



2019 IMPACT REPORT

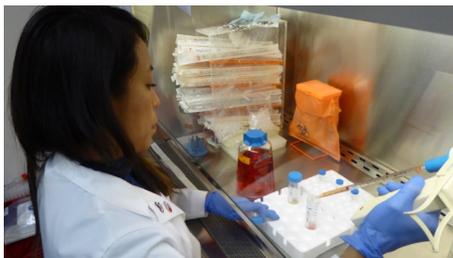
We are pleased to share with you the 2019 Impact Report of the Johns Hopkins Lyme Disease Research Center. Our groundbreaking patient-centered clinical research program is advancing knowledge in Lyme disease, and this report highlights the progress we are making in our research and education programs.



[READ IMPACT REPORT HERE](#)

RESEARCH

Our Center's post-doctoral research fellow, Maria Gutierrez-Hoffmann, PhD, is studying the nature of the human immune response to infection with *Borrelia burgdorferi*, the infectious agent of Lyme disease. She recently received a prestigious Outstanding Post-Doctoral Fellow Oral Presentation Award at the Johns Hopkins University Excellence in Diversity Symposium.



Her pioneering research has identified key genes and pathways that are differentially expressed or regulated in *Borrelia*-exposed dendritic cells that act as messengers between the innate and the adaptive immune systems. She has identified pro-inflammatory and anti-inflammatory cytokine expression that may impact T cell immune function and has uncovered

potentially relevant targets of *Borrelia*-reactive T cells that might be avenues for future new therapies.



The Center recently published a pilot study that shows a direct molecular test could enable improved diagnosis of early Lyme disease and provide a tool for testing new antibiotics and monitoring of treatment success. Findings suggest some *Borrelia burgdorferi* genotypes may reside in parts of the body that are not readily cleared by the immune system, and bacterial remnants may continue to leak into the circulatory system following antibiotic treatment. A direct test could further our understanding of infection by *Borrelia burgdorferi* genotypes and their impact on the human immune system and illness severity.

[READ MORE HERE](#)

IN THE NEWS

Lyme Disease is Baffling, Even to Experts, but New Insights are at Last Accumulating.

A September 2019 article in *The Atlantic* delineates how fiercely contested Lyme disease can be and explains that inadequate diagnostics as well as the intricate roles of immune dysfunction, inflammation, autoimmunity, and possible pathogen persistence are at the heart of the controversy. When Center Director, John Aucott, MD, is asked about the human immune response to a Lyme disease infection, he responds that our research shows it is "highly variable".

[READ ARTICLE HERE](#)

NATIONAL NEWS

Center Director, John Aucott, MD, served as Chairman of the Health and Human Services (HHS) Tick Borne Disease Working Group (TBDWG) from 2016-2018. The TBDWG issued a [REPORT TO CONGRESS](#) in 2018, identifying gaps in research, education, prevention, and access to care.

In response to the Report, the NIH released its [STRATEGIC PLAN FOR TICK-BORNE DISEASE RESEARCH](#) in October 2019.



The NIH plan identifies the following priorities to address the burgeoning tickborne disease (TBD) public health threat:

1. **Improve fundamental knowledge of TBDs**
2. **Advance research to improve the diagnosis of TBDs**
3. **Accelerate research to improve TBD prevention**
4. **Promote research to improve treatment for all forms of TBDs**
5. **Support tools and resources to advance research in understanding, preventing, diagnosing, and treating TBDs**

The NIH released a [NOTICE OF SPECIAL INTEREST: Advancing Research for Tickborne Diseases \(TBDs\)](#) in November 2019, aimed at implementing its strategic plan. Although an important step in the right direction, this initiative is presently unfunded.

The hope is for a special studies section to be formed at some point and for NIH funding to eventually become available to a broader constituency of interdisciplinary clinical researchers.

Our mission is to understand and urgently address the varied manifestations of Lyme disease and translate our pioneering multidisciplinary research into improved patient care, education, and health outcomes

EDUCATION

Have you watched our 7-minute award winning medical animation on Lyme Disease? Our video shows how *Borrelia burgdorferi*, the infectious agent of Lyme disease, can evade the immune system and disseminate throughout the body.



[WATCH HERE](#)

PHILANTHROPIC SUPPORT MAKES A DIFFERENCE

Our research program continues to primarily be funded through the philanthropic support of generous friends of the Center. We are immensely grateful to all our donors and are urgently working on your behalf towards improved diagnostics, treatments, and patient outcomes.

Andrew Goodman battled through a debilitating Lyme disease illness that included facial palsy, migraines, joint pain, and severe fatigue. He now successfully runs a Bethesda-based real estate company, Goodman Realtors®.

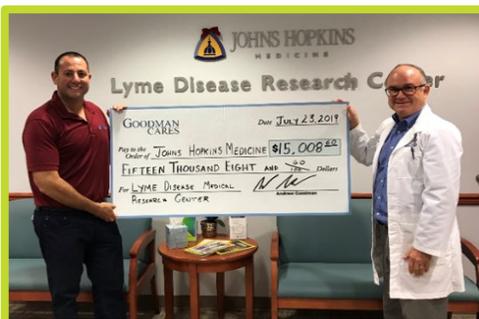
Recognizing the severity and complexity of Lyme disease, Andrew wanted to make a difference and created a non-profit, [Goodman Cares](#), to raise money for research at the Center. Goodman Cares hosts an annual family carnival which has raised \$37,500 in its first 3 years, including over \$15,000 in 2019.

WHY WE GIVE

In response to the question of why he gives to the Johns Hopkins Lyme Disease Research Center, Andrew K. Goodman explains: *“Having been terribly sick with Lyme disease I became aware of the growing number of people infected and the urgent need to improve patient care. I wanted to donate directly to a research program whose goal was a cure.”*

Dr. Aucott’s program is making great strides in that direction. Hopefully, our contributions will continue to grow each year and help move us closer to a cure.”

We thank Andrew Goodman and Goodman Cares for their ongoing support.



SAVE THE DATE!

4th Annual Goodman Cares Carnival
May 16, 2020
Falls Road Park, Potomac MD

Clinical Research Team

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SUPPORT THE CENTER

Philanthropic support makes a difference.

Donations are used to progress our pioneering research.

Your gift helps us advance critical knowledge and clinical tools to improve health outcomes for Lyme disease patients.

HOW TO GIVE

The Center is grateful for the support of the Steven and Alexandra Cohen Foundation, the Brennan Family, Global Lyme Alliance, Department of Defense, individual donors, foundations, and collaborators.

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