

Chengxiao Han

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rexhancx.github.io

Education

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| MS in Animal Science (GPA 3.73/4), Shanghai Jiao Tong University, Shanghai, China | 2021 |
| BS in Animal Science (GPA 3.56/4), Shanghai Jiao Tong University, Shanghai, China | 2018 |

Research Interests

CRISPR genome editing / Structural basis of protein interaction / Development of advanced biotechnology

Research Experience

Researcher advised by Dr. Man Pan 2022–Present

National Facility for Translational Medicine (Shanghai), Shanghai, China

Molecular mechanism and structural basis of RIG-I regulation in p97 unfolding ubiquitinated protein substrates

Graduate Researcher advised by Prof. He Meng 2017–2022

Shanghai Collaborative Innovation Center of Agri-Seeds, Shanghai, China

Performed chicken gene editing using adenoviral Cas9 vectors and studied *MSTN* and *TYR* gene function

Developed an advanced method based on amplicon sequencing to analyze CRISPR-induced mutations

Research Intern advised by Dr. Shun Li 2017

Shanghai Public Health Clinical Center, Fudan University, Shanghai, China

Established liver cancer model in mice by knocking out *P53* and *Mad2* using CRISPR/Cas system

Undergraduate Research Assistant advised by Prof. Gongyou Chen & Prof. Xinhong Li 2015–2017

School of Agriculture and Biology, SJTU, Shanghai, China

Studied the mechanism of antioxidants, especially vitamin C, protect sperm from cadmium toxicity in mice

Constructed Tn5-inserted mutants in *tal* genes of *Xanthomonas axonopodis* pv. *glycines*

Publications

Xu K*, **Han C***, et al. Effective *MSTN* gene knockout by adv-delivered CRISPR/Cas9 in postnatal chick leg muscle. *International Journal of Molecular Sciences* (2020). 10.3390/ijms21072584

Han C, Xu K, Zhou H, et al. Cost-effective and ultra-sensitive detection of CRISPR-induced indels based on amplicon sequencing. (Submitted)

Han C, et al. Efficient and accurate identification of CRISPR-induced mutations by amplicon sequencing. *The 21st National Conference on Animal Genetics and Breeding*, Beijing, China (2021). (Oral Presentation)

Han C, et al. A fast and accurate workflow for gene editing pattern detection and its application. *CN patent no. CN112322714A* (8 Nov 2020).

Honors, Awards and Memberships

Outstanding Graduate, Shanghai Jiao Tong University 2021

National Scholarship for Postgraduate, China (Top 0.5% over China) 2020

Membership, World Poultry Science Association 2019

Membership, Chinese Society for Cell Biology 2018

First-class Scholarship, Shanghai Jiao Tong University (Top 3%) 2017

Miscellaneous

Teaching: Teaching Assistant of four courses, Mentor of four undergraduates

Wet lab: CRISPR genome editing, indels analysis, RNAseq, Southern blotting, qPCR, FISH, IHC, AKTA, Western blotting, stem cell culture, FACS, microinjection, *in vivo* fluorescence imaging

Programming: Python (skilled), HTML5/CSS, R, C++; Ubuntu, VS Code, LaTeX, GitHub

Language: Chinese (native), English (fluent), Japanese (undergraduate minor)