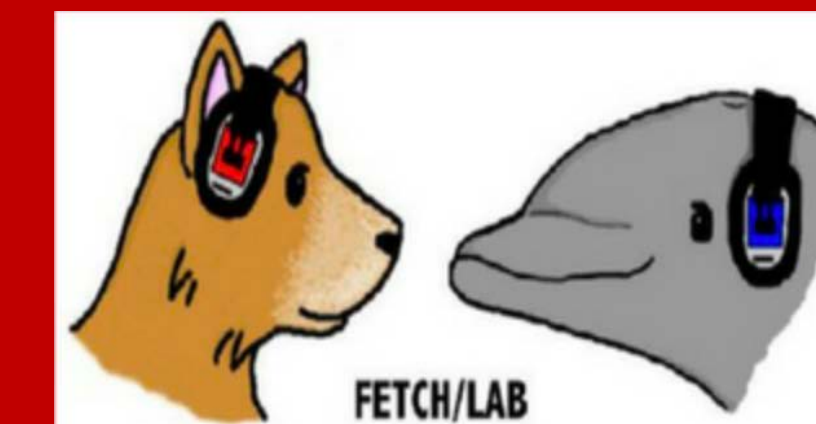


# Prevalence of Congenital Hearing Loss in Puppies

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## Introduction

Congenital deafness can be found in over 80 different breeds of dogs. There are also additional factors to look out for that indicate a potential effect in the genes, including all white coats, merle coats, and blue eyes. For this project, the data from hearing tests of puppies ages 5-12 weeks that came to FETCHLAB were collected, analyzed, and sorted based on gender in order to provide additional, current-day data for the lab as well as those studying congenital deafness in dogs. This information may be beneficial for breeders, veterinarians, and audiologists alike.

