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## Studies on Developmental Genetic Programs of Animal Early Embryogenesis

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submissions:

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### Message from the Guest Editor

Dear Colleagues,

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 undergo early embryogenesis. During this process, 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 could regulate the events of embryonic development and even the entire lifespan or offspring. Several important theories and mechanisms concerning the regulation of animal early embryogenesis have been elucidated, triggering the emergence of important technologies such as assisted reproduction, animal breeding, the creation of gene-editing animals, and so on. However, the early embryonic development process is complex, and its mechanisms are not fully understood. This Special Issue will focus on valuable findings associated with the genetic programs of animal early embryogenesis.



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# Special Issue



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## Message from the Editor-in-Chief

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