

## Special Issue

# Precision Nutrition: Unraveling the Molecular Physiology of Nutrient–Gut–Health Axis in Livestock and Poultry

### Message from the Guest Editors

Our Special Issue delves into the fundamental biological and physiological mechanisms underpinning this approach. We focus on how essential nutrients, bioactive compounds, and their interactions influence core physiological processes: digestion, nutrient absorption and metabolism; gut microbiome composition and function; immune regulation; metabolic homeostasis; and epigenetic programming. Understanding these intricate pathways—at cellular, molecular, and systemic levels—is crucial for defining how precise nutritional interventions impact animal health, development, productivity, and resilience. We invite contributions exploring the mechanistic links between targeted nutrient delivery, gut physiology, microbiota dynamics, and systemic health outcomes. Research elucidating nutrient sensing, signaling pathways, gene–nutrient interactions, and the role of the gut as a central integrator of nutrition and health is particularly welcome. This Special Issue aims to advance the foundational science enabling precise nutritional strategies that bridge essential nutrient supply with optimized physiological function in livestock and poultry.

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### Guest Editors

Dr. Shengchen Wang

Dr. Tingting Li

Dr. Xiaoyan Cui

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### Deadline for manuscript submissions

30 June 2026



## Biology

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### Message from the Editorial Board

A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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