Minghao JIANG | 姜 明昊

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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: Professor Jason Wing Hon WONG
- **M.Sc.** in **Biology** at **Shanghai Jiao Tong University**, Shanghai, China Sep-2019 — Jun-2022
  - Department: Shanghai Institute of Hematology, State Key Laboratory of Medical Genomics
  - Supervisor: Professor Lin CHENG
  - GPA: 3.90/4.0
- **B.Sc.** in **Bioinformatics** at **Harbin Medical University**, Harbin, Heilongjiang Province, China Sep-2014 — Jul-2019
  - College: College of Bioinformatics Science and Technology
  - Average score: 81.41/100 (five-year program)

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 IGH::DUX4 to enhace the transcativation 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

> Qing Xue†, Ming Zhang†, Yixiao Mo†, Bo Jiao†, Xuan Liu†, **Minghao Jiang**, Yu Zhou, Yun Tan, Huimin Li, Jianming Zhang, Qianqian Zhang, Yunqi Li, Jianfeng Li, Xiaofang Ma, Duo-Hui Jing, Jian-Qing Mi, Jin Wang, Zhu Chen, Shu-Hong Shen✉, Sai-Juan Chen✉. "Molecular Mechanisms of Unique Therapeutic Potential of CUDC-907 for *MEF2D* Fusion-driven BCP-ALL" ***Signal Transduct Target Ther.*** (Accepted on June 23rd, 2025)

> **Minghao Jiang**, Duohui Jing, Jason W.H. Wong✉. "gghic: A Versatile R Package for Exploring and Visualizing 3D Genome Organization" 2024 Dec. ***arXiv*** doi: 10.48550/arXiv.2412.03005

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

Zhihui Li†, **Minghao Jiang**†, Junfei Wang†, Zhiyi Zhuo†, Shiyan Zhang, Yangxia Tan, Weiguo Hu✉, Hao Zhang✉, Guoyu Meng✉. "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.

Hongxin Yin†, Junfei Wang†, Yangxia Tan†, **Minghao Jiang**†, Hao Zhang✉, Guoyu Meng✉. "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.

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

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

Gang Lu†, Yun Ling†, **Minghao Jiang**†, Yun Tan†, Dong Wei†, Lu Jiang, Shuting Yu, Fangying Jiang, Shuai Wang, Yao Dai, Jinzeng Wang, Geng Wu, Xinxin Zhang, Guoyu Meng✉, Shengyue Wang✉, Feng Liu✉, Xiaohong Fan✉, Saijuan Chen ✉. "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.

Minghao Jiang†, Hongxin Yin†, Shiyan Zhang†, Guoyu Meng✉, Geng Wu✉. "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.

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

Hao Zhang†, Nuo Cheng†, Zhihui Li†, Ling Bai†, 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 ✉, Zhu Chen✉, Jinyan Huang✉, Guoyu Meng✉. "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.

Liang Wu†, **Minghao Jiang**†, Ping Yu, Jianfeng Li, Wen Ouyang, Chong Feng, Wei Li Zhao✉, Yuting Dai✉, Jinyan Huang ✉. "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.

Junwei Han†, ✉, Siyao Liu†, Ying Jiang†, Chaohan Xu†, Baotong Zheng, **Minghao Jiang**, Haixiu Yang, Fei Su, Chunquan Li✉, Yunpeng Zhang✉. "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.

PUBLISHED SOFTWARE

- gghic

  A versatile R package for exploring and visualizing 3D genome organization

- smk_sv

  A **s**nake**mak**e pipeline to call **s**tructural **v**ariants from tumor-only ONT data

- RSWP

  RNA **s**equencing **w**orkflow by **P**ython

- ASP

  An **a**lternative **s**plicing **p**ackage in R

- Membership in the openbiox community

AWARDS

- First-class scholarship, Shanghai Jiao Tong University School of Medicine 2021
- First-class scholarship, Shanghai Jiao Tong University School of Medicine 2020
- 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 2019 — 2020
- Director of Publicity Department, Student Union, Harbin Medical University 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

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1. *Time-ordered* | † *Co-first authors* | ✉ *Corresponding author(s)* | # *Review articles* ↩