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# **Nutrients and Feed Additives in Modulating Rumen Microbiome**

Guest Editors:

#### **Dr. Alexandros Mavrommatis**

Laboratory of Nutritional Physiology and Feeding, Department of Animal Science, School of Animal Biosciences, Agricultural University of Athens, Iera Odos 75, GR-11855 Athens, Greece

### Prof. Dr. Eleni Tsiplakou

Laboratory of Nutritional Physiology and Feeding, Department of Animal Science, School of Animal Biosciences, Agricultural University of Athens, Iera Odos 75, GR-11855 Athens, Greece

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### Message from the Guest Editors

The current challenges facing the ruminants sector require the design of a multidisciplinary approach of strategies, focusing on the mitigation of greenhouse gas emissions and the improvement of animal productivity and products quality. Several bioactive compounds such as seaweed, microalgae, agro-industrial byproducts, essential oils, oilseeds, phytogenic, etc. are studied as rumen engineering tools capable of shaping future livestock.

However, multitargeted strategies require holistic tools too. In this light, the advent of metaomics techniques such as the 16S rRNA sequencing provides a much broader genomic and functional perspective in rumen microbial ecology.

The aim of this Special Issue is to present recent research and reviews focused on the impact of novel feed additives and bioactive compounds on rumen microbiome communities. The Special Issue is not narrowed out to the cataloging of rumen microbial populations rather than an in-depth understanding of their biochemical function related to environmental impact, feed efficiency, product quality, and its perspective as a reservoir of antimicrobial resistance and pathogenicity genes.



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### Prof. Dr. Clive J. C. Phillips

1. Institute of Veterinary Medicine and Animal Sciences, Estonian University of Life Sciences, Kreutzwaldi 1, 51014 Tartu, Estonia 2. Curtin University Sustainability Policy (CUSP) Institute, Kent St., Bentley 6102, Australia Animals is an on-line open access journal that was first published in 2011. Animals adheres to rigorous peerreview and editorial processes and publishes only high quality manuscripts that address important issues in the many varied disciplines that involve animals, with a focus on animal science, animal welfare and animal ethics. Animals is covered in the Science Citation Index Expanded (SCIE) in Web of Science, with the latest Impact Factor: 2.7 (2023, ranks 10/80 (Q1) in 'Agriculture, Dairy & Animal Science'; 16/167 (Q1) in 'Veterinary Sciences'), 5-Year Impact Factor: 3.0.

**Message from the Editor-in-Chief** 

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*Animals* Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/animals animals@mdpi.com X@Animals\_MDPI