



The Connecticut Agricultural Experiment Station

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PRESS RELEASE

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RODENT LYME VACCINE TO BE TESTED IN REDDING, CONNECTICUT

New Haven, CT - The Connecticut Agricultural Experiment Station (CAES) in cooperation with the Town of Redding announced today that it will be evaluating a new technology, developed by U.S. Biologics Inc., which has been shown to reduce tick infection with *Borrelia burgdorferi*, the cause of Lyme disease. The oral bait vaccine is targeted at white-footed mice, one of the principal reservoir species responsible for the transmission of Lyme disease to the blacklegged tick (i.e., deer tick), *Ixodes scapularis*. In response to consuming the bait containing the vaccine, mice create antibodies to *B. burgdorferi*. The mice subsequently do not infect the ticks that feed on these rodents. The vaccine prevents the transmission of the Lyme bacteria from the mouse to the tick, so ticks in areas where the vaccine is used are less likely to carry the Lyme bacteria and cause disease.

Supported by laboratory experiments, a five-year field trial in forested areas of New York showed a significant reduction (i.e., 23%) in the tick infection rate after the first year of treatment. By the fifth year of treatment, there was a 76% reduction in the tick infection rate compared to untreated areas. However, this reservoir-targeted vaccine has not been evaluated in residential settings or in combination with other tick management strategies. The oral vaccine pellets will be incorporated into the Integrated Tick Management Program led by Kirby C. Stafford III, Ph.D., Chief Entomologist, Department of Entomology, The Connecticut Agricultural Experiment Station. This multi-year research program will compare the efficacy of the oral vaccine pellet with other preventative measures and will take place in the Town of Redding in Fairfield County, Connecticut.

Lyme disease continues to be the most commonly reported vector-borne disease in the United States and a major public health concern. According to the Centers for Disease Control and Prevention (CDC), it affects over 300,000 people in the U.S. each year and can cause severe damage to joints and the neurologic system. Approximately three-quarters of the Lyme disease cases may be associated with tick bites acquired in activities around the home. Personal protection measures and managing exposure to infected ticks through various tick management strategies remains the primary approach for reducing the risk of tick-borne disease.

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