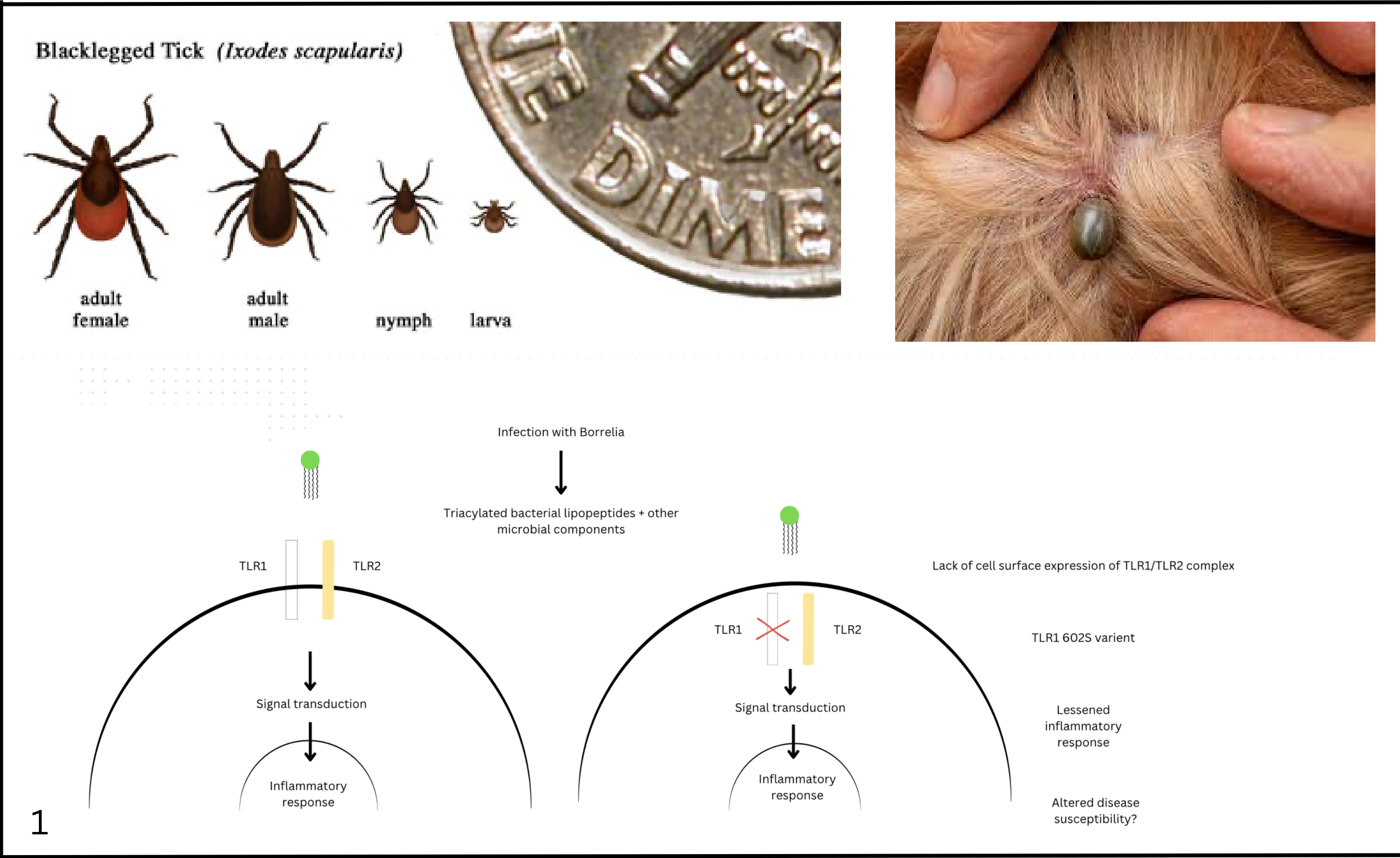


# How similar are we to man’s best friend? Investigating Genetic Predisposition to Symptomatic Lyme Disease in Canis Familiaris

