

## Seroprevalence analysis of *Ehrlichia canis* and *Anaplasma phagocytophilum* in cat colonies in the Autonomous Community of Madrid.

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### INTRODUCTION & AIMS

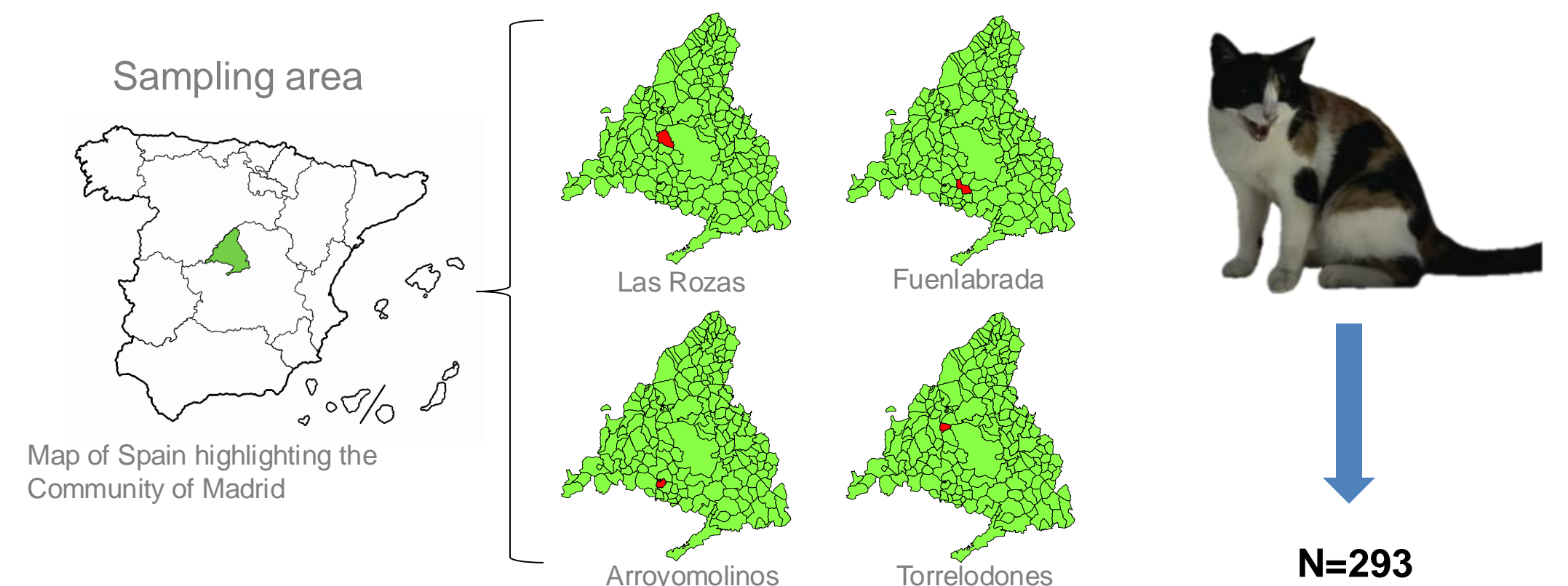
*Anaplasma phagocytophilum* and *Ehrlichia canis* are Gram-negative intracellular bacteria that reside in the salivary glands and digestive system of ticks, and then propagate in leukocytes and eventually infect the lymphatic system of dogs and cats.

For diagnosis, different clinical techniques like rapid immunochromatographic test, serological techniques such as ELISA (Enzyme-Linked Immunosorbent Assay) and IFAT (Indirect Immunofluorescence Assay Test), or molecular techniques, such as the Polymerase Chain Reaction (PCR), can be used.

The main objective of this study was to determine the seroprevalence of *E. canis* and *A. phagocytophilum* in feral cats (*Felis silvestris catus*) in the Autonomous Community of Madrid using serological techniques such as ELISA and IFAT. Additionally, the study aims to correlate the seroprevalence of these pathogens with various variables such as season, sex, age and geographical area, based on data analysis. Lastly, the study sought to establish which serological technique is more effective.

