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Genetic and Genomic Advances in Gamete and Embryo Preservation

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Message from the Guest Editors

Storage and deep freezing of gametes and embryos play an important role in the introduction and preservation of genetic resources from individuals with high breeding values and have contributed to an increase in assisted reproductive techniques (ARTs). Evidence has shown that there is a genetic basis for the extent of storage-dependent damage observed in reproductive tract cells, particularly following cryopreservation. However, rapid advances in genetic and genomic tools, such as high throughput RNA-Seq and microarrays, have led to the development of new strategies to improve the preservation technology of gametes and embryos at different temperatures (liquid storage, cryopreservation, and vitrification).

This Special Issue aims to provide an overview of the recent development in transcriptome analysis (gene expression), the role of long noncoding RNAs and gene polymorphism in gametes and embryos of farm animals subjected to liquid storage, cooling, and deep freezing (cryopreservation). Proteomics-related topics based on semen preservation (liquid storage, cryopreservation), or oocyte and embryo cryopreservation are also appreciated.



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Special Issue



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Message from the Editor-in-Chief

Genes are central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fastmoving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised.

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