

Project ID/Title: NE_TEMP2202: The Equine Microbiome

Response to Reviewers

Reviewer #1:

We appreciate the suggestion to reach out to Purina as potential collaborators. I met with Robert Jacobs and Mary Beth Gordon from Purina in 2019 as they were just developing their equine microbiome project. They offered to collaborate with sample collection and sequencing but were not interested in sharing data. As the availability of data is a key element and value proposition of this effort, I did not reach out to them to join in the formation of this Multistate group. That said, it would be of great interest to invite leaders in veterinary, nutritional and pharma industries to join and benefit from the efforts of this group.

Reviewer #2:

Thank you for your encouragement and support. Your comments provide rationale to include additional communications for clinicians and the general public as recommended by Reviewer #3 (addressed below).

Reviewer #3: Each point is addressed directly below.

- For the PubMed search maybe put the date that the search was done. I just tried and now get 348, so it is increasing rapidly!

The date of the PubMed search has been added (10/18/2021).

- Under the first set of bullets for 'needs' what about exposing those stakeholders to new ways of analyzing the data? There is always something new coming out (from work in other species) and it might not always be wrong to try something new.

This is a really important point. Tools and strategies for data analysis have been rapidly changing in this area across species and questions. I have revised the third bullet point to include data analysis and the development of protocols.

- For the horse owners and enthusiasts, what about the group creating publications or other web-based materials targeted to the lay person to help with your goals of dispelling myths and increasing communication?

While this goal is implied elsewhere, I agree that it should be more explicitly stated. I have added this goal: 5) Create print and web-based resources for the equine community (public, education, veterinary and equine industry) to increase understanding of microbiome science and its applications to improving horse health and management."

- In the details of Objective 4, recommend adding in a bit on publications for your various stakeholders (i.e. what is mentioned above for targeting lay people as well as other groups, like vets.)

In addition to adding Objective #5 (above), specific goals have been added for stakeholders:

For Veterinarians and Nutritionists

Creation of evidence-based web and print resources to translate equine microbiome science for better health outcomes.

For Horse Owners and Enthusiasts

Creation of evidence-based web and print resources to translate equine microbiome science for better management decisions.

- Again, in Outputs, other pubs, not just manuscripts.

These have been added as described above and in Output #3:

3. Informational materials (print and web-based) for non-academic stakeholders to translate microbiome science into better care and management decisions.

- There is only the author under 'projected participation' are there members in mind that the group hopes to target? Should these individuals be listed? I see them listed under the 'current members' but they are not in Appendix E, does that mean they are not really members?

The current members of the project are listed below and in the Organization/Governance section. Appendix E was not available to submit for the Proposal

Amy Biddle, University of Delaware
Jenifer Nadeau, University of Connecticut
Sarah Reed, University of Connecticut
Aaron Ericsson, University of Missouri
Robert Coleman, University of Kentucky
Stephen Coleman, Colorado State University
Carissa Wickens, University of Florida
Samantha Brooks, University of Florida
Carolyn Hammer, North Dakota State University
Sara Mastellar, The Ohio State University's Agricultural Technical Institute
Sarah White-Springer, Texas A&M University

- Outreach plan #2 is the first time educational materials for the general public or horse owning public is mentioned. As mentioned above, it should be at least briefly mentioned before this point.

These have been added as described above and in Output #3:

More generally, some of the objectives were a bit brief so hard to determine exactly what would be happening under these objectives. Understandably there will be a wide variety of studies accomplished under these objectives, but some more details would be helpful.

Clarifying language has been added. There will be a wide range of studies under each objective, focusing on the dynamics of the microbiome as well as the host. The survey data will be used to generate hypotheses regarding normal microbiome structure and functionality, response to stress, interventions, and health factors.