Grace Glasser, Dr. Laura Sirot

Department of Biology, College of Wooster, Wooster, Ohio

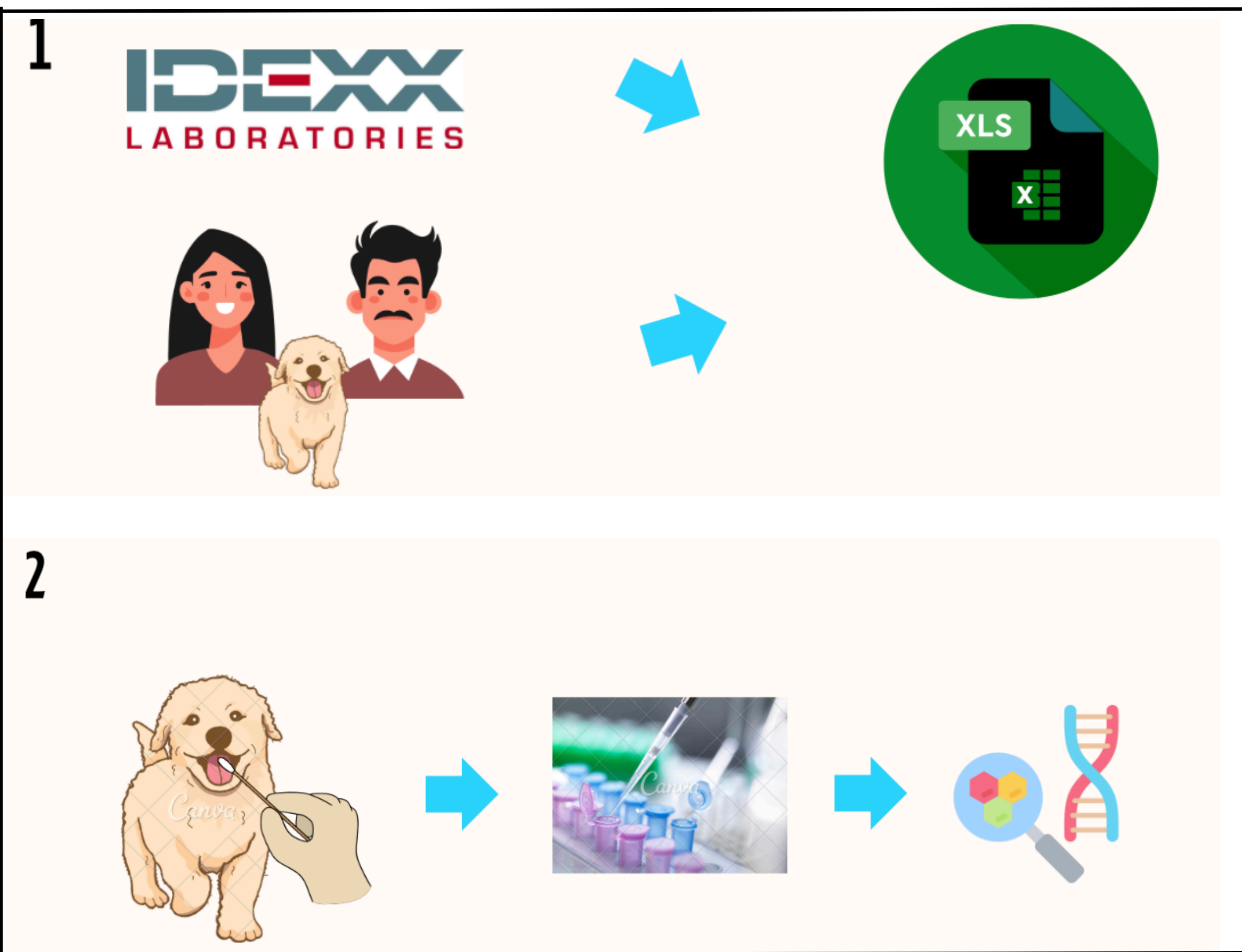
## Introduction



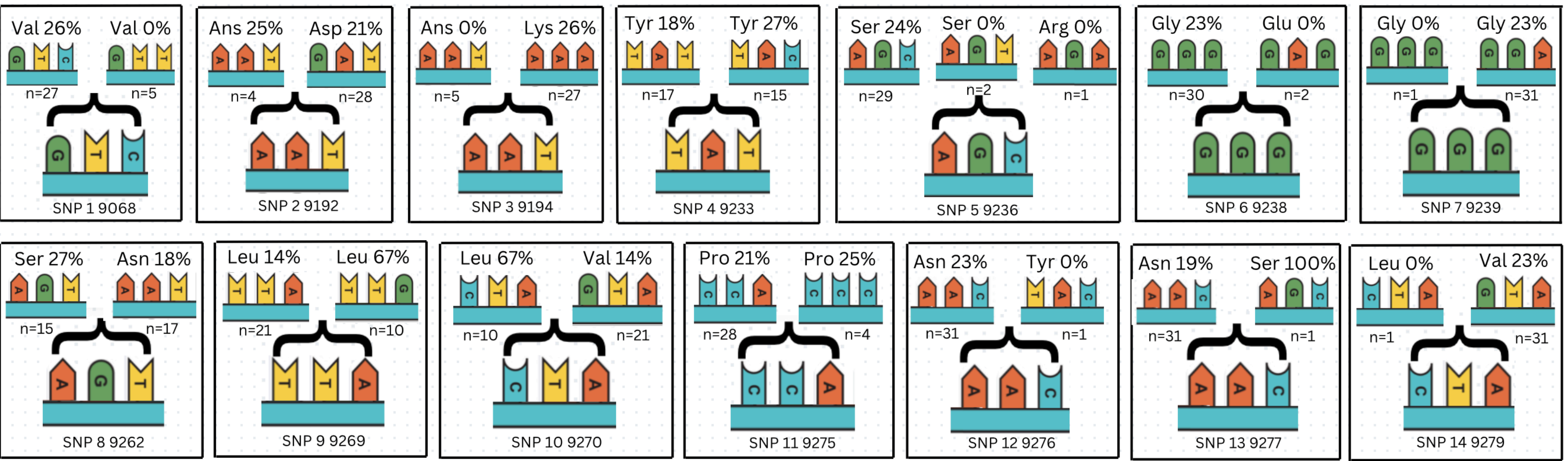
## Aims

- Collect information of Lyme positive dogs’ breeds, sex, age, and time of year of test
- Determine whether the genetic variant I602S is related to symptomatic cases of Lyme in dogs
- Gather data from dog owners about time dogs spend outside, environments they are in, and the type and consistency of use of tick prevention