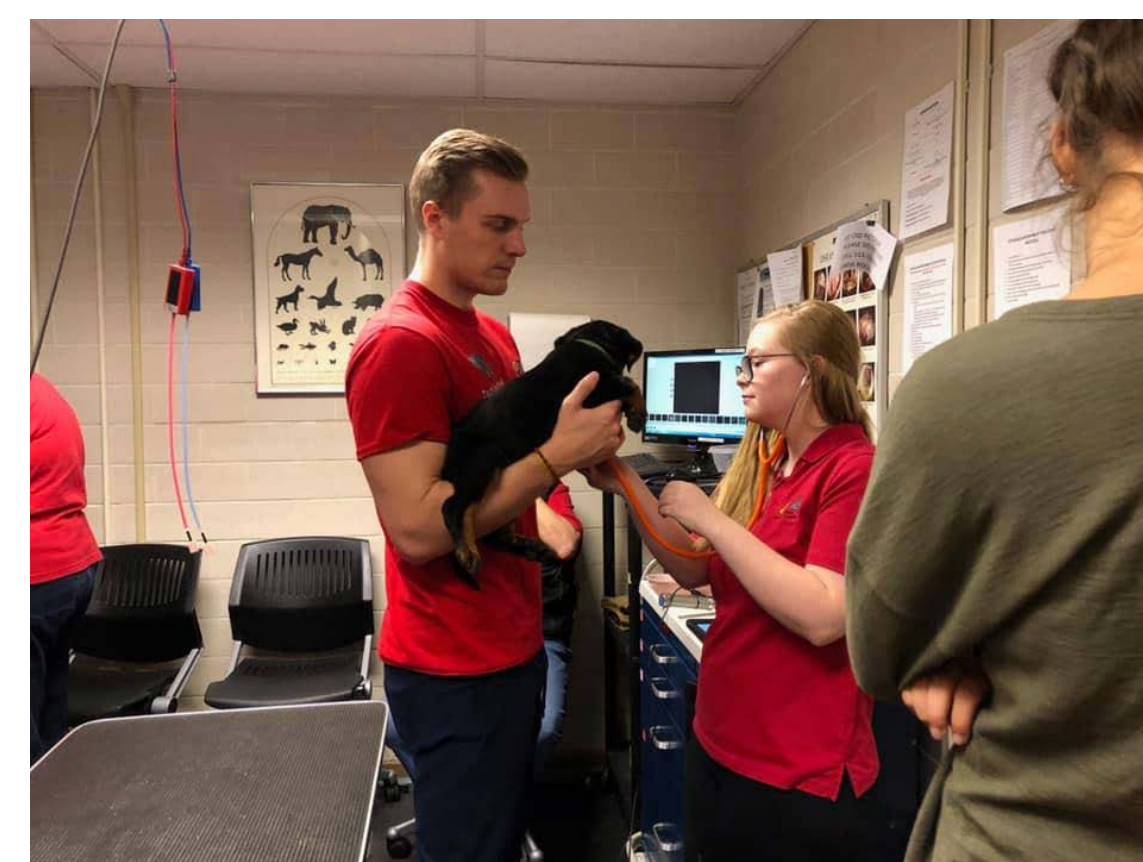
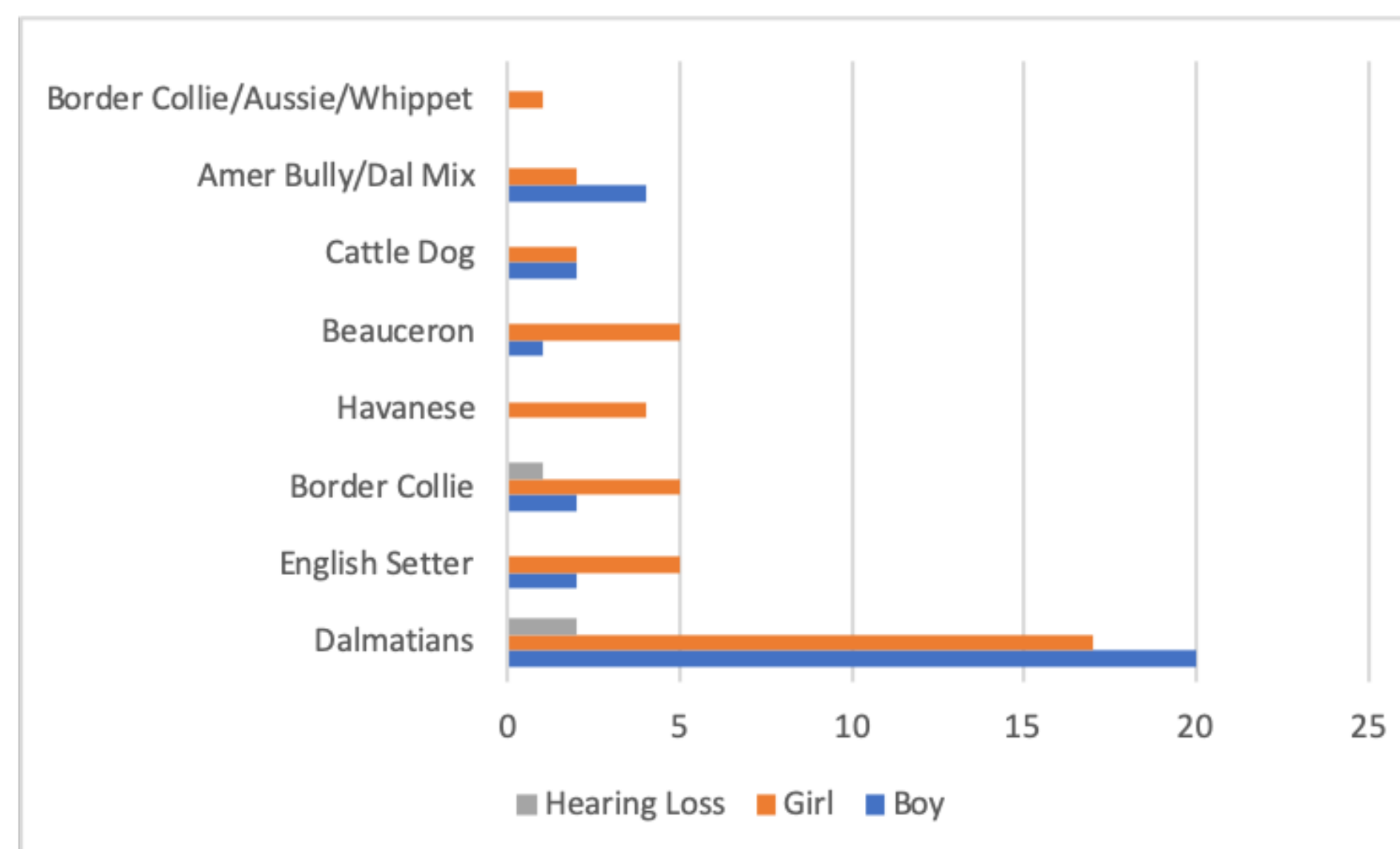
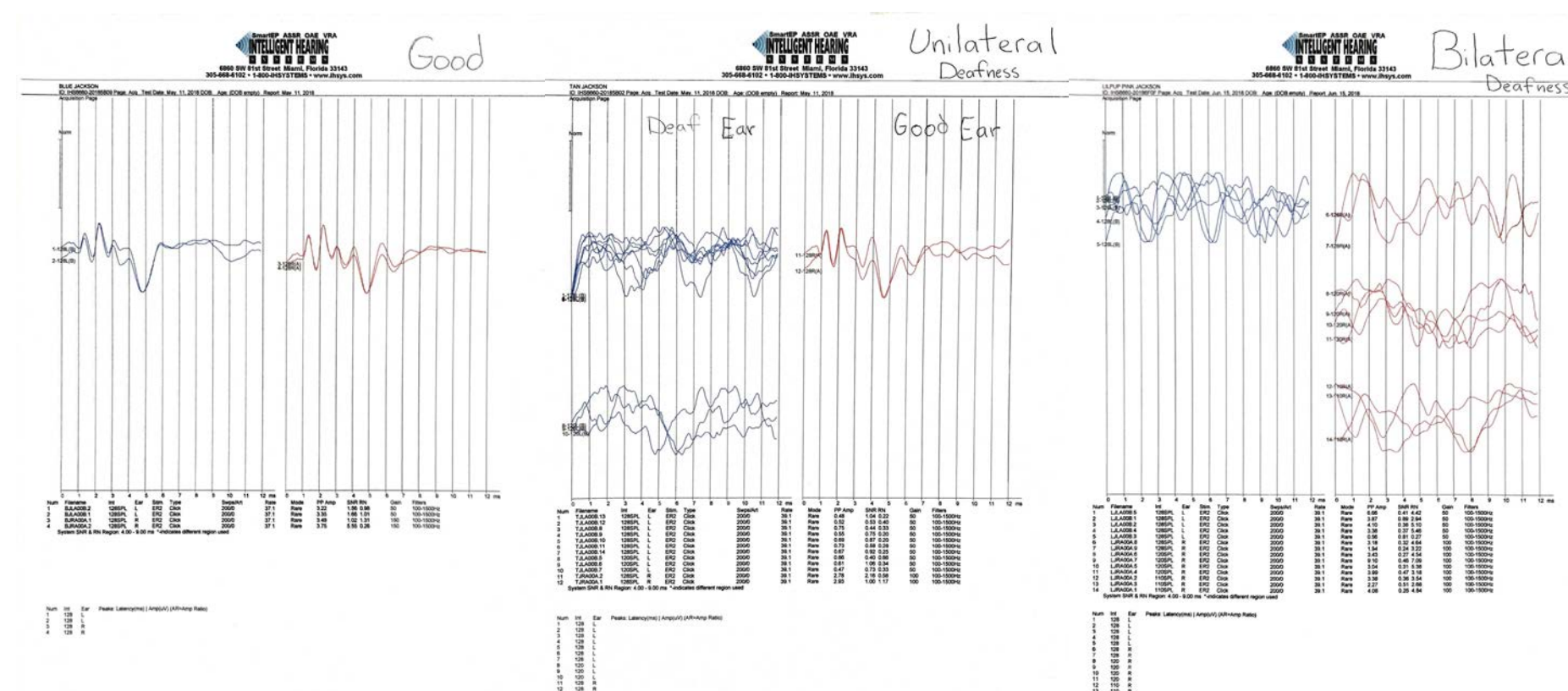
## Methods

