



BENEFITS OF PLANT EXTRACTS IN LYME DISEASE

PART 2

In the last issue of the Health Science News Page, we discussed insect-borne diseases with a specific focus on Lyme disease. Lyme disease was first widely recognized in 1975 in Old Lyme, Connecticut, USA. It is a bacterial infection caused by a type of bacteria called *Borrelia*. It is transmitted to humans through the bite of a tick that feeds on other small animals, pets, deer, mice, birds, and squirrels carrying the bacteria.

Lyme disease starts with vague flu-like symptoms such as skin rashes, fever, muscle aches, and fatigue. Due to a lack of specific and reliable laboratory tests, the treatment is often delayed and the disease goes on untreated for a long time. In more advanced or chronic Lyme disease stages, people develop chronic arthritis, inflammation of the heart and other organs, neuropathies, sleep disturbances, cognitive impairment and other neurological symptoms including changes in some of the markers of autoimmune diseases. Oral and intravenous antibiotics are usually applied but their efficacy decreases when given in the later stage of infection. Moreover, many of the antibiotics are not effective due to wide-spread bacterial resistance.

The bacteria causing Lyme disease can survive various conditions because they exist in three morphological forms within the body, and thus are able to escape the antibiotic effects. The active forms (spirochetes) of *Borrelia* can rapidly convert into the latent or rounded forms that allow *Borrelia* to survive for a long time. The rounded forms can easily convert back to the active spirochetes and can cause a relapse of Lyme disease. The third form, biofilm, is the most complex biological structure that harbors both active and latent forms of the bacteria and forms an effective protective mechanism against the immune cells or any other compounds including the antibiotics targeted at eliminating these bacteria. Therefore, the biofilm elimination is an important therapeutic target in the treatment of Lyme disease.



In the last issue of the Health Science News Page we presented the result of *in vitro* studies with natural compounds against *Borrelia*. The *in vivo* studies conducted at the Dr. Rath Research Institute used the defined nutrient mix in healthy (control group) mice and mice infected with *Borrelia*. At the end of 4 weeks, we observed that the infected mice had increased levels of monocytes (a type of white blood cells), which indicates that their immune systems had identified *Borrelia* as an invading species and reacted accordingly. *Borrelia* DNA was detected in the mice that were injected but not treated with the nutrient mix. However, mice treated with the nutrient mix showed only a negligible amount of *Borrelia* DNA which shows that the bacteria were almost eradicated. Moreover, infected mice kept on a normal diet had high levels of inflammatory markers, while inflammation in the mice exposed to the nutrient mixture was suppressed. We also conducted a 6-month pilot human clinical trial with Lyme disease patients who had previously undergone several rounds of antibiotics without any improvement. Of the participants on the micronutrient program, 65% experienced significant improvement in their condition allowing them to conduct their normal daily activities and resume working.

The *in vivo* and the pilot clinical trial results and success of this approach signalizes new possibilities for safe and effective control of Lyme disease, bringing hope for millions of chronic Lyme disease patients.

Ref:

Goc A, Niedzwiecki A, Rath M, *J Nutri Bio*, 5(1): 350-363 (2019)

Goc A, Gehring G, Baltin H, Niedzwiecki A, Rath M, *Ther Adv Chronic Dis* 2020; vol 11: 1-13

This information is provided to you by the Dr. Rath Research Institute a leader in the breakthrough of natural health research in the field of cancer, cardiovascular disease and other common diseases. The Institute is a 100% subsidiary of the non-profit Dr. Rath Foundation.

The ground-breaking nature of this research poses a threat to the multi-billion dollar pharmaceutical "business with disease". It is no surprise that over the years the drug lobby has attacked Dr. Rath and his research team in an attempt to silence this message. To no avail. During this battle, Dr. Rath has become an internationally renowned advocate for natural health. Says he: "Never in the history of medicine have researchers been so ferociously attacked for their discoveries. It reminds us that health is not given to us voluntarily, but we need to fight for it."

This information is based on scientific research results. It is not intended to substitute for medical advice to treat, cure, or prevent any disease.
© 2021 Dr. Rath Research Institute | San Jose, California, USA. We encourage the distribution of this News Page, provided its content remains unaltered.

You can print this News Page at: www.drathresearch.org, to share it with your practitioner and others.



www.drathresearch.org

CELLULAR FITNESS™
You can!