



## Xiangyu Ma

Postdoctoral Scholar, Otolaryngology - Head & Neck Surgery

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#### PROFESSIONAL EDUCATION

- Doctor of Philosophy, Southeast University (2024)
- Ph.D., Southeast University , Biology (2024)
- Bachelor of Science, Anhui Agricultural University (2018)
- B.S., Anhui Agricultural University , Biological Sciences (2018)

#### STANFORD ADVISORS

- Stefan Heller, Postdoctoral Faculty Sponsor

### Publications

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#### PUBLICATIONS

- **Conditional knockout of Dkk3 drives Lgr5+ progenitor reprogramming into hair cells in the mouse cochlea.** *Theranostics*  
Xiao, H., Wang, X., Ye, Z., Tan, X., Ma, Y., Ma, X., Tong, W., Zhang, L., Lin, Y., Tang, X., Zhang, H., Wan, J., Zhang, et al  
2026; 16 (12): 6911-6927
- **Molecular heterogeneity of the non-human primate cochlea.** *Nature communications*  
Chen, X., Che, Y., Qi, J., Cen, M., Gao, S., Zhu, B., Ao, Y., Ma, X., Cheng, C., Guo, R., Wang, X., Shen, T., Wu, et al  
2026
- **Viscoelastic and conductive nerve guidance conduits for peripheral nerve repair.** *Nanoscale*  
Yin, H., Hu, Y., Cheng, H., Zhang, B., Gao, S., Ma, X., Song, S., Wang, W., Wu, H., Zhang, C., Chai, R.  
2025
- **Proton perception and activation of a proton-sensing GPCR.** *Molecular cell*  
Chen, L. N., Zhou, H., Xi, K., Cheng, S., Liu, Y., Fu, Y., Ma, X., Xu, P., Ji, S. Y., Wang, W. W., Shen, D. D., Zhang, H., Shen, et al  
2025
- **Characterization of 3,3'-iminodipropionitrile (IDPN) damaged utricle transcriptome in the adult mouse utricle.** *Frontiers in molecular neuroscience*  
Tian, M., Huang, J., Xiao, H., Jiang, P., Ma, X., Lin, Y., Tang, X., Wang, Y., Dai, M., Tong, W., Ye, Z., Sheng, X., Chai, et al  
2024; 17: 1487364
- **Molecular insights into the activation mechanism of GPR156 in maintaining auditory function.** *Nature communications*  
Ma, X., Chen, L. N., Liao, M., Zhang, L., Xi, K., Guo, J., Shen, C., Shen, D. D., Cai, P., Shen, Q., Qi, J., Zhang, H., Zang, et al  
2024; 15 (1): 10601
- **Isolation and Comprehensive Analysis of Cochlear Tissue-Derived Small Extracellular Vesicles.** *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*

Jiang, P., Ma, X., Wang, X., Huang, J., Wang, Y., Ai, J., Xiao, H., Dai, M., Lin, Y., Shao, B., Tang, X., Tong, W., Ye, et al  
2024; e2408964

