

## Special Issue

# Mechanisms of Transgenerational Epigenetic Inheritance

### Message from the Guest Editor

Evolution occurs when altered phenotypes are selected and transmitted to the offspring. Gametes are responsible for transmitting phenotypic information to the next generation. In addition to the genome, the epigenome (like DNA methylation histone modifications) has also been reported to be transmitted from the oocytes to the next generation, which is known as transgenerational epigenetic inheritance. Unlike the genome, the epigenome can change depending on the environment. The discovery of transgenerational histone modification raises a new possibility that environment-induced changes of histone modifications in oocytes can affect the phenotypes of the next generation and potentially contribute to evolution. However, the mechanisms of this epigenetic inheritance have not been fully understood. This Special Issue of *Genes* on “Mechanisms of Transgenerational Epigenetic Inheritance” will provide an overview of advancement in this field of research from plants to animals, including critical perspectives on current and upcoming challenges.

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### Guest Editor

Dr. Chunxia Zhang

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### Deadline for manuscript submissions

closed (20 July 2023)

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### Message from the Editor-in-Chief

*Genes* is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving 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. Why not consider *Genes* for your next genetics paper?

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### Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan  
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