

# RUTH LYDIA SCHMIDT

## Microbial Ecologist & Data Scientist

A dynamic and resourceful microbial ecologist with 8 years of experience in agricultural microbiome research, data analysis and science communication, strong leadership and a broad set of technical and interpersonal skills. Passionate about finding sustainable solutions for pressing issues of our time through science, data and policy.



## EDUCATION

- 2017 • **Ph.D. in Microbial Ecology**  
Wageningen University & Netherlands Institute of Ecology  
📍 Wageningen, The Netherlands
- 2012 • **M.S. in Biotechnology**  
Graz University of Technology  
📍 Graz, Austria
- 2010 • **M.S. in Molecular Biology**  
Graz University of Technology  
📍 Graz, Austria



## RESEARCH EXPERIENCE

- 2020  
Present • **Mitacs Postdoctoral Fellow**  
Institut national de la recherche scientifique (INRS) & Plotly  
📍 Montréal, Canada
  - Developing open-source visualization apps for omic data in microbiome research using Plotly's Dash libraries.
  - Research on microbial solutions to drought in agriculture.
  - Led lab and field studies with wheat under drought conditions.
  - Conducted analysis of omic data (quantitative metagenomics, metatranscriptomics, metabolomics).
- 2013  
2018 • **PhD Candidate**  
Netherlands Institute of Ecology & Wageningen University  
📍 Wageningen, The Netherlands
  - Studied microbial secondary metabolites for sustainable agriculture.
  - Characterized molecular mechanism underlying volatile interaction in soil microbes using a combination of omic, microbiological, and analytical (GC-MS) approaches.
  - Analyzed omic data (proteomics, metabolomics) and developed workflow for metabolomic data analysis.
  - Collaborated with international research institutes in Germany, US & Sweden on genomics and proteomics projects.
- 2010-2012 • **Master student and University assistant**  
Graz University of Technology  
📍 Graz, Austria
  - Led and conducted field study on the effect of biocontrol agents in field in Egypt.
  - Performed analysis of 16S rRNA sequencing data & analytical data (LC-MS).

## CONTACT INFO

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## TECHNICAL SKILLS

R, Dash & Dash Bio (Plotly), Python, UNIX, Git, Markdown, SQL (basics), CSS & HTML (basics)

Multivariate statistics, statistical models

Molecular biology techniques,

Omic technologies & data analysis

Data cleaning, processing, manipulation & visualization

## INTERPERSONAL SKILLS

Excellent communicator (written & verbal)

Highly creative

Problem solver

Strong team player & collaborative

Good time management

Open-minded and adaptable

## LANGUAGES

German (Native)

English (Fluent)

Spanish (Advanced)

French (Beginner)