

EDUCATION

- **Ph.D. in Bioinformatics at The University of Hong Kong**, Hong Kong, Hong Kong SAR Sep-2023 — now
  - Department: School of Biomedical Sciences, Li Ka Shing Faculty of Medicine
  - Supervisor: Prof. Jason Wing Hon WONG and Dr David Jen Hao SHIH
- **M.Sc. in Biology at Shanghai Jiao Tong University**, Shanghai, PR China Sep-2019 — Jun-2022
  - Department: Shanghai Institute of Hematology, State Key Laboratory of Medical Genomics
  - Supervisor: Prof. Lin CHENG
  - GPA: 3.90/4.0
- **B.Sc. in Bioinformatics** (five-year program) at **Harbin Medical University**, Harbin, Heilongjiang Province, PR China Sep-2014 — Jul-2019
  - College: College of Bioinformatics Science and Technology
  - Average score: 81.41/100

RESEARCH INTERESTS

Bioinformatics | Computational biology | Genome organization | RNA biology

RESEARCH EXPERIENCE

1. Identified dysregulated sub-pathways in cancers by integrating gene expressions, CNVs, and DNA methylations.
2. Identified cell-cell communications associated with prognosis of patients with B-cell acute lymphoblastic leukemia (B-ALL).
3. Revealed TCF12 acted as a co-factor of DUX4/IGH to enhance the transactivation via a positive feedback in B-ALL.
4. Benchmarked 21 differential splicing tools for RNA-seq analysis at the event level to propose a tool-selection protocol for users.
5. Predicted the spreading of the COVID-19 epidemic in China using a novel time-delay differential equation model.
6. Performed analysis of RNA-seq, ChIP-seq, scRNA-seq, and CyTOF data.

PUBLICATIONS 1

**Minghao Jiang**, Duohui Jing, Jason W.H. Wong<sup>✉</sup>. "gghic: A Versatile R Package for Exploring and Visualizing 3D Genome Organization" *Bioinformatics*. (Under review)

Qing Xue<sup>†</sup>, Ming Zhang<sup>†</sup>, Yixiao Mo<sup>†</sup>, Bo Jiao<sup>†</sup>, **Minghao Jiang**, Yu Zhou, Yun Tan, Jianming Zhang, Qianqian Zhang, Zhu Chen, Shu-Hong Shen<sup>✉</sup>, Sai-Juan Chen<sup>✉</sup>. "Molecular Mechanisms of Unique Therapeutic Potential of Dual-target Inhibitor CUDC-907 for MEF2D Fusion-driven BCP-ALL" *Signal Transduct Target Ther*. (Under review)

Junna Ye<sup>†</sup>, Fan Wang<sup>†</sup>, Zhuochao Zhou<sup>†</sup>, **Minghao Jiang**<sup>†</sup>, Yijun You, Yutong Su, Qiongyi Hu, Huihui Chi, Honglei Liu, Xiaobing Cheng, Jinchao Jia, Hui Shi, Chengde Yang, Jinyan Huang<sup>✉</sup>, Jialin Teng<sup>✉</sup>, Qiongyi Hu<sup>✉</sup>, Yue Sun<sup>✉</sup>. "Itaconate promoted monocyte migration by increasing chemokine CCL12 expression in autoinflammatory cytokine storm." *Clin Immunol*. (Under review)

Zhihui Li<sup>†</sup>, **Minghao Jiang**<sup>†</sup>, Junfei Wang<sup>†</sup>, Zhiyi Zhuo<sup>†</sup>, Shiyan Zhang, Yangxia Tan, Weiguo Hu<sup>✉</sup>, Hao Zhang<sup>✉</sup>, Guoyu Meng<sup>✉</sup>. "Transcription factor 12-mediated self-feedback regulatory mechanism is required in DUX4 fusion leukaemia." *Clin Transl Med*. 2023 Dec;13(12):e1514. doi: [10.1002/ctm2.1514](https://doi.org/10.1002/ctm2.1514).

Hongxin Yin<sup>†</sup>, Junfei Wang<sup>†</sup>, Yangxia Tan<sup>†</sup>, **Minghao Jiang**<sup>†</sup>, Hao Zhang<sup>✉</sup>, Guoyu Meng<sup>✉</sup>. "Transcription factor abnormalities in B-ALL leukemogenesis and treatment." *Trends Cancer*. 2023 Oct;9(10):855-870. doi: [10.1016/j.trecan.2023.06.004](https://doi.org/10.1016/j.trecan.2023.06.004).

Wenyu Wu<sup>†</sup>, Yangxia Tan<sup>†</sup>, Hongxin Yin<sup>†</sup>, **Minghao Jiang**<sup>†</sup>, Yanling Jiang, Xiaodan Ma, Tong Yin, Yuwen Li<sup>✉</sup>, Hao Zhang<sup>✉</sup>, Xun Cai<sup>✉</sup>, Guoyu Meng<sup>✉</sup>. "Phase separation is required for PML nuclear body biogenesis and function." *FASEB J*. 2023 Jun;37(6):e22986. doi: [10.1096/fj.202300216R](https://doi.org/10.1096/fj.202300216R).

**Minghao Jiang**<sup>†, ✉</sup>, Shiyan Zhang<sup>†</sup>, Hongxin Yin<sup>†</sup>, Zhiyi Zhuo<sup>†</sup>, Guoyu Meng<sup>✉</sup>. "A comprehensive benchmarking of differential alternative splicing tools at the event level." *Brief Bioinform*. 2023 Apr 5;bbad121. doi: [10.1093/bib/bbad121](https://doi.org/10.1093/bib/bbad121).

