Chen Yigang, Ph.D.

✉ leonchen0912@outlook.com   in LinkedIn   🌐 GitHub Portfolio

Employment History

2024 – 2026   🔖 **Executive Deputy Director,** Better Way Group - Chinese University of Hong Kong (Shenzhen) Warshel Joint Laboratory for skin health and active molecule innovation.

2021 – 2026   🔖 **Research Assistant & Teaching Assistant.** The Chinese University of Hong Kong, Shenzhen.

Education

2021 – 2026   🔖 **Ph.D., The Chinese University of Hong Kong, Shenzhen.** Biological Science.
Thesis title: *Unveiling Drug Target and Mechanisms through Integrated Drug Target Identification Methods and Causal Network Models.*

2017 – 2021   🔖 **B.S., The Chinese University of Hong Kong, Shenzhen.** Bioinformatics.

Awards and Achievements

2024   🔖 **Vincent & Lily Woo Fellowship**, MCMIA Foundation. (HKD 150,000)

🔖 **Bronze Award, Team Leader**, Global Digital Intelligence Education Innovation Competition, DI-IDEA. (CNY 10,000)

🔖 **Best Poster Award**, SMART Symposium on AI-Driven Computational Biology and Medicine.

2023   🔖 **Best Presentation Award**, MED Research Day, CUHK(SZ).

🔖 **Best Poster Award**, MED Research Day, CUHK(SZ).

2022   🔖 **iGEM Silver Medal, Instructor**, International Genetically Engineered Machine Competition (iGEM).

2021   🔖 **Master's List Awards, Outstanding Talent Award**, Muse college, CUHK(SZ). (CNY 5,000)

2020   🔖 **Dean's List**, School of Life and Health Sciences, CUHK(SZ).

🔖 **Academic Performance Scholarships**, Foundation of CUHK-Shenzhen. (CNY 20,000)

2019   🔖 **Undergraduate Research Award**, URA Office, CUHK(SZ). (CNY 24,000)

Research Publications

My research interests include AI-based drug discovery, computational systems biology & biosynthesis, and biological databases & web servers. I have published 8 papers in leading journals such as *Nucleic Acids Research (NAR)*, *Briefings in Bioinformatics (BIB)*, and *International Journal of Molecular Sciences (IJMS)*, with 5 additional manuscripts currently under review. Among these, I have contributed as first or co-first author to 7 publications. My work has accumulated over **1,000 citations**.

AI-based Drug Discovery

1. Y. Huang, H. Wu, Y. Cai, *et al.*, "DeepDrugmiR: A two-stage deep learning method for inferring small molecules' regulatory effects on microRNA expression," in *Proceedings of the 15th ACM International Conference on Bioinformatics, Computational Biology and Health Informatics*, Shenzhen China: ACM, Nov. 2024, pp. 1–10, ISBN: 979-8-4007-1302-6. DOI: 10.1145/3698587.3701351. (visited on 01/06/2025).

2. Y. Huang, H.-Y. Huang, **Y. Chen**, *et al.*, "A robust drug–target interaction prediction framework with capsule network and transfer learning," *International Journal of Molecular Sciences*, vol. 24, no. 18, p. 14 061, 2023. (visited on 11/14/2024).

3. Y. Tang, **Y.-G. Chen**, H.-Y. Huang, *et al.*, "Panax notoginseng alleviates oxidative stress through miRNA regulations based on systems biology approach," *Chinese Medicine*, vol. 18, no. 1, p. 74, Jun. 2023, ISSN: 1749-8546. DOI: 10.1186/s13020-023-00768-y. (visited on 11/14/2024).

Computational Systems Biology & Biosynthesis

1. **Y. Chen**, R. Mao, J. Xu, *et al.*, "A Causal Regulation Modeling Algorithm for Temporal Events with Application to Escherichia coli's Aerobic to Anaerobic Transition," *International Journal of Molecular Sciences*, vol. 25, no. 11, p. 5654, 2024. (visited on 11/14/2024).

2. **Y. Chen**, Y.-C.-D. Lin, Y. Luo, *et al.*, "Quantitative model for genome-wide cyclic AMP receptor protein binding site identification and characteristic analysis," *Briefings in Bioinformatics*, vol. 24, no. 3, bbad138, 2023. (visited on 11/14/2024).

Database & Web server

1. **Y. Chen**, L. Yao, Yun Tang, *et al.*, "CircNet 2.0: An updated database for exploring circular RNA regulatory networks in cancers," *Nucleic acids research*, vol. 50, no. D1, pp. D93–D101, 2022. (visited on 11/14/2024).

2. H.-Y. Huang, Y.-C.-D. Lin, S. Cui, *et al.*, "miRTarBase update 2022: An informative resource for experimentally validated miRNA–target interactions," *Nucleic acids research*, vol. 50, no. D1, pp. D222–D230, 2022. (visited on 11/14/2024).

3. H.-Y. Huang, J. Li, Y. Tang, *et al.*, "MethHC 2.0: Information repository of DNA methylation and gene expression in human cancer," *Nucleic acids research*, vol. 49, no. D1, pp. D1268–D1275, 2021. (visited on 11/14/2024).

4. H.-Y. Huang, Y.-C.-D. Lin, J. Li, *et al.*, "miRTarBase 2020: Updates to the experimentally validated microRNA–target interaction database," *Nucleic acids research*, vol. 48, no. D1, pp. D148–D154, 2020. (visited on 11/14/2024).

Skills

Languages	Strong reading, writing, and speaking competencies in English and Mandarin Chinese.
Deep Learning	Proficient in frameworks such as PyTorch and scikit-learn, with practical experience in implementing deep learning architectures (e.g., CNNs, GNNs, and transformers) for drug discovery and biological data analysis.
Experiments	Expertise in cell culture and cell-based assays, target validation experiments (e.g., CETSA-WB, SPR), and multi-omics techniques such as RNA-seq, proteomics, and CETSA-MS.
Coding	Python, PHP, Java, SQL, R, LaTeX, …
Databases	MySQL, PostgreSQL.
Web Dev	HTML, CSS, JavaScript, Apache Web Server.

Skills (continued)

Misc.　■　Academic research, leadership, teaching, training, and consultation.