Special Issue

Application of Transgenic Technology in Animal Breeding

Message from the Guest Editors

Genome-editing technology can efficiently alter the genome of organisms to achieve the targeted modification of endogenous genes and the targeted integration of exogenous genes. Current genome-editing tools mainly include ZFN, TALEN and CRISPR/Cas9, which have been applied to various animal species including zebrafish, mice, rabbits, rats, monkeys, pigs, cattle, sheep, goats and others. Transgenic and genome-editing technology can be used in animal breeding for improving disease resistance, carcass composition, lactational performance, wool production, growth rate, and reproductive performance, as well as reducing negative environmental impact. Traditional animal breeding is associated with rate-limiting issues such as long breeding cycle and limitations of genetic resources. Genome-editing tools offer solutions to these problems at affordable costs. The generation of gene-edited animals with improved traits has proven feasible and valuable. Moreover, there are still no genetically engineered animal products on the market for food. It is imperative to comprehensively evaluate the pros and cons they will bring to the animal breeding industry.

Guest Editors

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Deadline for manuscript submissions

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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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