

April 29, 2021

The Honorable Betty McCollum
Chairwoman
Subcommittee on Defense
House Committee on Appropriations
Washington, DC 20515

The Honorable Ken Calvert
Ranking Member
Subcommittee on Defense
House Committee on Appropriations
Washington, DC 20515

Dear Chairwoman McCollum and Ranking Member Calvert:

We write to respectfully request that you provide \$12 million in the Congressionally Directed Medical Research Program (CDMRP) for research on Lyme and other tick-borne diseases (TBD) in the Fiscal Year (FY) 2022 Defense Appropriations bill.

We are grateful that the Committee has been consistently supportive of this important Tick-Borne Disease (TBD) research program at CDMRP since its 2016 inception. We are looking to enhance this work and meet the demand of an increasing number of Lyme disease cases. Using anonymous health care insurance claims data, in 2021 the Centers for Disease Control & Prevention (CDC) estimated the burden of Lyme disease to be approximately 476,000 people diagnosed and treated annually. The *Tick-Borne Disease Working Group 2020 Report to Congress* suggests that direct Lyme disease medical costs could represent \$1.3B each year, with marked increases when therapy fails to return patients to their pre-Lyme health.

In the February 2021 *Medical Surveillance Monthly Report (MSMR)*, a report on vector-borne diseases in the military during the period 2016 – 2020, including all reportable medical events (RME) of active and reserve component service members Army, Navy, Air Force, and Marine Corps who served any time during that period, disclosed the following information: “Lyme disease accounted for 43.8% of all confirmed RME cases and was the most common of the vector-borne diseases reported.”

A February 2021 *Joint Force Quarterly* publication written by a US Naval War College professor describes the high risks of Lyme to the military—some 75% of all US military installations are located in states where 99% of the ~500,000 TBD cases reported to CDC from 2004-2016 occurred. Additionally, veterans often retire to rural counties where Lyme incidence rates are higher.

Based on TBD’s disproportionate burden on military personnel, their families, and civilians alike, we are requesting that you increase funding from the current \$7 million to \$12 million in the CDMRP for research on TBD for FY2022. The *Tick-Borne Disease Working Group 2020 Report to Congress* stated CDC-reported Lyme disease cases comprised 73% of all

2016-2018 reported TBD cases. Due to the overwhelming comparative burden of Lyme disease, we ask that DOD dedicate 70% of such funding to Lyme disease research.

We also request that you include in the Committee's report the following language:

“The Committee encourages the Tick-Borne Disease Congressionally Directed Medical Research Program (CDMRP) to intensify its attention toward Lyme disease by specifically including a high proportion of Lyme disease experts on its Tick-Borne Disease Programmatic Panel, including more than one patient representative and doctors and researchers who have experience in chronic Lyme issues, and also including a high proportion of Lyme disease experts on its Peer Review Panel, to ensure that the burden of Lyme disease is appropriately addressed.”

As such, continued funding is needed for CDMRP research on Lyme and other TBD. Especially important is including development of more sensitive and accurate diagnostic tests for Lyme and increasing understanding of the full range of Lyme disease processes, as well as the numerous mechanisms that may allow organisms to persist post treatment. Using the currently available diagnostic tests, almost half of those with Lyme—especially and including our service personnel—remain untreated, permitting the disease to disseminate. Those Lyme victims may become severely disabled and may be unable to return to military service.

A published case report in *Mil Med*, 2019, spotlights a recent West Point graduate with Lyme history who developed a knee problem. He was misdiagnosed with another condition and then found to instead have Lyme disease. He was treated with antibiotics and other medicines but his condition had already deteriorated. He was declared unfit for duty and discharged from active military service. “This case illustrates the profound effect that latent Lyme disease can have on the quality of life and the career of an active duty military member. It highlights the need for increased surveillance for *Borrelia burgdorferi* (*B. burgdorferi*) in military training areas and for the early and aggressive diagnosis and treatment of military personnel who present with the symptoms of acute Lyme disease.”

The discovery of *Borrelia mayonii*, a new strain of the bacteria that causes Lyme disease, and of other recently discovered emerging TBD, greatly underscore the need for increased funding. Additionally, a recent CDC study shows that ticks that transmit Lyme disease are now found in half of all US counties, putting our service members at great risk.

