# Curriculum Vitae – Jelle Spooren


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| Full name: | Dr. Jelle Spooren |
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| Email: | jellespooren@gmail.com |
| Date of birth: | 09-01-1996 |
| Nationality: | Dutch |


I am a plant-microbiologist with a particular fascination for how plants modulate their microbiomes as an adaptive strategy to cope with environmental stresses. My main interest lies in plant-driven assembly of disease-suppressive microbiomes in response to pathogen attack. In my research, I combine both the above- and belowground plant and microbial perspectives to gain a holistic understanding on how the selective regime dictated by the infected plant shapes microbiome composition, functioning and evolution, thereby impacting the outcome of the plant-pathogen interaction. I greatly value and enjoy contributing to collaborative projects in an international academic environment. In addition, I love to teach and my spare time activities mainly surround my other big passions: travelling, hiking and cycling in the outdoors.

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**Education and experience**

**2025-2026** **Post-doctoral researcher, Institute of Microbiology, ETH-Zürich.**
**Project title:** 'Evolution of bacterial adaptive traits within phyllosphere microbiomes'
**Funded by:** EMBO post-doctoral fellowship and ETH post-doctoral fellowship.

**2020-2024** **PhD, Plant-Microbe Interactions group, Utrecht University: *Cum laude***
**Thesis title:** 'Plant-driven assembly of disease suppressive microbiomes'.
**Promotor:** Prof. dr. ir. Corné Pieterse, **co-promotor:** Dr. Roeland Berendsen.

2024 **Oral presentations** at the 5th plant-microbiome conference (Amsterdam, The Netherlands) & Rank symposium 'roots are as but guts inverted: an exploration of microbiomes' (Lake District, England).
**Title:** 'Plant-driven assembly of a soilborne phyllosphere disease-suppressive microbiome'.

2023 **Oral presentation** at the 4th plant-microbiome conference (Quito, Ecuador).
**Title:** 'Downy-mildew associated resistobiomes'.

2022 **Oral presentation** at the MiCROPe conference (Vienna, Austria, Microbe-assisted crop production: opportunities, challenges & needs) & Experimental Plant Sciences summer school: Environmental signaling in plants.
**Title:** 'Conserved disease-associated resistobiomes that form a plant-protective soil-borne legacy'.

**2018-2020** **Master Environmental Biology: *Cum laude,* average grade: 8.8, Utrecht University.**
**Supervised by:** Prof. dr. ir. Corné Pieterse, Dr. Roeland Berendsen and Dr. Antonio Leon-Reyes.
**Thesis title:** 'Language of the soil-borne legacy of disease: plant microbiome communications to construct disease-suppressive soils'.

2020 **6 Month internship**: Agricultural Biotechnology Department of Universidad San Francisco de Quito, Ecuador.

**Project title:** 'Mining the microbiome: unearthing bacterial communities that reside in tubers of native (Andean) potato varieties'.

2019 **Graduate School of Experimental Plant Sciences graduate program**: writing of a research proposal to fund your PhD-project.
**Proposal title:** 'Language of the soil-borne legacy: plant-microbiome communications to construct disease-suppressive soils'.

2018 **9 Month internship:** Plant-Microbe Interactions group, Utrecht University.
**Project title:** 'Soil-borne legacies of plant health and growth'.

**2014-2017 Bachelor Biology, average grade: 7.7, Utrecht University.**
**Thesis title:** 'Impact of plant domestication on assembly and functions of beneficial rhizosphere microbial communities'.
**Supervised by:** Prof. dr. Jos Raaijmakers & Prof. dr. ir. Corné Pieterse.

2017 **10 week internship** at the Microbial Ecology Department of the Netherlands Institute of Ecology (NIOO-KNAW), Wageningen, The Netherlands.
**Project title:** 'Growth and antimicrobial activity of beneficial rhizobacteria from wild and modern tomato accessions driven by wild tomato root exudates'.

**2008-2014 VWO pre-university education, *Cum laude,* Jacob-Roelandslyceum.**

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**Honors and prizes:**

2025 PhD degree: *cum laude.*
2024 Rank symposium 'Roots are but as guts inverted: an exploration of microbiomes' best presentation prize.
2023 Nominated for the Jan Ritzema Bos award (science communication) of the Royal Dutch Phytopathology Association.
2020 Master degree Environmental Biology: *cum laude.*
2019 Proposed for nomination of the Utrecht University award for best Msc thesis.
2014 Pre-university education diploma: *cum laude.*

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**Special skills and languages**

Academics: Analytical, critical, academic thinking, academic writing, presenting, interdisciplinary, persevering, diligent, organized, teamplayer, amplicon sequencing data analysis.
Dutch: Native language.
English: Fluent. Excellent understanding of both written and spoken language.
German: Good understanding of both written and spoken language.

