Chengyuan Yue

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EDUCATION

East China University of Science and Technology   Shanghai, China

Master in Pharmacy   Sep 2022 - June 2025

Supervisor: Prof. Yun Tang

GPA: 3.34/ 4

Hebei Medical University   Hebei, China

B.S. in Pharmaceutical Analysis   Sep 2018 - June 2022

Average score: 92.59/ 100

PUBLICATION

[1] Yue C, Chen B, Pan F, et al. TCnet: A Novel Strategy to Predict Target Combination of Alzheimer's Disease via Network-Based Methods. *J Chem Inf Model.* 2025 Apr 14;65(7):3866-3878.

[2] Yue C*, Chen B*, Chen L, et al. KG-CNNDTI: A Knowledge Graph-Enhanced Prediction Model for Drug-Target Interactions and Application in Virtual Screening of Natural Products against Alzheimer's Disease. *Chin J Nat Medicines.* 2025 in press.

RESEARCH EXPERIENCE

Laboratory of Molecular Modeling and Design   *Shanghai, China*

Multi-target Strategy for AD Therapy Based on Network Methods   **Project Leader**   **2023.06 - 2024.09**

This project integrated multi-omics data with network-based approaches for the screening of multi-target drugs against AD. I was responsible for the entire process of the project, including proposal design, experimental execution, and paper writing.

The key innovations of the project include:

- Identified 2 AD disease modules via similarity network fusion and 24 key targets using RWRM with 87.5% validation.
- Designed scoring function TC_{score} to evaluate target combinations with recall reached 75% on validation.
- Verified quercetin targets ADAM17 and GSK3β, and demonstrated its ability to mitigate Aβ-induced damage in vitro.

Knowledge Graph-enhanced DTI Prediction for AD Drug Screening   **Project Leader**   **2023.10 - 2024.02**

This project integrated knowledge graphs with protein pre-trained models to enhance protein representation. A deep learning model, KG-CNNDTI, was subsequently developed for drug-target interaction (DTI) prediction and applied to screen for anti-AD compounds. I was responsible for the project design, data processing, and model construction.

The key innovations of the project include:

- Enhanced model performance by 5% on average using knowledge graph-based protein embeddings.
- Identified 40 potential hit compounds, including 5 supported by literature and 3 experimentally validated for AD.

WORKING EXPERIENCE

Changchun GeneScience Pharmaceuticals Co., Ltd   *Shanghai, China*

Construction of a Single-cell Atlas from Public Datasets   **Research Intern**   **2024.09 - 2024.12**

- Collected and curated single-cell RNA-seq data from public databases across 55 tissues and 87 diseases.
- Built standardized pipelines using scvi-tools for batch correction and CELLiD for cell-type annotation.

SELECTED AWARDS AND HONORS

First Prize Scholarship (Top 5%), Hebei Medical University   2019 - 2021

Second Prize in the Huawei Cup Mathematical Modeling Competition, National competition   2024