Lyme Disease Association, Inc.

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Connecticut General Assembly
Joint Committee on Children
State Capitol
Hartford, CT 06106

Dear Chairman and Committee Members,

I am writing on behalf of the Lyme Disease Association, Inc., (LDA) a national non profit which partners with groups in Connecticut and supports research in Connecticut (see ABOUT LDA below), to support the passage of Senate Raised bill 207.

The incidence of Lyme and other tick-borne diseases is on the rise, with the Centers for Disease Control & Prevention (CDC) indicating 300,000 new cases of Lyme being reported nationwide, meaning only about 10% of cases are reported. From 1990 through 2013, Connecticut reported 61,783 Lyme cases to the CDC—thus about 617,830 new cases of Lyme developed over that period in Connecticut. [1] That figure represents 12.4% of all US reported cases over that time.

Based on CDC's Lyme reported cases numbers from 2001-2010 by age in the US, the LDA estimates that 37% of reported cases were children ages 0-18. Children ages 5-9 & 10-14 are at the highest risk of acquiring Lyme.

According to CDC, the incidence of Lyme surpassed the incidence of HIV in 2009[2] ─only sexually transmitted diseases, salmonella, strep, fungal disease, and the flu had higher incidence rates. CDC also said in 2012 that Lyme was the 7th highest reportable disease[3]

The Companion Animal Council indicates that in Connecticut, it received reports of 76,869 dogs tested in 2014 for Lyme, of which 12,510 (16.27%) were positive, 1 out of 6 dogs. This figure represents 6.4% of US dogs who tested positive that year. [4]

Deer ticks carry/transmit a number of disease agents in addition to *Borrelia burgdorferi*, the agent of Lyme disease, including *Babesia*, *Anaplasma*, *Ehrlichia* (muris-like), *Bartonella*, *Tularemia*, *Borrelia miyamotoi*, and Powassan virus. Powassan cases have increased in the Northeast in recent years, and there is no cure for the disease, which is why the LDA awarded a 2014 grant to a researcher to study tick-borne viruses such as Powassan. Deer ticks can even transmit tick paralysis toxin─ the related paralysis can only be stopped by finding the attached tick and removing it.

Tick attachment time is important. The longer the tick is attached, the greater the risk of Lyme infection. Although some scientists have said it takes up to 24 hours to transmit the Lyme spirochete, Dr. Willy Burgdorfer, after whom the Lyme bacteria is named, said as early as 1999 at LDA's Lyme and tick-borne diseases scientific conference at Bard College, NY and in the peer reviewed journal *Acta*, that there is no such

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[1] LDA maps of Lyme cases reported to CDC http://module.lymediseaseassociation.net/Maps/ (click state for details)

[2] MMWR May 13, 2011 / 58(53);1-100

[3] CDC website http://www.cdc.gov/lyme/stats/

[4] http://www.capcvet.org/parasite-prevalence-maps/

thing as a safety period; about 5-10% of [infected] ticks carry Lyme bacteria in their saliva & can transmit the disease as soon as they bite.

Since evidence shows that early diagnosis and appropriate treatment can prevent treatment failure causing chronic Lyme, aka, post treatment Lyme, preventing tick attachment or finding and removing an attached tick is critical to preventing long term symptoms of the disease. According to a Columbia University Lyme study,[5] based upon 10-fold underreporting and on 10% of newly infected and treated patients developing symptoms that persist for more than 6 months, "the actual incidence of new chronic cases (PTLS) is…30,000 [annually]. "

For these and many other reasons, it is necessary for the Connecticut General Assembly to pass this important bill which would provide funding for Lyme disease prevention programs in Connecticut and funding to develop and implement a regional community prevention program for Lyme disease and other tick-borne illnesses utilizing the BLAST Lyme disease prevention program model.

Thank you.

Sincerely,

Patricia V. Smith

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President

ABOUT THE LDA The LDA has been part of the Combined Federal Campaign (CFC) for 9 years, becoming a part of the government approved national charities list for federal workplace giving. LDA is also a GuideStar Gold participant, signifying transparency in operation. LDA is also long-time partner in the Environmental Protection Agency's Pesticide Environmental Stewardship Program (PESP), a voluntary program that forms partnerships to reduce tick populations while reducing the potential health and environmental risks associated with pesticide use.

In its search for prevention of and reliable diagnostics and a cure for Lyme disease, the LDA has provided over 98 research grants since 1992, and its funded research has been acknowledged in 35 peer reviewed scientific journal articles. LDA partnered with Connecticut's LRA, to endow the research center for chronic Lyme disease at Columbia University in 2007, the only center in the world devoted to chronic Lyme, and gave a grant creating a tissue bank there to store samples for Lyme disease research. Genome work initially funded by LDA through UMDNJ (now Rutgers) has shown that different strains of the *Borrelia* bacteria have the ability to exchange genetic material among strains, a trait greatly benefitting their survival and probably confounding the body's ability to eradicate the organism. LDA- initiated funding of genome mapping helped to lead to 17 strains being mapped. The LDA has funded work with the University of New Haven examining biofilms, a method Lyme bacteria are using to outwit the immune system and treatment and has provided scientific equipment loan to the University which has been used in several research projects. In the journal *Veterinary Sciences* in 2014, in an article coming from researchers at University of New Haven, LDA was acknowledged for its support of a study of *Ixodes scapularis* (deer) ticks collected from Southern Connecticut, which were evaluated for their potential to harbor filarial nematodes. The results from the studies demonstrated that filarial nematode infection was found in Ixodes ticks similar to what has been found in *Amblyomma americanum* ticks (lone star). The implications for humans has not yet been determined.

The LDA has also provided 102 educational grants, and has awarded $250,000 to help children whose families may not be covered for Lyme diagnosis and treatment. LDA has twice testified in DC before US House of Representatives subcommittees on Lyme disease issues, and in 2014, led a nationwide campaign which resulted in the first Lyme bill passing the US House of Representatives.

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[5] The *Journal of Neuropsychiatry & Clinical Neurosciences*, 2013, Batheja S., et al
"Post Treatment Lyme Syndrome & Central Sensitization"