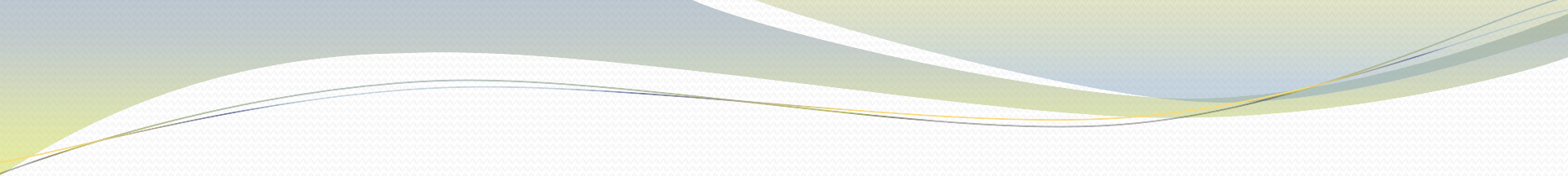


**Borrelia burgdorferi Antigen  
Release Stimulation by a  
Nutraceutical Formula  
as determined by  
Lyme Urine Antigen Testing**

# Antigens

- An antigen (allergen) is any substance that, as a result of coming in contact with appropriate tissues induces a state of sensitivity.
- Decreasing the antigen load on the body would correspondingly decrease the number and severity of symptoms.



Bacteria contain many particulate and soluble *antigens* that evoke strong, often lasting immune responses, both humoral and cellular.

# Proprietary Nutraceutical Product (Borrelogen™)

- Specifically targets the functional release of spirochetal antigen from the tissues of the body.
- Historic and pharmacognostic data demonstrates very low toxicity.

# Borrelogen™

- A nutraceutical is a plant based product that has been specifically formulated to provide a particular benefit with respect to the prevention of disease, generally thought of as reducing the risk of chronic disease.
- This nutraceutical formula seems to stimulate the release of antigens specific to *Borrelia burgdorferi*.

# Lyme Urine Antigen Test (LUAT)

- This test was chosen as a viable determinant due to its specificity to *Borrelia burgdorferi* antigens.
- The body will naturally release Lyme specific antigens in about 30% of the cases
- Borrelogen was tested to see if the body could be stimulated to release a greater amount of antigen.

# Methods

- 68 subjects were selected based on positive Bio-Resonance Scanning for *Borrelia burgdorferi*.
- Subjects were given the nutraceutical Borrelogen for one week prior to a three-day urine collection.
- Lyme Urine Antigen Testing was used to detect release of Bb specific antigen.

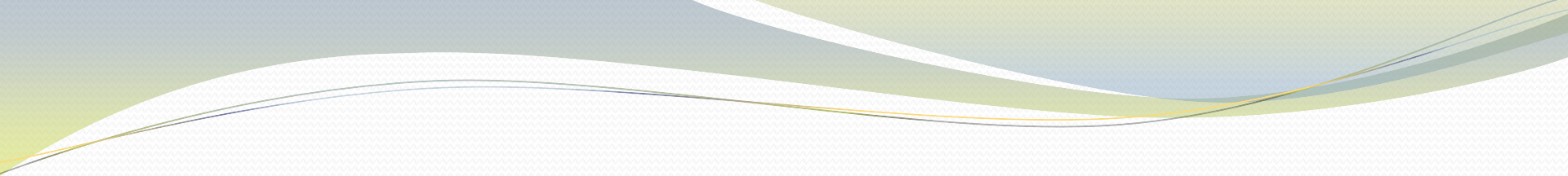
# LUAT

- An antigen capture assay.
- Detects low levels of antigen specific for 31 kDa (OpsA), 34 kDa (OpsB), 39 kDa, 93kDa antigens of *Borrelia burgdorferi*
- Antigen levels reported as  $>32$  ng/ml have a 95% confidence level of being positive.
- Valid throughout all stages of infection.



