DINGCHENG YI

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EDUCATION

Ph.D. in Systems Biology, Columbia University — Sep. 2025 - Present

B.E. in Bioinformatics, Peking University — Sep. 2021 - Jul. 2025

- Ranking: 2/115
- Related courses and grades:

Biostatistics, 96/100	Mathematical Modeling in Life Sciences, A
Genetics, 92/100	Statistical Analysis of Genomics Data, A
Multimodal Deep Learning, 95/100	Foundations of Natural Language Processing, 92/100

PUBLICATIONS

- Chao Zhang, Yuxuan Sun, **Dingcheng Yi**, Benyuan Jiang, Lixu Yan, …, Zemin Zhang, Wenzhao Zhong. Neoadjuvant sintilimab plus chemotherapy in early-stage EGFR-mutant NSCLC: phase 2 trial interim results (NEOTIDE/CTONG2104). ***Cell Reports Medicine***, **2024**
- Zedao Liu, Zhenlin Yang, Junqi Wu, Wenjie Zhang, Yuxuan Sun, Chao Zhang, Guangyu Bai, …, **Dingcheng Yi**, …, Zemin Zhang A single-cell atlas reveals immune heterogeneity in anti-PD-1-treated non-small cell lung cancer. ***Cell***, **2025**
- Wen Si, Sijin Cheng, Haiyin He, Yu Zhang, Yuhui Miao, **Dingcheng Yi**, Mengjiao Ni, Anqiang Wang, Hongtao Fan, Yufei Bo, Chang Liu, Zhaode Bu, Linnan Zhu, Zemin Zhang SARDH in the 1-C metabolism sculpts the T-cell fate and serves as a potential cancer therapeutic target. ***Cell Mol Immunol***, **2025**.

RESEARCH EXPERIENCE

Dr. Xiaojie Qiu's Group, Stanford University

Deciphering Cell-Cell Communication(CCC) in Mouse Heart Development using 3D MERFISH Jun. 2024 - Present

- Investigated cell-cell communication events and constructed a 3D CCC atlas in mouse embryonic heart development.
- Identified differential signal enrichment patterns in cardiac progenitor cells.
- Revealed Wnt and BMP pathway's interplay in juxtacardiac field development.

Dr. Zemin Zhang's Group, Peking University

Patient Phenotype Associated Spatial Community Feature Mining Oct. 2023 - Jun. 2025

- Developed an efficient algorithm to identify co-located celltypes(celluar triads) in spatial omics datasets.
- Demonstrated phenotype association and intepretability of detected spatial features.
- Leveraged statistical model to explore the relationships between spatial features and immunotherapy response.
- Investigated incorporating bulk RNA sequencing data with clinical information to guide the discovery of cell communities.

Single-Cell Analysis of EGFR-mutated NSCLC TME post Neoadjuvant Immunotherapy Sep. 2022 - Jul. 2024

- Systematically characterized the tumor microenvironment composition in EGFR-mutated lung cancer patients.
- Conducted differential abundance analysis to identify immune cell subtypes associated with treatment response in EGFR-mutated lung cancer patients.
- Proposed a patient stratification method using infiltration and clonal expansion patterns of two subtype of T cells and verified the reliability of stratification in multiple bulk RNA datasets.
- Discovered potential interactions between highly resistant tumor cells and specific groups of macrophages.
- Co-authored a publication in *Cell Reports Medicine*, contributing to both manuscript writing and the rebuttal process.

Whole exome sequencing data analysis of Immunotherapy Response in NSCLC Patients Mar. 2022 - Dec. 2022

- Developed a pipeline for calling single nucleotide variants.
- Discovered lower tumor mutational burden among responders and attributed it to prior treatment.
- Found certain driver mutations associated with poor response and verified it through literature survey.
- Wrote part of the manuscript and plotted figures.

ACADEMIC EXPERIENCE

Undergraduate Honors Program in Biology(UHPB), Peking University Mar. 2023 - Jan. 2025

- Presented one and participated in at least four **journal clubs** every semester
  - **Main Host**: Multimodal Single Cell Data Integration
  - **Main Host**: Transforming Single Cell Biology: The Role of Transformer Models in Single Cell Omics
  - The Development and Clinical Application of T Cell Immunotherapy
  - Genomic Instability in Human Cancer
- Displayed a poster about the EGFR-mutant NSCLC project at the 10th Annual Symposium
- Presented the summer research project on CCI in mouse heart development at the 11th Annual Symposium

TEACHING EXPERIENCE

Teaching Assistant, Bioinformatics Laboratory, Peking University Mar. 2024 - Jun. 2024

- Evaluated students' assignments and provided specific comments and suggestions for improvement.
- Explained complex analysis methods with biological intuition to facilitate understanding
- Fostered students' problem-solving skills by encouraging them to think about each command's outcome

HONORS & AWARDS

Shen Tong Outstanding Undergraduate Award, highest honor for undergraduates in the department. 2025

National Scholarship 2024

May 4th Scholarship, highest individual scholarship awarded at Peking University 2023

Qin Wanshun-Jin Yunhui Scholarship 2022

Award for Academic Excellence 2022, 2023

Pacemaker to Merit Student 2024

SKILLS

Programming Skills

R, Python	Familiar with data analysis and visualization packages: ggplot2, dplyr, pandas, matplotlib Familiar with single cell and spatial omics packages: Seurat, Scanpy, Squidpy, Spateo Familiar with machine learning/deep learning frameworks: scikit-learn, PyTorch, PyG
Linux	Familiar with slurm for job scheduling and basic bash script Daily Arch Linux desktop user, familiar with linux system management
SQL	Familiar with basic SQL query