Special Issue

The Microbial Population of the Gastrointestinal Tract of Animals: Impacts on Host Physiology

Message from the Guest Editors

The gastrointestinal microbial ecosystem of food animals is very diverse, complex, and interdependent and can include bacteria, protozoa, fungi, and viral members that act as a consortium to degrade digesta and produce end products that have significant impacts on host energetic status and can include toxins and vitamins that can impact host health. Some microbial effects on host physiology can impact animal production and production efficiency, but the microbial ecosystem can lead to changes in the host that might lead to increased multiplication and penetration of potential pathogens that impact animal health, as well as food safety. Next-generation sequencing and bioinformatics approaches have allowed us to determine the microbial population of the gut of animals more precisely, but we have not developed a complete picture of the interactions between the microbiome and host physiology. This Special Issue of *Microorganisms* is designed to bring knowledge of how the microbial population (and their end products) can impact host animal physiology and how that impacts animal (and human) health, growth, production, and ultimately safety.

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Message from the Editor-in-Chief

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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