

Special Issue

Innovations in Poultry Reproductive Biology: Germ Cells, Developmental Mechanisms, and Translational Applications

Message from the Guest Editors

This Special Issue highlights cutting-edge advances in the molecular, cellular, and developmental mechanisms regulating avian reproduction. Poultry reproductive biology is undergoing transformation, with breakthroughs in germ cell isolation, in vitro gametogenesis, genome editing, and transgenic technologies offering new insights into fertility regulation, genetic conservation, and breeding innovation. Research on primordial germ cell migration, oocyte and spermatogonial stem cell differentiation, and hormonal and epigenetic modulation is deepening understanding of reproductive development. Translational applications—from germline modification for genetic resource preservation to novel reproductive biotechnologies enhancing hatchability and production efficiency—are rapidly evolving. This Special Issue welcomes original research, reviews, and methodological papers exploring reproductive mechanisms and applications, aiming to bridge avian developmental biology with applied breeding and biotechnology to promote sustainable poultry production and conserve avian genetic diversity.

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Message from the Editor-in-Chief

Veterinary Sciences (ISSN 2306-7381) is an international and interdisciplinary scholarly open access journal that aims at publishing research in all fields of veterinary medicine in a democratic way. We encourage scientists to publish their original research articles, reviews, communications, and short notes in as much detail as possible. Articles submitted that involve subjecting animals to unnecessary pain or suffering will not be accepted, and all articles must be submitted with the necessary ethical approval (please refer to the Ethical Guidelines for more information).

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