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**Secondary activities**

2020-2024 Guest lectures on plant-microbe interactions for high school students.
2011-2020 Tutoring mathematics, physics, chemistry and biology to high school students.
2016-2020 Secretary of the board and member of various committees of the Utrecht Student Cycling Association.
2013 Participation to the international German speaking project: SchulBrücke Europa.

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**Hobbies**

Sports: Cycling, football, hiking.
Travelling: Nepal, Thailand, Singapore, Argentina, Kyrgyzstan, Mexico, Ecuador, Peru, Chili,

South Africa, Namibia, Botswana, Mozambique, Swaziland, Indonesia, Europe.

Additional: Developing and designing customized cycling routes.

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**Referees**

- **Prof. dr. ir. Corné Pieterse**, Chair of the Plant-Microbe Interactions group, Utrecht University. Email: c.m.j.pieterse@uu.nl
- **Dr. Roeland Berendsen**, Assistant Professor, Plant-Microbe Interactions group, Utrecht University. Email: r.l.berendsen@uu.nl
- **Dr. Antonio Leon-Reyes**, Chair of the Agricultural Biotechnology Department, Universidad San Francisco de Quito. Email: aleon@usfq.edu.ec
- **Prof. dr. Jos Raaijmakers**, Chair of the Microbial Ecology Department at the Netherlands Institute of Ecology (NIOO-KNAW). Email: j.raaijmakers@nioo.knaw.nl

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**Selection of scientific output and activities**

**Spooren, J**., van Bentum, S., Tomashow, LS., Pieterse, CMJ., Weller, DM. & Berendsen, RL. (2024) Plant-driven assembly of disease-suppressive soil microbiomes. ***Annual Review of Phytopathology*** **(2024):** *62.*

JS and SB contributed equally to this work.

Goossens P., **Spooren J.**, Baremans K. C. M., Andel A., Lapin D., Echobardo, N., Pieterse, C. M. J., Van den Ackerveken, G. & Berendsen, R. L. Obligate biotroph downy mildew consistently induces near-identical protective microbiomes in *Arabidopsis thaliana*. ***Nature Microbiology*** **(2023):** *8*, 2349-2364.

PG & JS contributed equally to this work.

Song, Y., **Spooren, J.**, Jongekrijg, C. D., Manders, E. H., de Jonge, R., Pieterse, C. M. J., Bakker, P. A. H. M. & Berendsen, R. L. Seed tuber imprinting shapes the next-generation potato microbiome. ***Environmental Microbiome*** **(2024):** *19*, 12.

Zhang, C., van der Heijden, M. G., Dodds, B. K., Nguyen, T. B., **Spooren, J.,** Held, A., Cosme, M. & Berendsen, R. L. A tripartite bacterial-fungal-plant symbiosis in the mycorrhiza-shaped microbiome drives plant growth and mycorrhization. ***Microbiome*** **(2023)***: 12,* 13.

**Spooren, J.** Een microbiële erfenis: hoe planten hun nageslacht 'vaccineren' tegen ziekteverwekkers. ***Gewasbescherming*** **(2023).**

Vismans, G., van Bentum, S., **Spooren, J**., Song, Y., Goossens, P., Valls, J., Snoek, B. L., Thiombiano, B., Schilder, M., Dong, L., Bouwmeester, H.J., Pétriacq, P., Pieterse, C. M. J., Bakker, P. A. H. M. & Berendsen, R. L. Coumarin biosynthesis genes are required after foliar pathogen infection for the creation of a microbial soil-borne legacy that primes plants for SA-dependent defenses. ***Scientific Reports*** **(2022)**: *12*(1), 1-12

GV, SB, JS and YS contributed equally to this work.

Vismans, G., **Spooren, J**., Pieterse, C. M., Bakker, P. A., & Berendsen, R. L. Soil-borne legacies of disease in *Arabidopsis thaliana*. In ***The Plant Microbiome*** **(2021),** (pp. 209-218). Humana, New York, NY.

**(co)-reviewer for:** Nature Microbiology, Microbiome, New Phytologist and Journal of Experimental Botany.