



Yuxing Dai

Biology Expert · Bioinformatics

CONTACT

frank1912f@gmail.com

[LinkedIn](#)

[Google Scholar](#)

[ORCID](#)

[GitHub](#)

EDUCATION

PhD in Pharmacology

Sun Yat-sen University
2025.09 - Present

MSc in Pharmacology

Sun Yat-sen University
2022.09 - 2025.06

BSc

Southern Medical University
2018.06 - 2022.09

TECHNICAL SKILLS

Multi-omics

AI4S/AIDD

MD Simulation

R

Python

Machine Learning

Virtual Cell

Molecular Docking

Seurat

Scanpy

Single-cell RNA-seq

Bulk RNA-seq

Pathway Analysis

Network Biology

PyTorch

AI-assisted Coding

Skill Creator

LANGUAGES

English

Fluent

Mandarin Chinese

Native

AWARD

National Scholarship for Graduate Students

Ministry of Education of China, 2024

Pharmacology PhD candidate and biology expert with **hands-on disease-modeling experience**, **multi-omics bioinformatics training**, and **AI4S/AIDD-relevant research**. Author of **12+ peer-reviewed publications** (169+ citations, h-index 5, IF up to 14.6). Experienced in designing rigorous experiments, interpreting omics data, and writing clear, high-depth biological reasoning for AI model evaluation.

KEY QUALIFICATIONS

- ◆ **Advanced biology** problem design and review
- ◆ **Genetics, transcriptomics**, pathway reasoning
- ◆ **Controls, confounders**, reproducibility
- ◆ **R / Python** multi-omics workflows
- ◆ **AI4S/AIDD** ML and virtual-cell literacy
- ◆ **Fluent English** scientific communication

RESEARCH EXPERIENCE

Graduate Researcher

2022 - Present

Sun Yat-sen University · School of Pharmaceutical Sciences

- ◆ **Formulated complex biological research questions** in pharmacology, molecular mechanisms, omics interpretation, experimental design, and translational drug discovery.
- ◆ **Applied multi-omics bioinformatics analysis** to map cell-type-specific injury mechanisms in cardiovascular disease models using R/Python-based workflows.
- ◆ **Interpreted transcriptomic, pathway, and phenotype evidence** to connect molecular mechanisms with disease progression, target hypotheses, and experimental validation.
- ◆ **Advanced AIDD-relevant therapeutic research** on cryptotanshinone derivative DST-3, linking compound design, MD/docking-aware hypotheses, and in-vivo validation.
- ◆ **Designed rigorous wet-lab studies** with attention to controls, confounders, blinding, reproducibility, dose-response logic, and data interpretation.
- ◆ **Reviewed and communicated scientific evidence** through manuscripts, data summaries, and clear expert-level explanations for cross-domain collaborators.

SELECTED PUBLICATIONS

12+ total publications · 169+ citations · h-index 5

1. Zhang J, **Dai Y** (co-first), Yu J, Chen Y, et al. "SNX3 exacerbates hepatic fibrosis by amplifying TGF- β 1/Smad signaling pathway in hepatocyte-HSC fibrotic loop." *Acta Pharmaceutica Sinica B* (2026). **IF 14.6** **Co-1st** Cited: 0
2. Su L, Mo R, **Dai Y**, Wang Z, et al. "Xueshuantong injection alleviates ischemic heart failure via targeting PFKP-mediated endothelial-to-mesenchymal transition." *Phytomedicine*, 158085 (2026). **IF 11.3** **Co-1st** Cited: 1
3. **Dai Y**, Yu J, He G, et al. "DST-3 attenuates glutamate excitotoxicity after ischemic stroke via CREB-Homer1 axis activation." *Phytomedicine* 147, 157223 (2025). **IF 11.3** **1st Author** Cited: 2
4. **Dai Y**, Yang W, Song H, et al. "Long-term effects of e-cigarette aerosol on cardiovascular and pulmonary systems: A comparative study to cigarette smoke." *Environment International* 185, 108521 (2024). **IF 10.2** **1st Author** Cited: 25
5. **Dai Y**, Duan K, Huang G, et al. "E-cigarette inhalation effects on lung function and inflammation in mice." *Frontiers in Toxicology* 5, 1232040 (2023). **IF 5.1** **1st Author** Cited: 13

Additional JCR-Q1 work spans biotechnology, medicinal chemistry, neuroprotection, pulmonary fibrosis, public health, and drug discovery.

OPEN SOURCE

XSTARS

Active Development

Open-source Excel add-in for automated statistics, data quality checks, and publication-quality figures for bench researchers; built through AI-assisted, rapid research-tool development.

VBA / Python

Stars 14