end of the study.<sup>17, 22</sup>

Dr. Stephen Sinatra has found Samento useful for quickly aborting bouts of the flu, as well as preventing it.<sup>18</sup> Samento is known to contain antiviral triterpenes and quinovic acid glycosides, which may account for this benefit.

#### **Samento: Slow But Steady**

Due to the unique life cycle of Bb, a quick complete elimination of Bb is unrealistic to expect, whatever germ-killers are used. Because Bb hides inside cells, often in a dormant, cyst form, it spends much of its life cycle sequestered from antimicrobial compounds. When cells die naturally, or from the intracellular presence of Bb, the cysts are released into tissue fluids or blood, where they become a spirochete once again. It is then that they are most vulnerable to antibiotics or Samento.

Since the various cells that hide Bb will typically have lifespans ranging from two to three weeks up to six to eight months, it may take six to eight months for even one generation of Bb to become exposed to Samento for elimination. Thus it may take eight to 16 months to gradually kill the Bb hiding in several generations of cells.

Since Samento is extremely nontoxic,<sup>14,16</sup> it can be safely taken daily for the “long haul” necessary to thoroughly eradicate Bb from an infected body.

#### **Samento: Cautions**

Because Samento empowers the immune system, it should not be used by those on immunosuppressive drugs, e.g. to prevent transplant rejection, nor should it be taken by those who are soon to undergo organ or bone marrow transplants.<sup>15</sup> Since Samento has been shown to lower blood pressure and blood sugar, those with severe low blood pressure or hypoglycemia should use Samento very cautiously.<sup>21</sup>

Pregnant or nursing mothers, as well as very young children, should not use Samento unless advised by a physician.<sup>15</sup> Anyone taking Samento should start with a low dose (one drop in four ounces of water twice daily) and slowly work up to five drops two or three times daily, taken on an empty stomach. Because Samento enhances immune activity and directly kills germs, it may trigger a Herxheimer reaction, especially if started at too high a dose or with too rapid dose increase.

The Herxheimer reaction may include headache, muscle pain, nausea, diarrhea, or flu-like symptoms. It is thought to be due to toxins released from the mass death of microbes killed through treatment, as well as to the immune system’s inflammatory overreaction to the germ toxins. Drinking lots of water and taking fiber and liver support supplements (silymarin, dandelion root extract, lipoic acid) may reduce the risk or severity of a Herxheimer reaction.

If such a reaction occurs when taking Samento, cease its use temporarily and restart later at a lower dose. Those known or suspected to suffer from Lyme disease or other serious infectious illness should ideally use Samento under the care of a doctor or other health care professional.

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