

Pan-Lyme Disease Strain Detection

PaLDiSPOT

Lyme disease referred to a disease caused by *Borrelia*, *Babesia* or *Bartonella* species, and affect different organs of human body (skin, heart, nervous system). *B. burgdorferi sensu stricto*, consist the strain with higher pathogenicity and transmitted by ticks, however *Borrelia afzelii* and *Borrelia garinii* also exhibit high pathogenicity. Apart from the previous genospecies, borreliosis caused also by *Borrelia burgdorferi sensu lato* complex (*Borrelia lanei*, *Borrelia californiensis*, *Borrelia bissettae* etc).

Early Lyme disease characterized by erythema migrans fever, malaise, fatigue, headache, myalgias, and arthralgias that appear within thirty days post tick bite, while other skin lesions have also been recorded (lymphocytoma). Delay in treatment of early borreliosis might affect other organs (musculoskeletal system, central nervous system, heart) while late borreliosis includes serious diseases such as arthritis and encephalitis.

Diagnosis can be performed observing clinical manifestations of Lyme disease, as well as with serological testing. The identification of *Borellia* genospieces through Polymerase Chain Reaction (PCR) is very sensitive and has the potential of detection at very low copies, even before activation of the immune system.

PaLDiSPOT is used for detection and determination of different *Borrelia*, *Babesia* and *Bartonella* genospecies using sensitive molecular biology techniques. The use of positive and internal controls, as well as the unique design of the platform, ensures high sensitivity and specificity. **PaLDiSPOT** detects the presence of different species in blood or plasma, even at early stages of the disease.

PaLDiSPOT enable detection of:

- *Borrelia burgdorferi*
- *Borrelia afzelii*
- *Borrelia garinii*
- *Borrelia mayonii*
- *Borrelia lusitaniae*
- *Borrelia valaisiana*
- *Borrelia kurtenbachii*
- *Borrelia lanei*
- *Borrelia californiensis*
- *Borrelia bissettae*
- *Borrelia bavariensis*
- *Borrelia turcica*
- *Borrelia spielmanii*
- *Borrelia carolinensis*
- *Borrelia americana*
- *Borrelia sinica*
- *Borrelia yangtzensis*
- *Borrelia hermsii*
- *Bartonella henselae*
- *Bartonella bacilliformis*
- *Bartonella vinsonii*
- *Babesia microti*
- *Babesia duncnani*