

Xiyu Ge

DIVISION OF ENDOCRINOLOGY, STANFORD UNIVERSITY SCHOOL OF MEDICINE

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Education

University of Illinois at Urbana-Champaign
Ph.D. in Molecular & Integrative Physiology Department

Aug. 2019 - Dec. 2022

University of Illinois at Urbana-Champaign
M.S. in Molecular & Integrative Physiology Department

Aug. 2017 - Aug. 2019

East China Normal University
B.S. in Biotechnology

Sep. 2013 - Jun. 2017

Research Experience

Division of Endocrinology, Stanford School of Medicine, PI: Dr. Joy Wu

Feb. 2023 - present

• **Single cell profiling of mouse bone marrow microenvironment**

Ongoing project focusing on investigating the role of PTH1R in bone microenvironment by identifying differences in subpopulations of bone marrow stromal and hematopoietic cells at single cell resolution between control and PTH1R conditional knockout mice.

Molecular & Integrative Physiology, UIUC, PI: Dr. Lori Raetzman

Aug. 2018 - Dec. 2022

• **Identifying impacts of prenatal phthalate exposure on the reproductive function in the offspring**

Performed experiments including *in vivo* dosing and *in vitro* culture of the pituitary glands using CD-1 mice as animal model with molecular biology technics including pituitary dissection, primary tissue culture and qRT-PCR, specifically focusing on phthalate's impacts on reproductive functions at the level of the pituitary. Expression of gonadotropins and aryl hydrocarbon receptor gene were found affected by phthalate exposure.

• **Discovering the relationship between GPHA2 and Notch signaling pathway in developing pituitary**

Applied single-cell RNA seq analysis of GPHA2 expression in mouse pituitary, pituitary culture with GPHA2 peptide to identify specific roles of GPHA2 in NOTCH signaling, as well as examining the expression of GPHA2 expression in developing pituitary using qRT-PCR, western blot and RNAscope *in situ* hybridization.

National Center for Supercomputing Application, UIUC, PI: Dr. Matthew Hudson

Jan. 2018 - Aug. 2019

Applied bioinformatic tools including GATK to identify *de novo* variants from Whole Genome Sequencing (WGS) data from patient's blood samples possibly related to Hypoplastic Left Heart Syndrome (HLHS). Missense variants were found and used to identify pathways related to diseases with bioinformatic tool VarSan developed by collaborator.

Shanghai Key Laboratory of Regulatory Biology, ECNU, PI: Dr. Dali Li

Oct. 2016 - May. 2017

Designed and selected target sgRNAs for AAVS1 gene.

Dell Pediatric Research Institute, UT Austin, PI: Dr. Richard Finnell

Jul. 2016 - Sep. 2016

Summer research intern

Work & volunteer Experience

Volunteer at Society for the Study of Reproduction

Dec. 2021

Helped organizing the connecting events between conference attendees and distribution of information brochures.

English Teacher at Shanghai Rocky English

Oct. 2016 - Apr. 2017

Intern job taken before college graduation. Work involved designing and planning online English courses. Students of different age groups and backgrounds were encountered. Different communicating skills and teaching methods were required individually due to students' different learning expectations as well as various age and previous English level.

Head of Information and Social Networking Division at ECNU Biology Department

Sep. 2015 - Jun. 2016

Work involved publicity for ECNU biology department, specifically included running departmental social media account, photographing and video shooting at important occasions, film editing, departmental magazine editing and poster designing. Other responsibilities included training and assigning work to new students, working and communicating with members from other Divisions and professors for daily matters of the department.

Publication

Xie, X., Kendzior, M. C., **Ge, X.**, Mainzer, L. S., & Sinha, S. (2021). VarSAN: associating pathways with a set of genomic variants using network analysis. *Nucleic acids research*, 49(15), 8471-8487. <https://doi.org/10.1093/nar/gkab624>.

Ge, X., Weis, K., Flaws, J., & Raetzman, L. (2022). Prenatal exposure to the phthalate DEHP impacts reproduction-related gene expression in the pituitary. *Reproductive Toxicology*, 108, 18-27. <https://doi.org/10.1016/j.reprotox.2021.12.008>.

Cutia, C. A., Leverton, L. K., **Ge, X.**, Youssef, R., Raetzman, L. T., & Christian-Hinman, C. A. (2022). Lateralized phenotypic differences in females in the intrahippocampal kainic acid mouse model of temporal lobe epilepsy. *Experimental Neurology*, 355, 114118. <https://doi.org/10.1016/j.expneurol.2022.114118>.

Xue, N., Liu, X., Zhang, D., Wu, Y., Zhong, Y., Wang, J., Fan, W., Jiang, H., Zhu, B., **Ge, X.** and Gonzalez, R.V. (2023). Improving adenine and dual base editors through introduction of TadA-8e and Rad51DBD. *Nature Communications*, 14(1), 1224. <https://doi.org/10.1038/s41467-023-36887-1>.

Honors & Awards

2022	Award , MCB Outstanding TA Award	UIUC
2021	Award , Graduate Student Travel Award	UIUC
2021	Award , First Place- Oral Presentation	<i>Illinois Symposium on Reproductive Sciences</i>
2021	Award , Early Career Forum Award	<i>Endocrine Society</i>
2018	Scholarship , Early Career Investigator in Precision Medicine Scholarship	<i>Mayo Clinic</i>
2017	Fellowship , Ulliyot Fellowship	UIUC
2015	Award , National Collage English Speaking Competition, 3 rd prize, Shanghai Division	NESC
2014-2016	Scholarship , East China Normal University Scholarship	ECNU

Skills & Certificates

Skills

- Molecular Biology skillset
- Microsoft Office
- Adobe Software
- R
- Python
- Shell/HPC environment Scripting
- Public Speaking

Certificate

Applied Data Science with Python Specialization (Issued by Coursera, [Certificate Link](#))