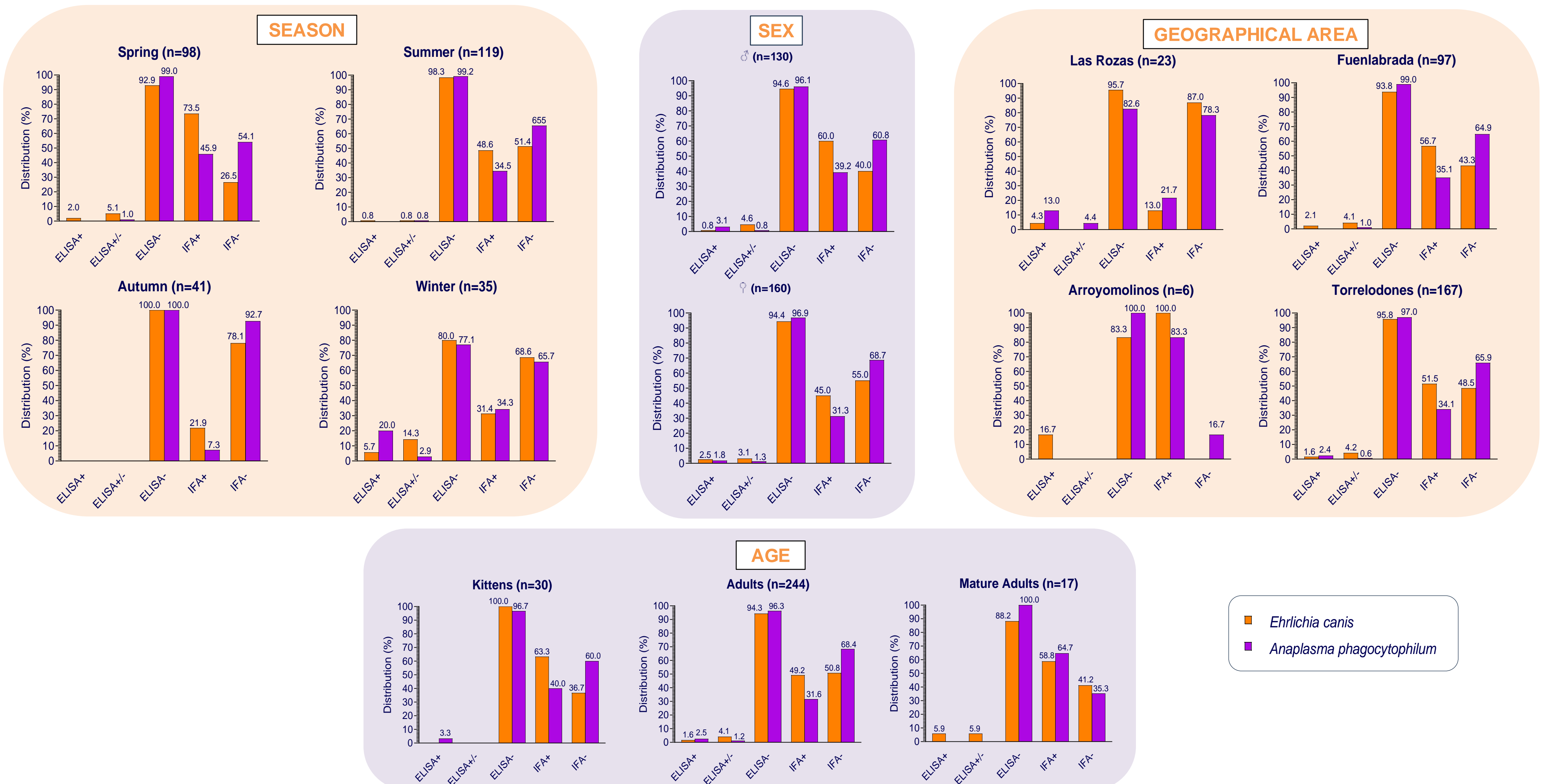
### METHODS

This project was funded by the "XVI Call for Research Project Development FUAX-Santander 2023 (Project code: 941.407)." We obtained our sample population through the Capture, Sterilization, and Release (CES) program. The serological techniques used in the study were commercial ELISA and IFAT.



### RESULTS & DISCUSSION

In this study, seroprevalences for both bacteria depended on different variables, as described below:



Unlike other studies conducted in Madrid, we were able to determine seroprevalence by season and geographical area. The Gold Standard test used was IFAT, which has high specificity but low sensitivity, potentially leading to cross-reactivity. Therefore, molecular diagnosis is necessary to confirm the results. The study faced some limitations, including issues with the data collection sheet, human error during testing (which may have caused variations in results), and the use of tests designed for dogs in cats.

### CONCLUSIONS

- 3.75% of cats were seropositive for *E. canis*, and 3.07% of cats were seropositive for *A. phagocytophilum*.
- It was observed that the highest seroprevalence for both bacteria was in Torreloaones, in spring and in young adult male cats.
- This study shows that IFAT is the test that gives the best results and is therefore the Gold Standard for the serological diagnosis of these bacteria, but molecular diagnosis is needed to determine its reliability in feline species.

### REFERENCES