Gang Lu<sup>†</sup>, Yun Ling<sup>†</sup>, **Minghao Jiang**<sup>†</sup>, Yun Tan<sup>†</sup>, Dong Wei<sup>†</sup>, Lu Jiang, Shuting Yu, Fangying Jiang, Shuai Wang, Yao Dai, Jinzeng Wang, Geng Wu, Xinxin Zhang, Guoyu Meng<sup>✉</sup>, Shengyue Wang<sup>✉</sup>, Feng Liu<sup>✉</sup>, Xiaohong Fan<sup>✉</sup>, Saijuan Chen<sup>✉</sup>. "Primary assessment of the diversity of Omicron sublineages and the epidemiologic features of autumn/winter 2022 COVID-19 wave in Chinese mainland." *Front Med*. 2023 Mar 31;1-10. doi: [10.1007/s11684-022-0981-7](https://doi.org/10.1007/s11684-022-0981-7).

**Minghao Jiang**<sup>†</sup>, Hongxin Yin<sup>†</sup>, Shiyan Zhang<sup>†</sup>, Guoyu Meng<sup>✉</sup>, Geng Wu<sup>✉</sup>. "Mathematical appraisal of SARS-CoV-2 Omicron epidemic outbreak in unprecedented Shanghai lockdown." *Front Med (Lausanne)*. 2022 Nov 8;9:1021560. doi: [10.3389/fmed.2022.1021560](https://doi.org/10.3389/fmed.2022.1021560).

Ming Zhang<sup>†</sup>, Hao Zhang<sup>†</sup>, Zhihui Li<sup>†</sup>, Ling Bai<sup>†</sup>, Qianqian Wang, Jianfeng Li, **Minghao Jiang**, Qing Xue, Nuo Cheng, Weina Zhang, Dongdong Mao, Zhiming Chen, Jinyan Huang, Guoyu Meng<sup>✉</sup>, Zhu Chen<sup>✉</sup>, Sai-Juan Chen<sup>✉</sup>. "Functional, Structural and Molecular Characterizations of Leukemogenic Driver Mef2d-Hnrnpul1 Fusion." *Blood*. 2022 Sep 22;140(12):1390-1407. doi: [10.1182/blood.2022016241](https://doi.org/10.1182/blood.2022016241).

Hao Zhang<sup>†</sup>, Nuo Cheng<sup>†</sup>, Zhihui Li<sup>†</sup>, Ling Bai<sup>†</sup>, Chengli Fang, Yuwen Li, Weina Zhang, Xue Dong, **Minghao Jiang**, Yang Liang, Sujiang Zhang, Jianqing Mi, Jiang Zhu, Yu Zhang, Sai-Juan Chen, Yajie Zhao, Xiang-Qin Weng, Weiguo Hu<sup>✉</sup>, Zhu Chen<sup>✉</sup>, Jinyan Huang<sup>✉</sup>, Guoyu Meng<sup>✉</sup>. "DNA Crosslinking and Recombination-Activating Genes 1/2 (Rag1/2) Are Required for Oncogenic Splicing in Acute Lymphoblastic Leukemia." *Cancer Commun (Lond)*. 2021 Nov;41(11):1116-1136. doi: [10.1002/cac2.12234](https://doi.org/10.1002/cac2.12234).

Liang Wu<sup>†</sup>, **Minghao Jiang**<sup>†</sup>, Ping Yu, Jianfeng Li, Wen Ouyang, Chong Feng, Wei Li Zhao<sup>✉</sup>, Yuting Dai<sup>✉</sup>, Jinyan Huang<sup>✉</sup>. "Single-Cell Transcriptome Analysis Identifies Ligand-Receptor Pairs Associated with BCP-ALL Prognosis." *Front Oncol*. 2021 Mar 10;11:639013. doi: [10.3389/fonc.2021.639013](https://doi.org/10.3389/fonc.2021.639013).

Junwei Han<sup>†, ✉</sup>, Siyao Liu<sup>†</sup>, Ying Jiang<sup>†</sup>, Chaohan Xu<sup>†</sup>, Baotong Zheng, **Minghao Jiang**, Haixiu Yang, Fei Su, Chunquan Li<sup>✉</sup>, Yunpeng Zhang<sup>✉</sup>. "Inference of Patient-Specific Subpathway Activities Reveals a Functional Signature Associated with the Prognosis of Patients with Breast Cancer." *J Cell Mol Med*. 2018 Sep;22(9):4304-4316. doi: [10.1111/jcmm.13720](https://doi.org/10.1111/jcmm.13720).

PUBLISHED SOFTWARE

- [gghic](#)  
A versatile R package for exploring and visualizing 3D genome organization
- [smk\\_sv](#)  
A **snakemake** pipeline to call **structural variants** from tumor-only ONT data
- [RSWP](#)  
**RNA sequencing workflow** by **Python**
- [ASP](#)  
An **alternative splicing package** in R
- Membership in the [openbiox](#) community



AWARDS

- |   |      |
|---|------|
| • First-class scholarship, Shanghai Jiao Tong University School of Medicine           | 2021 |
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| • Outstanding graduate, Harbin Medical University                                     | 2019 |
| • Outstanding volunteer of The Belt and Road China-Russia Medical University Alliance | 2018 |
| • Excellent student leader, Harbin Medical University                                 | 2016 |

## OTHER ROLES

- Director of Sports Department, Student Union, Shanghai Jiao Tong University School of Medicine
  - Director of Publicity Department, Student Union, Harbin Medical University
- 2019 — 2020

2014 — 2016

## SKILLS

- Proficient in R, Python, Shell, Linux, Slurm (Simple Linux Utility for Resource Management), and Adobe Illustrator
- Familiar with Perl, Java, and Adobe Photoshop

1. *Time-ordered* | <sup>†</sup> *Co-first authors* | <sup>⌘</sup> *Corresponding author(s)* | <sup>#</sup> *Review articles* [↵](#)