In a 12-year surveillance period (2000-2011), Lyme disease accounted for 70% of all reported vector-borne or zoonotic diseases in the Air Force Events Surveillance System, and 39% of all such diseases at Navy and Army health facilities (*Medical Surveillance Monthly Report (MSMR)* October 2012). In a 7-year surveillance period (2010-2016), including all active and reserve component service members in the Army, Navy, Air Force, or Marine Corps who accessed care paid for by the Military Health System, Lyme accounted for 50% of confirmed VBD cases.

The *MSMR* has cautioned about the dangers of tick-borne diseases, of which Lyme is the most common, to military readiness. The May 2014 *MSMR* recognizes that “Military service

members may be at increased risk for acquiring Lyme disease, compared to the general population, because their training activities often require that they spend substantial time outdoors, often in or near wooded or grassy areas where infected ticks are endemic.” Similarly, an article in the April 2019 *MSMR* states, “Lyme disease poses both a challenge to healthcare providers in the Military Health System and a threat to military readiness.”

Specifically addressing Lyme disease and its impact on military readiness, the *AF Aerospace Medicine Waiver Guide* (Sep. 16, 2019), states that, “if untreated, then aeromedical concerns of this disease are its debilitating effects in regard to the neurologic, cardiovascular, and arthritides that may result. Neurocognitive impairment, cardiac arrhythmias and arthritic pain are all manifestations that could impact the safety of the individual and the mission.” The *Navy Aeromedical Reference and Waiver Guide* (Sep. 4, 2019), states, “The condition or its sequelae can adversely affect the flight performance, mission, or safety. This condition is disqualifying for aviation.”

The *Tick-Borne Disease Working Group 2018 Report to Congress* contains the story of retired US Air Force Colonel and F-15 fighter pilot, Nicole Malachowski, who eventually was found to have neurological tick-borne diseases:

“One day while leading a formation of F-15E fighter aircraft back from a training mission, I was overcome by an overwhelming sense that my aircraft was turning left, though it was not; and I could not get my hands to activate the switch that I had activated thousands of times. After I finally managed to activate the switch, I realized that I could not speak. Fortunately, my experienced wingman led us home, and the instructor pilot in my jet performed backseat landing. However, that day marked the beginning of my medical odyssey. In the following four years, I saw more than twenty doctors across eight specialties. My neurological symptoms continued to worsen, but none of the doctors knew why and some suggested it was all in my head. I was suffering from intensifying fatigue, joint and muscle pain, vestibular issues, ocular manifestations, sensory problems, cognitive dysfunction, and the list goes on. I was misdiagnosed with everything from possible multiple sclerosis, to autoimmune disease, to fibromyalgia. Eventually I could no longer work in the military as a fighter pilot, and the military began steps to medically retire me. At the age of 43, I was permanently, medically retired from the career I loved, after having served in the military for more than 21 years.”

While a threat to US military personnel worldwide, the highest incidence of Lyme disease among active duty service members in the US is in the Northeast (*MSMR* May 2014). The unit locations with the highest absolute incident cases during 2004-2013 were Naval Submarine Base New London, CT; Marine Corps Air Station Cherry Point, NC; Andrews Air Force Base, MD; and Fort Drum, NY.

In 2016, the Southern New York area—which includes the U.S. Military Academy (USMA) at West Point—had the highest burden of Lyme disease in the US, with reported infection rates of ticks with *Bb* as high as 55%. As reported in the *MSMR* April 2019, in recent years Lyme has resulted in the removal of at least two cadets from the USMA because of

medical ineligibility for commissioning. In addition, two recently commissioned Second Lieutenants were discharged from the Army because of medical issues as a result of “chronic Lyme.”

Many critical research gaps need to be closed for the effective management—prevention, diagnosis, and treatment—of tick-borne diseases, most prevalently Lyme disease, which have such a devastating impact on both U.S. military and civilian populations.

Thank you for your time and consideration of this important request and we look forward to working with you to ensure we are safeguarding the operational capabilities of our Armed Forces and protecting the health of U.S. service members and their dependents.

Sincerely,

CHRISTOPHER H. SMITH
Co-Chair, Lyme Disease Caucus