Antibiotic Treatment of Animals Infected with *Borrelia burgdorferi*

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Summary: Despite resolution of the objective manifestations of Lyme disease after antibiotic treatment, a minority of patients have fatigue, musculoskeletal pain, and/or difficulties with concentration or short-term memory of uncertain etiology; these are called post-Lyme disease symptoms or, in more severe cases, post-Lyme disease syndrome or "chronic Lyme disease." Several recent studies in which *Borrelia burgdorferi*-infected animals were treated with antibiotic therapy have demonstrated the presence of PCR positivity for *B. burgdorferi* DNA in the absence of culture positivity. In mice that were treated with antibiotic therapy, residual spirochetes could be taken up by ticks during a blood meal and could be transmitted to SCID mice. These spirochetes are attenuated; their presence is not associated with either inflammation or disease. In this review the methodology and findings of these studies are critically analyzed, and the significance of the results with regard to human Lyme disease is evaluated, with special emphasis on whether these studies provide useful insights into post-Lyme disease syndrome. A serious methodological concern is the failure to consider the pharmacokinetic-pharmacodynamic properties of the antibiotic in choosing the dosage regimen used. We conclude that there is no scientific evidence to support the hypothesis that such spirochetes, should they exist in humans, are the cause of post-Lyme disease syndrome.

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Editorial by C. Heidt
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Dr Wormser freely admits here that although culture remains negative, PCR results show the presence of spirochetes after the typical 3-6 wk antibiotic regime. He goes on to say that their presence is not associated with disease. This statement is troubling in that it does not appear to be based on sound scientific practices but rather appears to be based on his personal opinion as he does not reference any medical studies to justify his conclusions.

Furthermore Wormser also notes that different antibiotic regimes may be necessary to treat Lyme disease even though he presently asserts that all combinations of antibiotics will not cure chronic Lyme disease because it doesn't exist...even though he has shown here that PCR results

are positive in chronic sufferers. He prefers to term this animal as “post Lyme disease”. It doesn’t make sense to the logical person and yet the CDC and the IDSA are eating it up like candy.

Wormser concludes that there is no scientific evidence to support the hypothesis that these lingering spirochetes are responsible for chronic illness. Perhaps Wormser himself has no scientific studies to indicate chronic inflammation, however many other credible scientists have published data to the contrary.

It is a sad day when the power of the IDSA becomes stronger than the power of logic!!