




CAROLINA LOBATO

+351-96-839-8787 | carolinabclobato@gmail.com | [cbclobato.github.io](https://github.com/cbclobato)

 [carolina-lobato](#) |  [cbclobato](#) |  [cbclobato](#)

Düsseldorf, North Rhine-Westphalia, Germany

EXPERIENCE

- **Postdoctoral Researcher** Jun 2025 - ongoing
Supervision: [Prof. Dr. Björn Usadel](#)
◦ Institute for Biological Data Science – Heinrich Heine University Düsseldorf  Düsseldorf, Germany
- **University Assistant** Jan 2021 - Dec 2024
Supervision: [Univ.-Prof. Dipl.-Biol. Dr.rer.nat. Gabriele Berg](#)
◦ Institute of Environmental Biotechnology – Graz University of Technology  Graz, Austria
- **Research Assistant** Apr - Dec 2020
Supervision: [Univ.-Prof. Dipl.-Biol. Dr.rer.nat. Gabriele Berg](#) & [Dr. Tomislav Cernava](#)
◦ Institute of Environmental Biotechnology – Graz University of Technology  Graz, Austria
- **Research Fellow** Apr 2018 - Nov 2019
Supervision: [Prof. Dr. Leonor Morais-Cecílio](#)
◦ Plant Science and Crop Production – ISA, University of Lisbon  Lisbon, Portugal
- **Research Fellow** May 2017 - Mar 2018
Supervision: [Prof. Dr. José Carlos Rodrigues](#) & [Dr. Ana Alves](#)
◦ Forest Ecology – ISA, University of Lisbon  Lisbon, Portugal
- **Graduate Research Intern** Sep 2013 - Jun 2014
Supervision: [Dr. Sandra Gamboa](#)
◦ CERNAS – Polytechnic University of Coimbra  Coimbra, Portugal

EDUCATION

- **PhD. Molecular Biosciences and Biotechnology, defended with distinction** Apr 2021 - Mar 2025
Supervision: [Univ.-Prof. Dipl.-Biol. Dr.rer.nat. Gabriele Berg](#)
◦ Institute of Environmental Biotechnology – Graz University of Technology  Graz, Austria
- **MSc. Molecular Biomedicine** 2014 - 2016
Supervision: [Prof. Dr. Gabriela Moura](#)
◦ Institute of Biomedicine – University of Aveiro  Aveiro, Portugal
- **Internship LLLP-Erasmus** May - Sep 2013
Supervision: [Prof. MVDr. Vladimír Celer, Ph.D.](#)
◦ Infectious Diseases and Microbiology – University of Veterinary Sciences Brno  Brno, Czechia
- **BSc. Biotechnology** 2009 - 2013
Supervision: [Prof. Dr. Paula Amador](#)
◦ Higher School of Agriculture – Polytechnic University of Coimbra  Coimbra, Portugal

TEACHING EXPERIENCE

• Guest Lecturer "The Seed Microbiome" <i>Environmental Microbiology Seminar (MOL.963UF)</i>	Institute of Environmental Biotechnology 2023 & 2024
• Teaching Assistant <i>Laboratory Course Microbiome Analysis (MOL.972UF)</i>	Institute of Environmental Biotechnology 2023 & 2024
<i>Laboratory Course Environmental Biotechnology (MOL.935UF)</i>	2023 & 2024
<i>Biodiversity and Applied Microbiology (MOL.731UF)</i>	2021 - 2024
<i>Biodiversity and Applied Microbiology (PLA.221UF)</i>	2021 - 2024
<i>Laboratory Course Biotechnology (CHE.177UF)</i>	2021 - 2024
<i>Environmental Microbiology Seminar (MOL.963UF)</i>	2021 & 2022
<i>Laboratory Course Microbiology (MOL.209UF)</i>	2022
<i>Laboratory Course Bioinformatics (MOL.923UF)</i>	2021
• Undergraduate Preceptor <i>Genetic Engineering</i>	Higher School of Agriculture 2013

RESEARCH MENTORSHIP

• Bachelor Students ◦ Daniel Sheleg ◦ Matevž Zlatnar ◦ Anna Mitterrutzner ◦ Zahra Azizi	Institute of Environmental Biotechnology 2024 2022 2021 2021
• Master Students ◦ Daniel Habich ◦ Daniela Dreisiebner ◦ Magdalena Egger ◦ Bettina Semler	Institute of Environmental Biotechnology 2021-2023 2021-2023 2021 2020

RESEARCH OUTPUT

Peer-reviewed Publications

- Lobato C., Abdelfattah A., Berg G. & Cernava T., "Defining the Cultured and Uncultured Bacterial Fractions in *Cannabis* Seeds" *Environmental Microbiome*, 2025
- Lobato C., Freitas J.M., Habich D., Kögl B., Berg G. & Cernava T., "Wild Again: Recovery of a Beneficial *Cannabis* Seed Endophyte from Low Domestication Genotypes" *Microbiome*, 2024
- Abdelfattah A., Tack A., Lobato C., Wassermann B. & Berg G., "From Seed to Seed: The Role of Microbial Inheritance in the Assembly of the Plant Microbiome" *Trends in Microbiology*, 2023
- Inácio V., Lobato C., Graça J. & Morais-Cecílio L., "Cork Cells in Cork Oak Periderms Undergo Programmed Cell Death and Proanthocyanidin Deposition" *Tree Physiology*, 2021