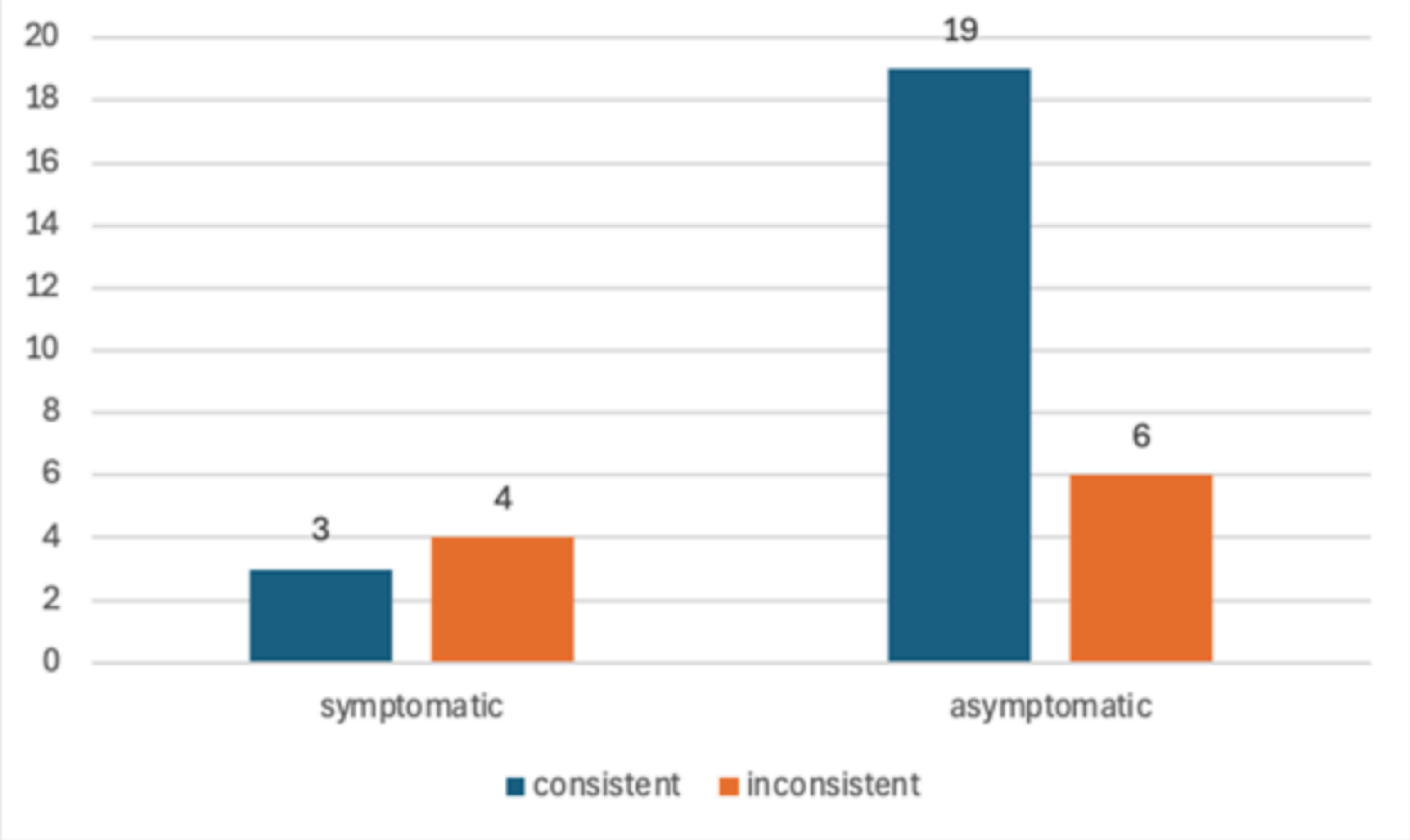
## Methods



## Results



No dogs had the 602S variant, but the above variants were found



The majority of dogs that recieved consistent tick prevention were asymptomatic

27 CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
26 CTTAGAAGATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
23 CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
30 CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
20 CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
49y CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
34 CTTAGAAAACTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATATAGTGGGCATGA  
5b CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGAGAACATGA  
29 CTTAGAAAACTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATATAGTGGGCATGA  
38 CTTAGAAAACTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATATAGCGGGCATGA  
41 CTTAGAAAACTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATATAGCGAGCATGA  
28 CTTAGAAAACTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
39 CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
2 CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATATAGCGGGCATGA  
3 CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATATAGCGGGCATGA  
5ay CTTAGAAAATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
1b CTTAGAAGATCTCCAAAGAACCATCCAGTTCATGCTTTTATTTTCATACAGCGGGCATGA  
\*\*\*\*\* \* \*\*\*\*\*

Aligned sequences showed the SNPs present in the dogs’ genes

## Conclusion

- Females and males infected at similar rates
- No relationship between breed, age, or time of year for testing and Lyme
- No relationship between outdoor environment, time spent outside, or tick prevention and symptomatic cases
- No dogs had the 602S variant

## Future Directions

- A larger study that examines if I602 is conserved in all dogs
- A larger scale study to explore the relationship between consistent tick prevention and asymptomatic Lyme cases

## Acknowledgements

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## Citations

- 1 (Schumann &Tapping, 2007).