ZHOU YING

📞 +86 19921875412   ✉ zhouying_ch@qq.com   ✉ zying926818@gmail.com   📍 China
🐙 ZhouYing0818   🔗 My page   🔗 Google Scholar   🔗 ResearchGate

Summary

Curiosity, Independence, Self-growth, Exploration. Details of my story and scientific interest can be found in my PS ↗ and SoP ↗

Education

MS **Harbin Medical University**, Biomedical Engineering (Bioinformatics)   Sep. 2022 to Present
- GPA: Not Final Decision   Slide decks ↗
- **Training:** Analysis of RNA-seq, scRNA-seq, ChIP-seq, CUT&RUN, CUT&TAG, Ribo-seq, AS|APA, CRISPR Screens etc.

MS **Fudan University**, Neurobiology (Neurodevelopment & neural classification)   Sep. 2016 to Jan. 2020
- GPA: 2.99/4.0 (Details of Transcript) ↗   Thesis ↗
- **Coursework:** Advanced Neurobiology, Progress in Brain Function and Diseases, Neural circuit: Slide decks ↗
  from gene to function, Optical Image in Neuroscience, Patch-Clamp Techniques, Practical Tech-
  niques for Morphology and molecular Biology etc.

BS **Hunan Agricultural University**, Bioengineering   Sep. 2012 to July. 2016
- GPA: 3.59/4.0 (Details of Transcript) ↗
- **Coursework:** Biochemistry, Molecular Biology, Cell biology, Genetic Engineering, Advanced
  Mathematics, General Chemistry/Physics, Computer Applications, Scientific Writing, Biologi-
  cal/chemistry/physics experimental technologies, Practical algorithms etc.

Research Experience

Systematic comparison of glioblastoma (GBM) and neurodevelopmental trajectories   Harbin Medical University,
- Integrated and analyzed 5 GBM single-cell/single-nucleus transcriptome datasets.   China
- Aligned these datasets with developmental trajectories observed in fetus to systematically compare   Jan. 2023 to Present
  and profile the dynamically changing molecular expressions in GBM.
- **Acquired:** experience in scRNA-seq analysis, dry experimental design, proposal writing and funding   POSTER ↗
  application.

Improving variant prioritization in exome analysis by entropy-weighted ensemble of multiple tools   Xinhua Hospital
(Published as first co-author)   affiliated to Shanghai
- Evaluated the efficacy of variant prioritization tools in a large rare disease cohort with heterogeneous   Jiaotong University
  phenotypic information   School of Medicine, China
- Used an entropy-weighted ensemble of multiple tools to improve variant prioritization and accelerate   May 2020 to Oct. 2022
  molecular diagnosis in exome/genome sequencing.
- **Acquired:** comprehended basic model construction methods and evaluation; practiced extracting in-   POSTER ↗
  formation from clinical notes; Developed skills in WES data analysis; Honed scientific writing skills.

Sncg, Mybpc1, and Parm1 Classify subpopulations of VIP-expressing interneurons in layers 2/3 of   Fudan University, China
the somatosensory cortex (Published)   2017 to May 2020
- Constructed and implemented quantification methods to describe morphological and electrophysio-
  logical features of interneurons.   POSTER ↗
- Identified distinct subpopulations of neocortical VIP+ interneurons using morphological and electro-
  physiological properties, as well as molecular markers.
- **Acquired:** electrophisiological and neural morphological data analysis, and mastered unsupervised
  classification methods.

Effects of Cell Cycle and migration on Cortical Folding During Brain Development in ferret   Fudan University, China
- Investigated how stem cell activity affects cortical folding during development, identifying key differ-   May 2016 to Aug. 2018
  entiation patterns.
- Labled types of neural stem/progenitor cells, and analyzed their differentiation and cell cycle.   POSTER ↗
- **Acquired:** Wet lab skills including IHC, WB, virus injection, and time-lapse recording, and developed
  proficiency in image analysis using ImageJ, Matlab, Imaris, and Photoshop.

Publications

Improving variant prioritization in exome analysis by entropy-weighted ensemble of multiple tools. Clin Genet. (First co-author)

Fan Y,*Zhou Y*, Liu H, Luo X, Xu T at al.

doi:10.1111/cge.14257. ☒

Oct. 2022

POSTER ☒

Sncg, Mybpc1, and parm1 classify subpopulations of VIP-expressing interneurons in layers 2/3 of the somatosensory cortex. Cereb Cortex.

Jiang SN, Cao JW, Liu LY, *Zhou Y*, Liu H, Shan GY, Fu YH, Shao YC, Yu YC.

doi:10.1093/cercor/bhac343. ☒

Aug. 2022

POSTER ☒

Effect of post-weaning isolation on anxiety- and depressive-like behaviors of C57BL/6J mice. Experimental Brain Research

Huang Q, *Zhou Y*, Liu LY

doi:10.1007/s00221-017-5021-5 ☒

2017

Region-specific SPON1 expression regulates cortical folding and brain function.

Lin YN, Chen JY, Yang FW, Huang Q, Xue YP, Tao Y, He N, He M, Yu M, He ZB, Fan K, Tong SY, Xu YQ, Luo YH, Li YX, *Zhou Y*, Peng G, Zhang T, Wu RQ,Shi SH, Liu LY, Yu YC

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Under submission

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Working Experience

Clinical data Analyst — May 2020 to Jun. 2022

- Clinical data analyst of GeneDock Corporate, based on Shanghai Institute of Pediatric Research, Xinhua Hospital affiliated to Shanghai Jiaotong University School of Medicine, Shanghai, China
- Participated 2 WES/WGS projects, published paper of 'genetic variant auto-interpretation' projects as first co-author.
- Further practice Python, complicated coding and model building skills

Additional Experience

- The second international conference on single-cell and spatial omics (TICSSO-2), 29th-30th March 2024, Shenzhen, China.
- 2020 conference of Medical Geneticists Branch of Chinese Medical Doctor Association, 16th-17th Oct. 2020, Chengdu, China.
- The 11th FENS Forum of Neuroscience, 7th-11th July 2018, Berlin, German ☒
- The 12th National Academic Conference of Chinese Society for Neuroscience, 2017, Tianjing, China.
- Volunteer of The national science-popularizing public activity held by Chinese Society for Cell Biology, May 2017, Shanghai, China ☒

Awards|Scholarships|Funding|Certificates

- **Funding (2023-2024):** Postgraduate Research & Practice Innovation Program of Harbin Medical University(No.YJSCX2023-120HYD)
- **Scholarship (2018&2017):** Neuroscience scholarship at Fudan University ☒
- **Scholarship (2016 - 2017):** Kwang-Hua Award at Fudan University ☒
- **Award(2012-2013&2012-2014)** Outstanding Student at Hunan Agricultural University ☒
- **Certificate:** Certificate of science popularization worker at Chinese society of cell biology ☒
- **Certificate:** ShangHai Computer Rank Examination three level Data science and artificial intelligence certificate ☒
- **Certificate:** National Computer Rank Examination two level VB language certificate ☒
- **Certificate:** Hunan Computer Application Rank Examination two level certificate ☒

Skills

- Python, R, Matlab, stastics, basic data mining and machine learning skills
- Bulk/Single cell/Single nucleus RNA-seq, ChIP-seq, CUT&RUN/CUT&TAG, Ribo-seq, and other molecular bioinformatics anaylysis skills
- Neuronal morphological and electrophysiological data analysis skills
- Basic Anatomic experiment, frozen section and IHC, WB, virus injection,tissue cell culture and other biological experiments