

## The Importance of Recognizing the Presence of *Mycoplasma* Carriage in Blacklegged Deer Ticks (*Ixodes scapularis*) in Survey Studies

**Robert-A Ollar\***

Clinical Assistant Professor of Neurology, Department of Neurology, Valhalla, New York Medical College, Valhalla, New York, USA

**\*Corresponding Author:** Robert-A Ollar, Clinical Assistant Professor of Neurology, Department of Neurology, New York Medical College, Valhalla, New York, USA.

**Received:** September 06, 2022; **Published:** September 09, 2022

Quotation: "The diverse pathogenic manifestations of *Mycoplasma* pathogens make it absolutely essential that all pathogen carriage surveys must include *Mycoplasma* species (i.e. *Mycoplasma pneumoniae*, *Mycoplasma genitalium* and *Mycoplasma fermentans*)".

The *Mycoplasma* are organisms that lack a cell wall and have been called smallest of the free living bacteria [1,2]. Mycoplasmic infections are able to cause a great variety of disease states such as: asthma, pneumonia, Inflammatory bowel disease, rheumatoid arthritis, pathogenic states associated with immunosuppression, diseases associated with genitourinary tract, chronic fatigue, fibromyalgia and can mimic such neurodegenerative diseases as multiple sclerosis and amyotrophic lateral sclerosis [3,4]. Infections associated with *Mycoplasma* have been linked to sexual contact, consumption of contaminated foods, droplet infections, as well as the bite of ticks, mosquitos, fleas and biting flies [5].

The investigations of Dr Eva Sapi have revealed that frequently several species of *Mycoplasma* (*Mycoplasma pneumoniae*, *Mycoplasma genitalium*, *Mycoplasma fermentans*) have been often isolated in ticks also carrying Lyme pathogens [6].

The *Mycoplasma* pathogen *Mycoplasma fermentans* has been associated with neurological manifestations that resemble multiple sclerosis and amyotrophic lateral sclerosis [3]. *Mycoplasma fermentans* is now being seen in patients in New Jersey and in US Middle Atlantic States [7]. This development has been associated with the Gulf War Syndrome [7].

The recent statistically significant pathogen carriage studies in Pike County Pennsylvania (1000 ticks collected and 988 tick tested) substantiated the fact that *Mycoplasma* is indeed a co-infection in Lyme Disease carrying Blacklegged deer ticks (*Ixodes scapularis*) [8].

The diverse pathogenic manifestations of *Mycoplasma* pathogens make it absolutely essential that all Blacklegged Deer Tick (*Ixodes scapularis*) tick pathogen carriage surveys must include *Mycoplasma* species (i.e. *Mycoplasma pneumoniae*, *Mycoplasma genitalium* and *Mycoplasma fermentans*).

### Bibliography

1. <https://en.wikipedia.org/wiki/Mycoplasma>
2. Tille PM. "Cell Wall-Deficient Bacteria: Mycoplasma and Ureaplasma". In: Bailey and Scott's, Diagnostic Microbiology (14<sup>th</sup> Edition). Elsevier, St. Louis, Missouri (2017): 570-577.

3. Nicolson GL, et al. "Mycoplasma Infections in Chronic Illnesses: Fibromyalgia, and Chronic Fatigue Syndromes, Gulf War Illness, HIV-AIDS and Rheumatoid Arthritis". *Medical Sentinel* 4.5 (1999): 172-175.
4. Horowitz RI. "How Can I get Better: An Action Plan for Treating Resistant Lyme and Chronic Diseases". St. Martin's Griffin, New York (2017): 280-282.
5. Rawls B. "Mycoplasma the Most Common Lyme Coinfections". Health Articles (2016).
6. Horowitz RI. "How Can I get Better: An Action Plan for Treating Resistant Lyme and Chronic Diseases". St. Martin's Griffin, New York (2017): 129-130.
7. Ollar RA. "Neurologists Beware of the Broad Spectrum of Neurological Manifestations of Tick Borne Mycoplasma fermentans Infections in New Jersey and in Other Middle Atlantic States in the USA Which Include MS and ALS Like Symptoms as Well as Other Neurological Conditions". *EC Neurology* 13.1 (2021): 1-2.
8. Chinnici N., et al. "Prevalence of Tick Borne Diseases in Questing Blacklegged Ticks (*Ixodes scapularis*) from Pike County, Pa". East Stroudsburg University, The Dr Jane Huffman Wildlife Genetics Institute, East Stroudsburg, Pa, USA (2020).

**Volume 11 Issue 8 August 2022**

**©All rights reserved by Robert-A Ollar.**