Over the course of six months, Brainstem Auditory Evoked Response (BAER) diagnostic tests were conducted on the puppies that made an appointment at FETCHLAB. The animals receive a lidocaine cream applied to the fur below their ears and on their forehead. After the cream takes effect, the animals fill, heart rate, and ear canals are examined. An electrode is inserted into the above listed places. A brain wave response is checked for and insert earphones are placed in the ear canal. A signal of 110 dB is presented through the earphones and the response is measured by the latencies for peaks I and V as well as uniformity in line patterns.

## Acknowledgements

A special thank you to UC FETCHLAB™ for the opportunity to be involved in animal audiology and to the University of Cincinnati for making this project possible.

## Results



## Conclusion

Upon examining the data that was collected, it was found that only three puppies out of 72 presented with either bilateral or unilateral hearing loss leading to a prevalence rate of about 4%. Additionally, our data specifically on dalmatians provided similar results to the current data on the prevalence of hearing loss in dalmatians. Due to these limited findings, we cannot determine a correlation between hearing loss and gender or breed. Our research also did not take into account blue eyes or color of coats, which are known risk indicators of congenital deafness in dogs.

## Discussion

For future research, a wider population group and a wider variety of breeds are recommended. Future research may also include an increase in age, eye color, hereditary information, and coat color.



## References

- <https://www.ofa.org/diseases/other-diseases/congenital-deafness>
- “Comparative analyses of canine hearing using event-related potentials” Scheifele P.M., Browning D. (JASA, vol 119 issue 5, 5/4/06, doi 10.1121/1.4786469) 2006