

Public Health Committee
House Bill #6200

AN ACT CONCERNING THE USE OF LONG-TERM ANTIBIOTICS FOR THE TREATMENT OF
LYME DISEASE

My name is Eva Sapi. I am an Associate Professor at the University of New Haven where I teach molecular biology for graduate students and I study tick-borne infectious diseases. My research interest in Lyme disease started seven years ago when I contracted Lyme disease. Since my blood tested negative for Lyme disease, my treatment was delayed for months and my health greatly deteriorated. I am a cancer researcher by training, but when I was struggling with this disease I realized that Lyme patients are in a far worse situation than cancer patients, because nobody believes them and they do not receive the appropriate treatment. Reading the literature about this disease, I was shocked that many important questions were not getting answered for this disease. For example, what kind of pathogens are in the ticks and what kind of bacteria other than *Borrelia* can we receive when we get a tick bite? How can *Borrelia* hide from the immune system and from the therapeutic approaches?

To find answer for the first question, our Lyme disease research group started to collect and analyze ticks in Southern CT. In 2005 we tested 250 ticks for *Borrelia* and several known tick-borne co-infections such as *Babesia*, *Bartonella* and *Anaplasma*. Results revealed that 57% of the tested deer ticks were infected. 22% were multiply infected. 5% of ticks were triply infected, and 0.4% was infected with all four pathogens. More recently (2007) we have tested over 1200 ticks in Fairfield County for *Borrelia burgdorferi* and found that over 60% of nymphal or adult ticks are positive. The significance of this study is that the collections sites were chosen close to school playgrounds and public parks. Furthermore, one of our latest studies showed the presence of other bacteria called *Mycoplasma* in ticks at a very significant rate. All these data strongly suggest that we need to design very specific therapeutic protocols because we might not deal with a single pathogen in Lyme disease patients.

Recently, we have initiated a study where we investigate the mechanism of antibiotic resistance of *Borrelia*. Our preliminary results show that *Bb* has multiple ways to survive antibiotics exposure and only a few antibiotics combination can eradicate *Bb* completely. We need to further understand the mechanism of this process but for now we can definitely conclude from our study that *Borrelia* cannot be eradicated by using standard therapeutic protocols.

Because of these very significant research findings I urge you to support this new bill (House Bill #6200) "to allow the use of long term antibiotics for the treatment of Lyme disease"

Please feel free to contact me if you have any questions about our studies or program at the University of New Haven.

Sincerely,

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