

Special Issue

Advances in Livestock Breeding: From DNA Sequencing to Selection Techniques

Message from the Guest Editors

The field of livestock breeding has undergone a transformative evolution with the integration of high-throughput sequencing and advanced selection techniques. The advent of omics technologies—such as genomics, transcriptomics, proteomics, and metabolomics—has deepened our understanding of the complex biological networks that govern animal performance, health, and reproduction. This Special Issue aims to highlight the latest advancements in livestock breeding, from DNA sequencing and SNP discovery to the functional analysis of gene expression and protein dynamics. Particular emphasis is placed on the role of proteomics in bridging the gap between genotype and phenotype, enabling more accurate selection strategies. We invite contributions that explore innovative breeding programs, biomarker discovery, multi-omics data integration, and the application of cutting-edge technologies, such as mass spectrometry, in animal science. Studies focusing on sustainable breeding practices, disease resistance, fertility, and the improvement of production traits in any species (terrestrial, birds, and pollinators) are especially welcome.

Guest Editors

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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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