



Yuxing Dai

PhD Candidate · Pharmacology

CONTACT

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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

scRNA-seq

Proteomics

LC-MS/MS

R

Python

Deep Learning

Seurat

Scanpy

Bulk RNA-seq

Western Blot

ELISA

IHC

qRT-PCR

FlowJo

GraphPad

ImageJ

AWARD

National Scholarship for Graduate Students

Ministry of Education of China, 2024

PhD candidate combining **hands-on wet-lab disease modeling** with **single-cell RNA-seq** and **quantitative proteomics**. Author of **12+ JCR-Q1 publications** (169+ citations, 3 first-author and 2 co-first-author papers). Trained to design rigorous, multi-step experiments and interpret complex biological data — ready to create high-quality challenges and evaluate AI model reasoning in the life sciences.

• KEY QUALIFICATIONS

- ◆ **Wet-lab + computation** hybrid researcher
- ◆ **Proteomics, transcriptomics, genomics**
- ◆ **Protein assays:** WB, ELISA, MS
- ◆ **Multi-step** experimental reasoning
- ◆ **Active PhD** with institutional affiliation
- ◆ **R / Python** bioinformatics pipelines

• RESEARCH EXPERIENCE

Graduate Researcher

2022 – Present

Sun Yat-sen University · School of Pharmaceutical Sciences

- ◆ **Designed and executed** multi-arm in-vivo studies on drug-induced cardiotoxicity and heart failure with rigorous controls, blinding, and reproducibility protocols
- ◆ **Performed scRNA-seq** and downstream computational analysis to map cell-type-specific injury mechanisms in cardiovascular disease models
- ◆ **Integrated quantitative proteomics** (LC-MS/MS) with histological and functional endpoints in chronic e-cigarette studies, identifying differentially expressed proteins and perturbed signaling pathways
- ◆ **Developed therapeutic leads** — cryptotanshinone derivative DST-3 for ischemic stroke, combining SAR-informed design with in-vivo neuroprotection assays
- ◆ **Built bioinformatics pipelines** (R, Python) for transcriptomic processing, differential expression, pathway enrichment, and multi-omics integration
- ◆ **Validated computational findings** at the bench via Western blot, ELISA, qRT-PCR, and IHC across cardiovascular, neurological, and fibrotic disease models

• 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). **Co-1st** · DOI: 10.1016/j.apsb.2026.06.021
 2. **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 8.3** **1st Author** · Cited: 2
 3. **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 9.7** **1st Author** · Cited: 25 · incl. quantitative proteomics
 4. **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 4.6** **1st Author** · Cited: 13
 5. Peng X, **Dai Y** (co-first), Chen J, et al. "Neuroprotective effect of *Salvia castanea* Diels f. *Tomentosa* Stib extracts." *Pharmaceuticals* 18(5), 728 (2025). **IF 4.8** **Co-1st** · Cited: 2
- + 7 co-authored publications in JCR-Q1 journals incl. *Biomedicine & Pharmacotherapy* (IF 7.5, 51 cit.), *BMC Public Health* (64 cit.), *Eur. J. Med. Chem.* (IF 5.9), and others.

• OPEN SOURCE

XSTARS

Active Development

Open-source Excel add-in for automated statistics and publication-

quality figures. **VBA / Python** ★ 11