

# Menghui Dong, PHD,

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## PERSONAL DATA

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Current position: Postdoctoral Researcher

Department of Agroecology, Aarhus University, Denmark

Date of birth: 14/12/1993 | Gender: Male | Nationality: Chinese

ORCID: <https://orcid.org/0000-0002-9487-7318>

## EDUCATION

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- **PhD in microbial ecology**

2021.1 - 2023.10 Utrecht University, Netherlands

Promoters: Prof. George A. Kowalchuk, Prof. Eiko Kuramae

2016.9 – 2021.1 Nanjing Agricultural University, China.

Promoters: Prof. Qirong Shen, Prof. Rong Li

Thesis: Aggregate size matters: The impact of soil aggregation on microbial community assembly and suppression of tomato *Ralstonia* disease

- **Bachelor in Biology**

2012 .9 -2016.6 Nanjing Agricultural University, China

## EMPLOYMENT

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- **Postdoctoral Researcher**, Department of Agroecology, Aarhus University, Denmark

2023.9 - present

Research focus: Microbiome profiling of barley varieties in field trials (*BarleyMicroBreed project, WP5*)

## RESEARCH INTERESTS

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- Microbial ecology in agricultural systems, focusing on how microbial communities influence crop performance and resilience
- Plant-microbe interactions, with an emphasis on mutualistic relationships that promote plant health and growth
- The influence of soil structure on microbial ecology, exploring how soil composition and physical properties shape microbial community dynamics and functions

## PUBLICATIONS

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**Dong, M.**, Kuramae, E., Zhao, M., Li, R.; Shen, Q., & Kowalchuk, G.(2023). Tomato growth stage modulates bacterial communities across different soil aggregate sizes and disease levels. *ISME communications*, 3, 104. <https://doi.org/10.1038/s43705-023-00312-x>

**Dong, M.**, Zhao, M., Shen, Z., Deng, X., Ou, Y., Tao, C., Liu, H., Li, R., & Shen, Q. (2020). Biofertilizer application triggered microbial assembly in microaggregates associated with tomato bacterial wilt suppression. *Biology and Fertility of Soils*, 56, 551-563. <https://doi.org/10.1007/s00374-020-01459-8>

**Dong, M.**, Kowalchuk, G. A., Liu, H., Xiong, W., Deng, X., Zhang, N., Li, R., Shen, Q., & Dini-Andreote, F. (2021). Microbial community assembly in soil aggregates: A dynamic interplay of stochastic and deterministic processes. *Applied Soil Ecology*, 163, 103911. <https://doi.org/10.1016/j.apsoil.2021.103911>

Xu, X., Jiang, R., Wang, X., Liu S., **Dong, M.**, Mao, H., Li, X., Ni, Z., Lv N., Deng, X., Xiong, W., Tao, C., Li, R., Shen, Q. & Geisen, Stefan. Protorhabditis nematodes and pathogen-antagonistic bacteria interactively promote plant health. *Microbiome* 12, 221 (2024). <https://doi.org/10.1186/s40168-024-01947-1>

Zhao, M., Yuan, J., Shen, Z., **Dong, M.**, Liu, H., Wen, T., Li, R., & Shen, Q. (2019). Predominance of soil vs root effect in rhizosphere microbiota reassembly. *FEMS Microbiology Ecology*, 95(10), fiz139. <https://doi.org/10.1093/femsec/fiz139>

- Zhao, M., Yuan, J., Zhang, R., **Dong, M.**, Deng, X., Zhu, C., Li, R., & Shen, Q. (2018). Microflora that harbor the NRPS gene are responsible for Fusarium wilt disease-suppressive soil. *Applied Soil Ecology*, 132, 83-90. <https://doi.org/10.1016/j.apsoil.2018.07.008>
- Ou, Y., Shen, Z., Wang, B., **Dong, M.**, Qiao, C., Li, R., & Shen, Q. (2020). Microbial diversity assembled from series-diluted suspensions of disease-suppressive soil determines pathogen invasion resistance. *Pedosphere*, 31(1), 221-225. [https://doi.org/10.1016/S1002-0160\(20\)60064-9](https://doi.org/10.1016/S1002-0160(20)60064-9)

## CONFERENCE:

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- ISME Event 19, Cape Town, South Africa, 18-23 August 2024. (Poster)  
Large-scale root microbiome profiling identifies variety-specific bacterial generalists with important functional potential for barley
- EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022 (Oral Presentation),  
Soil aggregation impacts bacterial community assembly and suppression of *Ralstonia* disease in tomato,
- ISME 18, Lausanne, Switzerland, 14-19 August 2022. (Poster)  
Microscale assembly of bacterial community among soil aggregates impacts tomato *Ralstonia* wilt suppression
- National Outstanding PhD Student Symposium on Resources and Environment, Wuhan, China 2020. (Oral Presentation)  
Soil aggregate size mediates the impact of fertilizer amendment on microbial community assembly and tomato bacterial wilt suppression.

## PROJECTS

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- BarleyMicroBreed, WP5 (Participant), European Union's Horizon research and innovation programme 101060057, Denmark, 2023 – present
- PE&RC Institutional Collaboration Project (Executor), 05PE&RC2022, Wageningen University, Netherlands, 2022
- Postgraduate Research and Practice Innovation Project (Host), KYCX20\_0589, Jiangsu, China, 2020
- Maintenance mechanism and regulation of tomato disease suppressive soil microbiota, 41977044 (Participant), National Natural Science Foundation of China, 2019-2022.

## TEACHING

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- **R workshop 2023**, PhD & Master student, Nanjing Agricultural University, China  
*Guest lecturer: R course regarding R basic, statistics, plot etc.*
- **Experimenteerweek 2022**, Bachelor student, Utrecht University, Netherlands  
*Guest lecturer: How to write a scientific report*
- **Microbial Ecology 2021, 2022 & 2023**, Master student, Utrecht University, Netherlands  
*Teaching Assistant: Feedback on the experimental proposal, generating data for the virtual experiment, Q&A on statistical analysis & R coding etc.*
- **Ecology & Evolution 2021**, bachelor student, Utrecht University, Netherlands  
*Teaching Assistant: Assisted a group of bachelor students to finish a small project regarding microbial evolution, feedback on proposals, labs, statistics, final reports, and grade assignments.*