



genes



an Open Access Journal by MDPI

Application of New Gene Editing Techniques in Pig Breeding

Guest Editor:

Prof. Dr. Bo Zuo

Department of Animal Science
and Technology, Huazhong
Agricultural University, Wuhan,
China

Deadline for manuscript
submissions:

closed (20 October 2022)

Message from the Guest Editor

Pigs are among the most important livestock for meat production. With the development of gene editing techniques and the identification of major genes affecting economically important traits, genetic engineering in livestock has been widely applied for disease resistance and genetic improvement of production traits. Compared with other gene editing techniques, CRISPR/Cas9 systems are powerful tools for gene editing and allow for the creation of new genotypes by changing the target loci that introduce the locus double strand breaks and addressed by endogenous repair pathways. To date, gene edited pigs such as MSTN and CD163 gene edited pigs have been used to breed new strains of pigs with disease resistance and higher productivity in agriculture. Besides, pigs are regarded as ideal biomedical animals owing to their similarity in anatomy, physiology, and organ size to humans, and many pig models of human diseases have been established for drug screening and pathogenic mechanisms. In this Special Issue, we invite researchers to submit articles, reviews, and prospects about gene editing techniques and their applications in pig breeding and biomedical research.



mdpi.com/si/96870

Special Issue



genes



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan

Department of Pathology, The University of Alabama at Birmingham, 1825 University Blvd, SHEL 814, Birmingham, AL 35294-2182, USA

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.

Why not consider *Genes* for your next genetics paper?

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)*)

Contact Us

Genes Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/genes
genes@mdpi.com
[X@Genes_MDPI](#)