- **The single-cell transcriptomic landscape of the topological differences in mammalian auditory receptors.** *Science China. Life sciences*  
Ma, X., Chen, X., Che, Y., Zhu, S., Wang, X., Gao, S., Wu, J., Kong, F., Cheng, C., Wu, Y., Guo, J., Qi, J., Chai, et al  
2024; 67 (11): 2398-2410
- **Advance and Application of Single-cell Transcriptomics in Auditory Research.** *Neuroscience bulletin*  
Ma, X., Guo, J., Tian, M., Fu, Y., Jiang, P., Zhang, Y., Chai, R.  
2024; 40 (7): 963-980
- **G protein-coupled receptors in cochlea: Potential therapeutic targets for hearing loss.** *Frontiers in molecular neuroscience*  
Ma, X., Guo, J., Fu, Y., Shen, C., Jiang, P., Zhang, Y., Zhang, L., Yu, Y., Fan, J., Chai, R.  
2022; 15: 1028125
- **Transcriptomic and epigenomic analyses explore the potential role of H3K4me3 in neomycin-induced cochlear Lgr5+ progenitor cell regeneration of hair cells.** *Human cell*  
Ma, X., Zhang, S., Qin, S., Guo, J., Yuan, J., Qiang, R., Zhou, S., Cao, W., Yang, J., Ma, F., Chai, R.  
2022; 35 (4): 1030-1044
- **Dync1li1 is required for the survival of mammalian cochlear hair cells by regulating the transportation of autophagosomes.** *PLoS genetics*  
Zhang, Y., Zhang, S., Zhou, H., Ma, X., Wu, L., Tian, M., Li, S., Qian, X., Gao, X., Chai, R.  
2022; 18 (6): e1010232
- **Controllable growth of spiral ganglion neurons by magnetic colloidal nanochains** *NANO TODAY*  
Xia, L., Zhao, X., Ma, X., Hu, Y., Zhang, Y., Li, S., Wang, J., Zhao, Y., Chai, R.  
2022; 44
- **Characterization of the microRNA transcriptomes and proteomics of cochlear tissue-derived small extracellular vesicles from mice of different ages after birth.** *Cellular and molecular life sciences : CMLS*  
Jiang, P., Ma, X., Han, S., Ma, L., Ai, J., Wu, L., Zhang, Y., Xiao, H., Tian, M., Tao, W. A., Zhang, S., Chai, R.  
2022; 79 (3): 154
- **Effects of superparamagnetic iron oxide nanoparticles and static magnetic fields on neural stem cell differentiation by transcriptomic techniques** *STEMedicine*  
Li, D., Ma, X., Tang, M.  
2022
- **The Expression and Roles of the Super Elongation Complex in Mouse Cochlear Lgr5+ Progenitor Cells.** *Frontiers in cellular neuroscience*  
Chen, Y., Qiang, R., Zhang, Y., Cao, W., Wu, L., Jiang, P., Ai, J., Ma, X., Dong, Y., Gao, X., Li, H., Lu, L., Zhang, et al  
2021; 15: 735723
- **Characterization of Strip1 Expression in Mouse Cochlear Hair Cells.** *Frontiers in genetics*  
Zhang, S., Dong, Y., Qiang, R., Zhang, Y., Zhang, X., Chen, Y., Jiang, P., Ma, X., Wu, L., Ai, J., Gao, X., Wang, P., Chen, et al  
2021; 12: 625867
- **Knockdown of Foxg1 in Sox9+ supporting cells increases the trans-differentiation of supporting cells into hair cells in the neonatal mouse utricle.** *Aging*  
Zhang, Y., Zhang, S., Zhang, Z., Dong, Y., Ma, X., Qiang, R., Chen, Y., Gao, X., Zhao, C., Chen, F., He, S., Chai, R.  
2020; 12 (20): 19834-19851
- **Stress-Induced Metabolic Disorder in Peripheral CD4+ T Cells Leads to Anxiety-like Behavior.** *Cell*  
Fan, K. Q., Li, Y. Y., Wang, H. L., Mao, X. T., Guo, J. X., Wang, F., Huang, L. J., Li, Y. N., Ma, X. Y., Gao, Z. J., Chen, W., Qian, D. D., Xue, et al  
2019; 179 (4): 864-879.e19
- **The amphioxus ERK2 gene is involved in innate immune response to LPS stimulation.** *Fish & shellfish immunology*  
Ma, X., Peng, S., Zhou, X., Li, S., Jin, P.  
2019; 86: 64-69
- **LncCeRBase: a database of experimentally validated human competing endogenous long non-coding RNAs.** *Database : the journal of biological databases and curation*

Pian, C., Zhang, G., Tu, T., Ma, X., Li, F.  
2018; 2018