

Dengcheng Yang

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EDUCATION

College of Biological Science and Technology, Beijing Forestry University 2018-2023

Ph.D. in Computational Biology,

Dissertation: Theory and Application of Omnigenic Interaction Network Reconstruction for Complex Traits.

Supervisor: Prof. Rongling Wu

College of Life Science , Henan Agriculture University

2014-2018

B.Sci. in Bioengineering

PROFESSIONAL APPOINTMENTS

2023-2025 Lecturer (2023-2024), Research Associate Professor (2024-), College of Veterinary Medicine, Henan Agricultural University

2025-present Assistant Professor(2024-), Beijing Institute of Mathematical Sciences and Applications

PUBLICATIONS

1. Li, F*, **Yang, D.***, Wu,S., Xue,C., Sang,M., Liu,X, Wu,J, Gragnoli, C., Griffin, C., Wang, C, Yau, S., &Wu, R. Network modeling and topology of aging. (2024) Physics Reports,Volume 1101,2025,Pages 1-65,ISSN 0370-1573. [Network modeling and topology of aging - ScienceDirect](#)
2. Chen,Y., Huang,J., Zhang,K., Qin,K., Li,X., Wang,R., Li,J., Zang,S., Jian,F., **Yang, D.#**,& Zhang,L.#,The impact of anthropogenic and environmental factors on the genetic variation and subtype distribution of *Cryptosporidium parvum* in dairy cattle.(2024) Molecular Ecology Resources (Submitted)
3. Lu, K., Gong, H., **Yang, D.**, Ye, M., Fang, Q., Zhang, X. Y., & Wu, R. (2024). Genome-Wide Network Analysis of Above- and Below-Ground Co-growth in *Populus euphratica*. Plant phenomics (Washington, D.C.), 6, 0131.[Genome-Wide Network Analysis of Above- and Below-Ground Co-growth in Populus euphratica | Plant Phenomics](#)
4. Lu, K., Wang, X., Gong, H., **Yang, D.**, Ye, M., Fang, Q., Zhang, X. Y., & Wu, R. (2023). The genetic architecture of trait covariation in *Populus euphratica*, a desert tree. Frontiers in plant science, 14, 1149879.[Frontiers | The genetic architecture of trait covariation in Populus euphratica, a desert tree](#)
5. **Yang, D.**, Li, F., Wang, J., Dong, A., & Wu, R. (2022). A framework to model a web of linkage disequilibria for natural allotetraploid populations. Methods in Ecology and

Evolution, 13, 358–366. [A framework to model a web of linkage disequilibria for natural allotetraploid populations - Yang - 2022 - Methods in Ecology and Evolution - Wiley Online Library](#)

6. **Yang, D.**, Jin, Y., He, X., Dong, A., Wang, J., and Wu, R. (2021). Inferring multilayer interactome networks shaping phenotypic plasticity and evolution. Nature communications, 12(1), 5304. [Inferring multilayer interactome networks shaping phenotypic plasticity and evolution | Nature Communications](#)
7. **Yang, D.**, Zheng, X., Jiang, L., Ye, M., He, X., Jin, Y., and Wu, R. (2021). Functional Mapping of Phenotypic Plasticity of Staphylococcus aureus Under Vancomycin Pressure. Frontiers in Microbiology, 12. [Frontiers | Functional Mapping of Phenotypic Plasticity of Staphylococcus aureus Under Vancomycin Pressure](#)
8. Dong, A., Feng, L., **Yang, D.**, Wu, S., Zhao, J., Wang, J., & Wu, R. (2021). FunGraph: A statistical protocol to reconstruct omnigenic multilayer interactome networks for complex traits. STAR protocols, 2(4), 100985 [Genetic dissection of growth trajectories in forest trees From FunMap to FunGraph](#)
9. Feng L, Jiang P, Li C, Zhao J, Dong A, **Yang, D.** & Wu, R. . 2021. Genetic dissection of growth trajectories in forest trees: From FunMap to FunGraph. Forestry Research 1: 19 [Genetic dissection of growth trajectories in forest trees From FunMap to FunGraph](#)

RESEARCH TECHNIQUES AND SKILLS

- Extensive experience in analyzing genomic and phenotypic data.
- Application, improvement, and development of common statistical genetics and machine learning methods in biology research.
- Development and application of frameworks for association analysis and gene network construction centered around GWAS.
- Knowledge of molecular biology and experimental techniques, such as CRISPR and phylogenetic analysis.
- Strong R programming skills with experience in developing R packages (FunGraph, idopNetwork), and also proficiency in Python.

ACADEMIC ACTIVITIES

Invited Presentation

- The 2nd International Symposium on Tree Genomics, Physiology, and Molecular Breeding.
- International Academic Exchange Conference on Innovation and Utilization of Forest Germplasm Resources of Beijing Forestry University
- Longhu Forum of Henan Agricultural University

Journal Reviewer

BMC Genomics, Plant Molecular Biology Reporter, Frontiers in Systems Biology, Frontiers in Genetics.

HONORS AND AWARDS

- President's Scholarship of Beijing Forestry University (2022)
- Baosteel Education Award (2022)
- Outstanding graduate student of Beijing Forestry University (2021,2022)
- The 3rd prize oral presentation award of 2nd International Symposium on Tree Genomics, Physiology, and Molecular Breeding (2021)
- First Prize for Academic Papers, College of Biological Sciences and Technology, Beijing Forestry University (2021)