

Public Abstract

First Name:Carrie

Middle Name:Elizabeth

Last Name:Lasky

Adviser's First Name:Charles

Adviser's Last Name:Brown

Co-Adviser's First Name:

Co-Adviser's Last Name:

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Department:Microbiology- Medicine

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Title:The Cellular Immune Response to Murine Lyme borreliosis

Lyme disease is caused by the bacterial spirochete *Borrelia burgdorferi*. There are approximately 300,000 new cases of Lyme Disease reported in the United States each year. Individuals with Lyme disease often suffer from chronic, painful arthritis. Our research uses a mouse model to better understand the immune response to this bacteria. Using an innovative technique, we were able to characterize the cellular immune response with the ankle joints of *B. burgdorferi*-infected mice. We found unique anti-inflammatory cells within the ankle joints which may provide potential targets for therapeutics in the future. In addition, we identified a detrimental role for T cells during infection in the absence of TLR-2. All studies presented herein provide a foundation on which future studies will be built from in the hopes of providing better treatment for Lyme Disease patients in the future.