

Special Issue

Nutritional Modulation of the Gut Microbiome in Domestic and Farm Animals

Message from the Guest Editors

The gut microbiome is a key determinant of health and productivity in both domestic and farm animals, with its composition and function directly influencing nutrient digestion, metabolism, immune responses, and disease resistance. Nutritional strategies aimed at modulating the gut microbiome have emerged as a promising approach to enhance animal performance and health outcomes. Interventions such as prebiotics, probiotics, synbiotics, and dietary fibers can reshape microbial communities, promoting beneficial bacteria while suppressing pathogenic species. In farm animals, these interventions have demonstrated improvements in feed efficiency, growth performance, and resistance to infections, thus contributing to more sustainable and resilient production systems. In domestic animals, dietary modifications have been shown to alleviate chronic gastrointestinal disorders, metabolic diseases, and inflammatory conditions. This Special Issue delves into the molecular mechanisms underlying the nutritional modulation of the gut microbiome, emphasizing the role of diet in shaping microbial populations and their functional outcomes.

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Veterinary Sciences (ISSN 2306-7381) is an international and interdisciplinary scholarly open access journal that aims at publishing research in all fields of veterinary medicine in a democratic way. We encourage scientists to publish their original research articles, reviews, communications, and short notes in as much detail as possible. Articles submitted that involve subjecting animals to unnecessary pain or suffering will not be accepted, and all articles must be submitted with the necessary ethical approval (please refer to the Ethical Guidelines for more information).

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