

**Docket #:** S19-366

# **Treating Lyme Disease infection by blocking pathogen mimics of CD47**

Researchers at Stanford University have discovered a novel target for the treatment of Lyme disease by blocking pathogen mimics of CD47. Lyme disease is caused by the bacterium *Borrelia burgdorferi* (Bb) and the current standard of care is treatment with antibiotics. While an effective treatment for many cases, antibiotics don't work for 20% of patients with tick-borne illness and many suffer from lingering symptoms after treatment. Furthermore, with the growing prevalence of antibiotic resistance, it is important to innovate therapies beyond antibiotics for the treatment against Lyme disease and similar bacterial infections. Researchers in Irv Weissman's lab have identified that Bb expresses a protein, p66, that mimics CD47 the mammalian "don't eat me" signal implicated in immune evasion. Researchers propose that p66 is implicated in blocking macrophage-mediated phagocytosis of Bb and are developing a high affinity p66 inhibitor for the treatment of infected Lyme disease patients.

## **Stage of Development**

Pre-Clinical

## **Applications**

- Treatment of patients with Lyme Disease by p66 blockade using antibody targeting treatments

## **Advantages**

- Alternative to antibiotic treatment

## Patents

- Published Application: [WO2022094234](#)
- Published Application: [20230391857](#)

## Innovators

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