# Range of LUAT Level

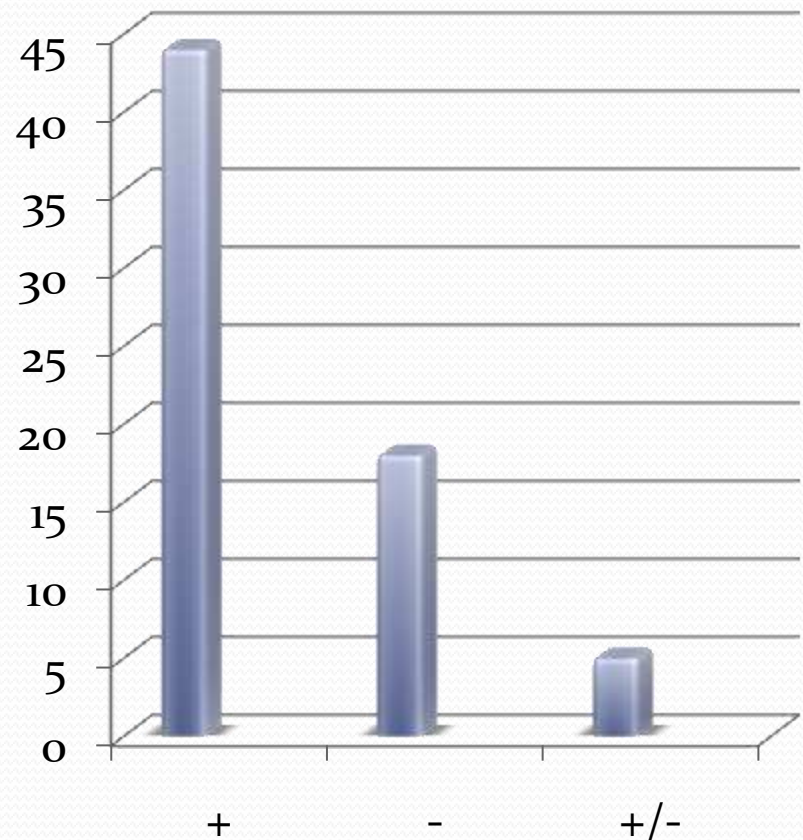
- Negative <math><20\text{ ng/ml}</math>
- Borderline 20-31 ng/ml (mean +1SD)
- Positive 32-45 ng/ml (mean +2SD)
- Highly Positive > 45 ng/ml (mean +3SD)



The Lyme Urine Antigen Test is  
a highly controlled and  
reproducible assay, which  
demonstrates all three stages of  
infection.

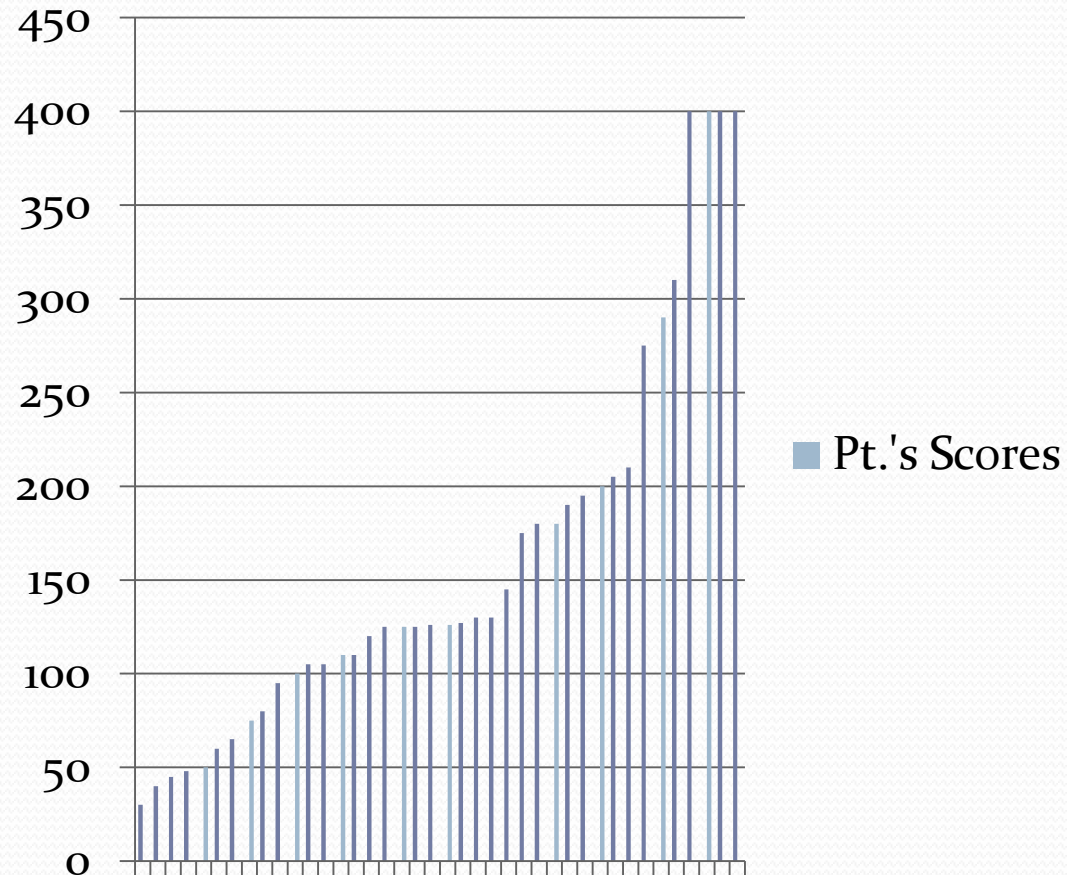
# Results

- 68 LUATs were performed
- 44 were reported as positive or highly positive.
- 18 were negative
- 5 were borderline



# Majority of the LUAT's were 100ng/ml or greater

- A highly positive is considered a score >45ng/ml
- The patients that used Borrelogen on an average scored >100ng/ml
- And 4 of the scored >400 ng/ml



# Conclusion

- It appears that Borreligen does indeed stimulate the body to purge antigens.
- In this limited study, Borreligen seems to stimulate a significant and high release of Lyme specific antigen in approximately 73% of the patients tested.