

## Special Issue

# Integrative Omics Technologies and Machine Learning Approaches in Animal Production

### Message from the Guest Editor

Advances in molecular biology have revolutionized research in livestock production. The application of genomics, transcriptomics, metatranscriptomics, proteomics, nutrigenomics, metagenomics, and metabolomics has not only provided the opportunity to decipher the genomic architecture underlying traits of interest but also enhanced our understanding of the molecular basis of growth, reproduction, and carcass merit, as well as the role of selection and nutrition and of other environmental factors. There is also a growing interest in the use of semi- and non-parametric methods for genomic prediction, because the conventional approach of using linear regression models has been said to ignore gene–gene interactions and higher order non-linearities. In this context, machine learning approaches provide interesting alternatives for marker-based genomic selection and omics approaches. This Special Issue invites manuscripts that apply omics technologies and those that utilize any machine learning approach in livestock production.

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### Guest Editor

Dr. Sunday Peters

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### Deadline for manuscript submissions

1 August 2025



## Animals

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## About the Journal

### Message from the Editor-in-Chief

*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 (2024, ranks 15/86 (Q1) in 'Agriculture, Dairy & Animal Science'; 21/170 (Q1) in 'Veterinary Sciences'), 5-Year Impact Factor: 3.2.

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### Editor-in-Chief

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