

**ISAPP 2023 Meeting Discussion Group**  
**“Use of Probiotics and Prebiotics in Agricultural and Companion Animals”**

**Chairs: Kelly Swanson and George Fahey**

**June 27, 2023; 8 am-noon**

**The Brown Palace, Denver, CO**

**Introduction:**

Probiotics, prebiotics, and other biotic substances are not only effective ways to promote a healthy gastrointestinal tract, an effective immune system, and the overall health of humans, but also in agricultural and companion animals. As the oversight of antibiotic use intensifies, population density of animals and humans increases, and production strategies of agricultural animals are more heavily scrutinized, the importance of biotics and other health promoters will increase in the future. Because key differences exist in regard to gastrointestinal tract anatomy and physiology, dietary management and feeding strategy, and disease susceptibility, biotic types and amounts often differ according to host species and life stage. Despite these differences, the literature demonstrates the value of biotics in agricultural and companion animal species, but there is room for improvement and expansion. As knowledge of gastrointestinal microbiomes grows and the biotic field develops, more targeted and effective strategies for health promotion in these species is expected. The aims of this Discussion Group are: 1) to document successful use of probiotics, prebiotics, and other biotic substances to promote health or treat disease in agricultural and companion animals, and 2) to identify opportunities and challenges that may impact the future of this field. To achieve this goal, we have identified experts that will deliver short presentations relevant to the field. Following the presentations, the future needs, opportunities, and challenges will be discussed by all participants. The primary outcome of this activity is expected to be an opinion paper in a journal such as *Trends in Microbiology*, *Frontiers in Microbiology*, or something similar.

**Invited participants:**

- Companion animals
  - o Karin Allenspach; Iowa State University (probiotics in companion animals)
  - o Charlotte Bjørnvad; University of Copenhagen (Denmark) (clinical nutrition of dogs and cats)
  
- Agricultural animals
  - o Steven Ricke; University of Wisconsin (poultry)
  - o Susana María Martín-Orúe; Autonomous University of Barcelona (Spain) (swine)
  - o Nadia Everaert, KU Leuven (Belgium) (swine and poultry)

**Schedule:**

**8:00-8:15 am:** Welcome all participants to room; load presentations (if not done previously); discussion group objectives, round of introduction of participants.

**8:15-9:00 am:**

1. Introduction (Fahey; 5 minutes)
2. Importance of microbiota in gut maturation and health (Everaert; 12-15 minutes)
3. Use of probiotics to manage companion animals with chronic enteropathies (Allenspach; 12-15 minutes)
4. Use of prebiotics to support gastrointestinal health of companion animals (Bjørnvad; 12-15 minutes)

**9:00-9:15 am:** break

**9:15-10:00 am:**

5. Evidence of successful pro/prebiotic use in the management of growing piglets (Martín-Orúe; 12-15 minutes)
6. Evidence of successful pro/prebiotic use in the management of poultry species (Ricke; 12-15 minutes)
7. Probiotics and prebiotics in agricultural and companion animals: Future needs, opportunities, and challenges (Swanson; 12-15 minutes)

**10:00-10:15 am:** break

**10:15-11:30 am:** group discussion on needs, opportunities, challenges; next steps toward opinion paper

**Expected outcome of discussion group:** of the participants that are interested, an opinion paper on the topic would be published in a journal such as *Trends in Microbiology*, *Frontiers in Microbiology*, or something similar.