

We are grateful to the Editor and the Reviewers for his/her attentive reading of our manuscript and helpful insight. In the revised version of the manuscript we modified extensively the approach of the work, introduced the suggested corrections and rewrote some passages. In addition, the full text was reviewed for the writing.

Please find below the detailed responses to the reviewers' comments and find the corrections in the revised manuscript.

Reviewer 2

We really appreciate the reviewer comments and suggestions to improve our manuscript.

Methodology: The *Materials and Methods* section needs significant improvement. Essential details, such as sample recruitment criteria, statistical analysis methods, and experimental procedures, are either missing or insufficiently described. This makes it difficult to assess the study's reproducibility and validity.

*The primary relevance of the present study lies in the epidemiological impact of the observed findings. Our recruitment criteria was the detection of clinical signs compatible with anaplasmosis and the further confirmation based on molecular diagnosis. While the small sample size prevents a formal statistical analysis, the results nonetheless are relevant since no previous studies have analyzed the genotypic diversity of *A. marginale* in tick-free areas. Regarding *R. microplus* endemic regions, our findings in the bovine C2021 are in accordance with previous genotyping studies (Esquerra et al., 2014; Hove et al., 2018; Primo et al., 2021; de la Fourniere et al., 2023).*

Sample Size: A larger sample size is crucial for drawing meaningful and generalizable conclusions. The current sample size weakens the statistical power of the study, and this limitation should be explicitly acknowledged in the discussion section.

We are very grateful to the reviewer for highlighting this point. We are not able to increase the sample size of the study because it is an opportunistic sampling. Our study was limited to analyze two clinical cases at different epidemiological conditions. This fact is probably a limitation of our work, and for that reason we added a paragraph in the Discussion section to state it.

"The reduced sample size analyzed in this study is a limitation, and further research with a larger number of samples will contribute significantly to a better understanding of the anaplasmosis epidemiology."

Results Presentation: The results section requires better organization and clarity. Consider using well-labeled figures, tables, and concise text to guide readers through your findings more effectively. Ensure that statistical outcomes are adequately reported with p-values, confidence intervals, or effect sizes.

In the revised version of the manuscript we added data in the results section and we also modified figures according to it. Regarding statistical outcomes, as we mentioned above, we are showing results from two case reports. We did not make a sample design and the results that we are showing are not adequate for statistical analysis.

Conclusions: The conclusions should be revised to align more closely with the study's data and limitations. Overgeneralization or extrapolation weakens the credibility of the work. Clearly stating the limitations will enhance the manuscript's transparency.

Thanks for this comment, we added a paragraph to the discussion section and also added a Conclusions section to the revised version in order to highlight the fact that our results are limited by the sample size.

Conclusions

In the present work we studied A. marginale complex infections in naturally infected bovines from two areas in Argentina. The presence of R. microplus seems to shape a highly diversity profile in the bovine host from the tick endemic area, while bovines in the tick-free area remain carrying a low diversity genotype profile. For the best of our knowledge this is the first analysis of A. marginale complex infections in a tick free area. Further studies involving a larger number of samples will help to improve the knowledge regarding A. marginale complex infections both in tick endemic and tick-free areas.