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Education Background

Shenzhen Medical Academy of Research and Translation

Sep 2024 - Now

Doctor of philosophy, joint program with Westlake University

Shenzhen, China

Sun Yat-Sen University

Sep 2021-Jun 2024

Master of science, School of Life Science

Guangzhou, China

South China Agriculture University

Sep 2017-Jun 2021

Bachelor of Aquaculture, School of Marine Science

Guangzhou, China

Publications

Liu, D., Zhang, J., Zou, Z., Chen, L., Lin, J., Zeng, J., Hou, J. M., Han, L., Jiang, Y., Li, S., & Zhang, Y. (2024). Identification of SNPs and candidate genes associate with growth performance in all-female mandarin fish (*Siniperca chuatsi*) by a genome-wide association study. **Aquaculture**, 740778. <https://doi.org/10.1016/j.aquaculture.2024.740778>

Liu, D., Zhang, Z., Song, Y., Yang, J., Lu, Y., Lai, W., Wu, Z., Zhao, D., Lin, H., Zhang, Y., Zhang, J., & Li, S. (2023). Effects of salinity on growth, physiology, biochemistry and gut microbiota of juvenile grass carp (*Ctenopharyngodon idella*). **Aquatic toxicology**, 258, 106482. <https://doi.org/10.1016/j.aquatox.2023.106482>

Liu, D., Zhang, Z., Yang, J., Zhao D., Song Y., Li M., Lin H., Zhang Y. (2023). Effects and Mechanisms of Low Salinity Brackish Water on Growth and the Meat Quality of Grass Carp (*Ctenopharyngodon idella*). **Journal of Hainan Institute of Tropical Oceanography**, 30, 02. doi:10.13307/j.issn.2096-3122.2023.02.01. (in Chinese)

Liu, D., Ouyang, H., Huang, J., Han, L., Li, S., Li, G., Yan, B., Hou, Y., Lin, H., Zhang, Y. (2022). Analysis of the molecular mechanism of adaptation to artificial feed in mandarin fish (*Siniperca chuatsi*) based on transcriptome sequencing. **Journal of Hainan Institute of Tropical Oceanography**, 29, 05. doi:10.13307/j.issn.2096-3122.2022.05.01. (in Chinese)

Liu, S., Han, C., Huang, J., Zhu, Q., **Liu, D.**, Han, L., Li, S., Li, G., Lin, H., Zhang, Y. (2023). Screening and characterization of X chromosome-specific markers in mandarin fish (*Siniperca chuatsi*). **Aquaculture**, 562, 738833. <https://doi.org/10.1016/j.aquaculture.2022.738833>.

Ouyang, H., Deng, N., Xu, J., Huang, J., Han, C., **Liu, D.**, Liu, S., Yan, B., Han, L., Li, S., Li, G., Zhang, J., Lin, H., Zhang, Y. (2023). Effects of hyperosmotic stress on the intestinal microbiota, transcriptome, and immune function of mandarin fish (*Siniperca chuatsi*). **Aquaculture**, 563, 738901. <https://doi.org/10.1016/j.aquaculture.2022.738901>.

Liu, Shiyan, Ouyang, H., Han, C., Huang, J., Zhu, Q., **Liu, D.**, Han, L., Li, S., Li, G., Lin, H., & Zhang, Y. (2022). Estrogen receptor-related receptors in Mandarin Fish (*siniperca chuatsi*): Molecular cloning, characterization, and estrogen responsiveness. **Aquaculture Reports**, 24, 101137. <https://doi.org/10.1016/j.aqrep.2022.101137>.

Zhu, Q., Han, C., Liu, S., Ouyang, H., **Liu, D.**, Zhang, Z., Huang, J., Han, L., Li, S., Li, G., Lin, H., & Zhang, Y. (2022). Development and gene expression analysis of gonad during 17 α -methyltestosterone-induced sex reversal in Mandarin Fish (*siniperca chuatsi*). **Aquaculture Reports**, 23, 101049. <https://doi.org/10.1016/j.aqrep.2022.101049>

Skills

Animal experiment skills: Fish husbandry, Anesthesia, Sampling, Haemospasia

Wet lab skills: Extracting RNA/DNA, Real-time PCR, Library Construction

Software skills: Prism, R Studio, Plink, Adobe Illustrator

Research Experience

State Key Laboratory of Biocontrol, Sun Yat-Sen University | Guangzhou, China

Postgraduate student in Professor Yong Zhang's Lab

Project title: Effects of salinity on growth, physiology, biochemistry and gut microbiota of juvenile grass carp (*Ctenopharyngodon idella*) **Oct 2021-Mar 2023**

- Husbanded and sampled experiment animals
- Measured and analyzed the growth performance, enzyme activity and ion concentration of grass carp
- Analyzed intestinal 16s sequencing microbiome data
- Drew figures and draft manuscript for publication

Project title: Integrative analysis of gut microbiome and metabolome reveals the mechanism behind the growth difference of yellowfin seabream (*Acanthopagrus latus*) **Oct 2022-Now**

- Analyzed intestinal 16s sequencing microbiome data
- Analyzed intestinal metabolomic data
- Identified specific probiotics and metabolites related to growth
- Conducted experiments to verify the effects of probiotics and metabolites
- Drew figures and draft manuscript for publication

Project title: Genome-Wide Association Analysis and Candidate Functional Gene Mining for Growth and Salt tolerance Traits of Mandarin fish (*Siniperca Chuatsi*) **Mar 2022-Now**

- Identified molecular markers for growth of mandarin fish
- Identified molecular markers for salt tolerance of mandarin fish
- Analyzed transcriptome data and mined candidate functional gene
- Drew figures and draft manuscript for publication

Work Experience

Guangzhou Chengyi Aquaculture Co., Ltd.

Oct 2021-Dec 2021

Interns; domestication and culture of grass carp

Guangzhou, China

Guangdong Liangshi Aquatic seed Co., Ltd.

Mar 2022-Aug 2022

Interns; Artificial fertilization and breeding of mandarin fish

Foshan, China

Honors and Sponsorships

China National Scholarship for Postgraduates	2023
Sun Yat-Sen University First Prize Scholarship	2021-2024
College-Level Outstanding Student Leader	2022
The “Liao Xianghua, Lin Ding” Scholarship	2022

Languages

Mandarin (Native), English (Fluent), Cantonese (Fluent)