

Special Issue

Genetics of Embryo Development and Reproduction Research

Message from the Guest Editor

The fertilization of oocyte and sperm to produce a new organism is the culmination of numerous intricately regulated cellular processes. After fertilization, gametes develop from a highly differentiated state to a pluripotent state, and then they undergo early embryogenesis. Paternal and maternal chromatin structures and genomes undergo dramatic changes, with the latter experiencing genome-wide epigenetic modifications or reprogramming. The transcriptome, proteome, and metabolome of the early embryo also exhibit significant transformations, all of which can regulate the events of embryonic development and the entire lifespan of offspring. Until now, several important theories and mechanisms concerning the regulation of early animal embryogenesis have been elucidated, triggering the emergence of important technologies such as assisted reproduction, animal breeding and so on. However, the early embryonic development process is complex, and its mechanisms are not fully understood. This Special Issue will focus on findings associated with the genetic programs of early animal embryogenesis by utilizing new research in this area.

Guest Editor

Prof. Dr. Enqi Liu
Laboratory Animal Center, Xi'an Jiaotong University, Xi'an, China

Deadline for manuscript submissions

closed (25 December 2024)

G C A T
T A C G
G C A T

Genes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5
Indexed in PubMed



mdpi.com/si/194587

Genes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
genes@mdpi.com

[mdpi.com/journal/
genes](https://mdpi.com/journal/genes)



G C A T
T A C G
G C A T

Genes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5
Indexed in PubMed



[mdpi.com/journal/
genes](https://mdpi.com/journal/genes)



About the Journal

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?

Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan
Experimental Cancer Therapeutics, The University of Alabama at
Birmingham, 1825 University Blvd., SHEL 814, Birmingham, AL 35294-
2182, USA

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Embase, PubAg, and other databases.

Journal Rank:

JCR - Q2 (Genetics and Heredity) / CiteScore - Q2 (Genetics (clinical))