Submitted Manuscripts

- Chen X., Olimi E., Lobato C., Berg G. & Cernava T., "The Tomato Seed Microbiome is Mainly Shaped by Host Genotype and Production Site" *mSystems*, 2025
- Olimi E., Wuggenig R., Lobato C., Bickel S., Kusstatscher P., Wicaksono W. A., Battisti A., Coyne D., Adriko J., Cernava T. & Berg G., "Linking the Microbiome and Metabolome of *Mondia whitei*, a Medicinal Climber Plant" *Environmental Microbiology Reports*, 2025

Published Thesis

- Lobato C., "The Microbiome of *Cannabis* Seeds: Insights into Microbiome-Driven Sustainability" TU Graz diglib, 2025
- Lobato C., "A Study of Alternative Initiation Codons in *Candida cylindracea*" RIA, 2016

Oral Presentations

Lobato C., Freitas J.M., Habich D., Kögl B., Berg G. & Cernava T., "Symbiotic Futures: Leveraging Seed Microbiomes for Sustainable *Cannabis* Cultivation", LANDSCAPE Berlin, 2024

Lobato C., Freitas J.M., Habich D., Berg G. & Cernava T., "Healthy *Cannabis* Seeds Harness a Geno- and Chemotype Specific Microbial Signature" Slovenian Microbiome Network Symposium (SMNS) 2023

Lobato C., Freitas J.M., Habich D., Berg G. & Cernava T., "Exploring the microbiome of *Cannabis* Seeds Through Domestication and Breeding Stages" 2nd Young AMICI Symposium, 2023

Lobato C., Cuadros-Patiño K., Cernava T. & Berg G., "[Characterization of the *Cannabis* Seed Microbiome for the Development of Improved Cultivation Strategies](#)" Virtual Cannabis Research Conference, 2021

Poster Presentations

Lobato C., Freitas J.M., Habich D., Kögl B., Berg G. & Cernava T., "Symbiotic Futures: Leveraging Seed Microbiomes for Sustainable *Cannabis* Cultivation", 5th Plant Microbiome Symposium Amsterdam (PMS), 2024

Lobato C., Freitas J.M., Habich D., Berg G. & Cernava T., "Uncovering *Cannabis* Seed Endophytic Diversity and Composition Across Varieties" 16th Symposium on Bacterial Genetics and Ecology (BAGECO), 2023

Lobato C., Cernava T. & Berg G., "Exploring the *Cannabis* Seed Microbiome" 10th ISS Congress & 3rd International Conference on Holobionts, 2022

Lobato C., Cernava T. & Berg G., "Exploring the *Cannabis* Seed Microbiome" miCROPe International Symposium 2022

Lobato C., Cuadros-Patiño K., Cernava T. & Berg G., "Characterization of the *Cannabis* Seed Microbiome for the Development of Improved Cultivation Strategies" 8th Theodor Escherich Symposium on Medical Microbiome Research (TES) & 4th AMICI Symposium, 2021

Inácio V., Lobato C., Graça J. & Morais-Cecílio L., "How cork cells differentiate: The Role of Programmed Cell Death and Proanthocyanidin Deposition in Cork Oak Periderm" PADiBa, 2019

Gamboa S., Lobato C., Oliveira H., Oom M.M. & Bahcevandziev K., "Flow Cytometry for the Assessment of Equine Sperm Chromatin" GTIE, 2015

SCIENCE OUTREACH

• Co-founder and Coordinator

Seed Microbiome Working Group (SMWG)  2022-ongoing

• Speaker

TU Graz Science Day 2023: New Worlds in Production Sep 2023
Science communication seminar "Healthy seed microbiome, healthy Cannabis plants".

• Organizer

TU Graz Long Night of Research 2024 May 2024
Planned and coordinated public engagement activities showcasing microbiome research carried at the Institute of Environmental Biotechnology.

[PEC 282 - Growth, Cellular Renovation, and Reproduction: From Theory to Practice](#) 2014
Engaging high school students through lectures and practical activities on recombinant DNA in bacteria, and in animal fertilization.

• Session chair

10th Theodor Escherich Symposium on Microbiome Research Jan 2024
 9th Theodor Escherich Symposium on Microbiome Research Nov 2022

PROFESSIONAL DEVELOPMENT & SERVICE

Workshops & Trainings

• Reproducible Research with R and quarto: Workflows for data, projects, and publications	Sep 2024
• Teaching Academy: University Didactics 1 & 2 (Basic Module)	Jul - Sep 2022
• Bacterial Metagenomics: from experimental design to data analysis	May 2021
• Code Academy: Learn the Command Line Course	Feb 2021
• Metagenomics applied to surveillance of pathogens and antimicrobial resistance	Feb 2020
• Programming Initiation Course for Biologists	Jan 2019
• Theoretical-practical course in Cytogenetics and Genomics in Diagnosis and Research	Sep 2018

Peer reviewing

• Environmental Microbiome Journal	2024 - ongoing
• Scientific Reports	2025 - ongoing

ADDITIONAL INFORMATION

Languages: Portuguese (Native), English (Proficient), Spanish (Intermediate), German (A2) **Programming Languages:** R (Experienced), Bash - Unix Shell (Experienced), Python (Beginner) **Driver's license:** B1 **Hobbies:** Scientific illustration, Basketball