

CURRICULUM VITAE

Personal Information			
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Research Interest			
<p>My current research interest is to use the CRISPR/Cas9 technology for high-throughput screening of functional genomics in pig, especially to study the molecular mechanism of virus-host interaction.</p> <p>Specific focusality: Development of resistance pigs against viral or bacterial infection using CRISPR/Cas9 technology. Development of new bioinformatics software and databases for gene editing platform (e.g. CRISPR/Cas9).</p>			
Education & Working Experience			
<p><i>Education Background:</i> Ph.D. in Biochemistry and Molecular Biology, March 2013; M.Sc. in Animal Genetics, Breeding and Reproduction, 2009; B.Sc. in Animal Science, 2006; Visiting Scientist, International Livestock Research Institute, Nairobi, Kenya, 2019-2020.</p> <p><i>Working Experience:</i> Associate Professor, Department of Animal Physiology and Biochemistry, College of Veterinary Medicine, Huazhong Agricultural University, 2014-now; Research Associate, Shanghai Key Laboratory for Molecular Andrology, State Key Laboratory of Molecular Biology, Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, 2013-2014.</p>			



Publications

1. Han X, Gao Y, Li G, Xiong Y, Zhao C, Ruan J, Ma Y, Li X, Li C, Zhao S, **Xie S***. Enhancing the antibacterial activities of sow milk via site-specific knock-in of a lactoferrin gene in pigs using CRISPR/Cas9 technology. *Cell Biosci*, 2020,10:133.
2. Zhao C, Liu H, Xiao T, Wang Z, Nie X, Li X, Qian P, Qin L, Han X, Zhang J, Ruan J, Zhu M, Miao Y, Zuo B, Yang K, **Xie S***, Zhao S*. CRISPR screening of porcine sgRNA library identifies host factors associated with Japanese encephalitis virus replication. *Nature Communications*, 2020, 11:5178. (*Co-Corresponding authors)
3. Xiong Y, Han X, Zhang J, Zhao G, Wang Z, Zhuang R, Nie X, **Xie S**, Li C, Li X, Liu X, Li K, Zhao S, Ruan J. Identification of ACTB Gene as a Potential Safe Harbor Locus in Pig Genome. *Mol Biotechnol*, 2020, 26. doi: 10.1007/s12033-020-00276-6.
4. Tao D, Liu J, Nie X, Xu B, Tran-Thi TN, Niu L, Liu X, Ruan J, Lan X, Peng G, Sun L, Ma Y, Li X, Li C, Zhao SH, **Xie S***. Application of CRISPR-Cas12a enhanced fluorescence assay coupled with nucleic acid amplification for the sensitive detection of African swine fever virus. *ACS Synth Biol*, 2020, 9(9):2339-2350.
5. Zhang S, Zhang K, Peng X, Zhan Hui, Lu Jia, **Xie S**, Zhao S, Li X, Ma Y. Selective sweep analysis reveals extensive parallel selection traits between Large white and Duroc. *Evolutionary Applications*, 2020, doi: 10.1111/eva.13085.
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7. Chu C, Yu L, Henry-Berger J, Ru Y, Kocer A, Champroux A, Li Z, He M, **Xie S**, Ma W, Ni M, Ni Z, Guo Y, Fei Z, Gou L, Liu Q, Sharma S, Zhou Y, Liu M, Chen C, Eamens A, Nixon B, Zhou Y, Drevet J, Zhang Y. Knockout of glutathione peroxidase 5 down-regulates the piRNAs in the caput epididymidis of aged mice. *Asian J Androl*, 2020, doi: 10.4103/aja.aja_3_20.
8. Zhang D, Hussain A, Manghwar H, Xie K, **Xie S**, Zhao S, Larkin RM, Qing P, Jin S, Ding F. Genome editing with the CRISPR-Cas system: an art, ethics and global regulatory perspective. *Plant Biotechnol J*, 2020, 18(8):1651-1669.
9. Fu L, Wang H, Liao Y, Zhou P, Xu Y, Zhao Y, **Xie S**, Zhao S, Li X. miR-208b modulating skeletal muscle development and energy homeostasis through targeting distinct targets. *RNA Biol*, 2020, 17(5):743-754.
10. Zhao C, Wang Y, Nie X, Han X, Liu H, Li G, Yang G, Ruan J, Ma Y, Li X, Cheng H, Zhao S, Fang Y*, **Xie S***. Evaluation of the effects of sequence length and microsatellite instability on single-guide RNA activity and specificity. *Int J Biol Sci*, 2019, 15(12):2641-2653. (*Co-Corresponding authors)
11. Zheng B, Wang X, Liu Y, Li Y, Long S, Gu C, Ye J, **Xie S**, Cao S. Japanese Encephalitis Virus infection induces inflammation of swine testis through RIG-I—NF-κB signaling pathway. *Veterinary Microbiology*, 2019, 238:108430.
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