Yue Hu | Ph.D.

h379860751@gmail.com • https://jechia.github.io/ • Yue Hu
jechia • Yue Hu • Yue Hu • 0000-0002-2858-0831

Education

Beijing Jiaotong University — **Beijing, P.R.China**
Bachelor, Bioinformatics — *2013–2017*

University of North Carolina at Chapel Hill — **Chapel Hill, NC**
Visiting Ph.D student, Department of Pharmacology — *2019–2021*
Adviser: Dr. Daniel Dominguez

Shanghai Institute of Nutrition and Health, CAS — **Shanghai, P.R.China**
Ph.D, Computational Biology — *2017–2023*
Adviser: Dr. Zefeng Wang

Research Projects

RNA-binding protein splicing activity prediction model — *2016.11-2018.11*

- Developed a machine learning method to predict the splicing regulatory activities based on amino acid sequence of RNA-binding proteins

Systematic survey of PRMTs interactome — *2018.5-2021.7*

- Analyzed the differential splicing of PRMTs' RNA-seq data and found their regulatory roles in splicing

Integrative language model for RBP-RNA interactions — *2019.11-2023.7*

- Developed a prediction model based on BERT to integrate both *in vivo and vitro* binding experimental data of RBPs, successfully found RBPs' regulatory roles in RNA splicing and translation

Extensive Dysregulation of SLK Splicing in Cancers Impacts Metastasis — *2021.10-2023.3*

- Conducted large-scale analysis of cancer-related splicing events, and found SLK's downstream target through RNA-seq analysis

Professional Experience

CirCode — **Shanghai, P.R.China**
Bioinformatics Scientist, RNA design — *2023-present*

Shanghai Institute of Nutrition and Health, CAS — **Shanghai, P.R.China**
Teaching Assistant, Biostatistics — *2019*

Skills

- R
- Bash
- Transcriptomic Data Analysis
- C
- Python
- Pytorch
- Statistical Analysis
- MySQL

Model developments

Pytorch - iBindNet: author & maintainer (https://github.com/jechia/iBindNet)

Conference presentations

The 4th National Ribonucleic Acid RNA Youth Academic Conference **Lanzhou, P.R.China**
Talk, *April, 2023*
iBindNet - Integrative language model for RBP-RNA interactions

RNA 2023 **Singapore**
Talk, *June, 2023*
iBindNet - Integrative language model for RBP-RNA interactions

Publications

- Miaowei Mao, Yue Hu, Yun Yang, Yajie Qian, Huanhuan Wei, Wei Fan, Yi Yang, Xiaoling Li, Zefeng Wang. **Modeling and predicting the activities of trans-acting splicing factors with machine learning** *Cell systems* 7 (5), 510-520. e4,2018. doi: 10.1016/j.cels.2018.09.002

- Huan-Huan Wei, Xiao-Juan Fan, Yue Hu, Xiao-Xu Tian, Meng Guo, Miao-Wei Mao, Zhao-Yuan Fang, Ping Wu, Shuai-Xin Gao, Chao Peng, Yun Yang, Zefeng Wang. **A systematic survey of PRMT interactomes reveals the key roles of arginine methylation in the global control of RNA splicing and translation.** *Science Bulletin* 66 (13), 1342-1357,2021. doi: 10.1016/j.scib.2021.01.004

- Ning Wang, Yue Hu*, Zefeng Wang **Regulation of alternative splicing: Functional interplay with epigenetic modifications and its implication to cancer** *Wiley Interdisciplinary Reviews: RNA* e1815,2023. doi: 10.1002/wrna.1815

Pre-print Publications

- Ying-Qun Yang*, Yue Hu*, Si-Rui Zhang*, Jie-Fu Li, Jia-Wen Guan, Wen-Jing Zhang, Yu Sun, Xiao-Yan Feng, Jing Sun, Yun Yang, Zefeng Wang, Huan-Huan Wei. **Extensive Dysregulation of SLK Splicing in Cancers Impacts Metastasis.** *bioRxiv* 2022.10.28.514146. doi: 10.1101/2022.10.28.514146

Awards

Top 10 Advances in Bioinformatics 2018	*2019.2*
International Cooperative Training Program for Doctoral Students at UCAS	*2019.7*
China Scholarship Council's scholarship program	*2020.8*
Third Prize of "Pioneer Cup" Computing Application Grand Prix	*2022.11*

References

Zefeng Wang
Shanghai Institute of Nutrition and Health, CAS
wangzefeng@picb.ac.cn

Daniel Dominguez
Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill
didoming@email.unc.edu

Zhen Shao
Shanghai Institute of Nutrition and Health, CAS
shaozhen@picb.ac.cn