

# CAROLINA LOBATO







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Düsseldorf, North Rhine-Westphalia, Germany

## EXPERIENCE

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

## EDUCATION

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

## TEACHING EXPERIENCE

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

## RESEARCH MENTORSHIP

• <b>Daniel Shelegy</b> <i>Bachelor Student – Institute of Environmental Biotechnology</i>	2024
• <b>Matevž Zlatnar</b> <i>Project Lab Student – Institute of Environmental Biotechnology</i>	2022
• <b>Daniel Habich</b> <i>Master Student – Institute of Environmental Biotechnology</i>	2021 - 2023
• <b>Daniela Dreisiebner</b> <i>Master Student – Institute of Environmental Biotechnology</i>	2021 - 2023
• <b>Anna Mitterrutzner</b> <i>Project Lab Student – Institute of Environmental Biotechnology</i>	2021
• <b>Magdalena Egger</b> <i>Master Student – Institute of Environmental Biotechnology</i>	2021
• <b>Zahra Azizi</b> <i>Bachelor Student – Institute of Environmental Biotechnology</i>	2021
• <b>Bettina Semler</b> <i>Master Student – Institute of Environmental Biotechnology</i>	2020


## RESEARCH OUTPUT

J=PEER-REVIEWED PUBLICATION, S=IN SUBMISSION, O=ORAL PRESENTATION, P=POSTER PRESENTATION, T=THESIS

[S]	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
[S]	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 <i>Mondia whitei</i> , a Medicinal Climber Plant" Environmental Microbiology Reports, 2025
[J]	Lobato C., Abdelfattah A., Berg G. & Cernava T., "Defining the Cultured and Uncultured Bacterial Fractions in <i>Cannabis</i> Seeds" Environmental Microbiome, 2025
[T]	Lobato C., "The Microbiome of <i>Cannabis</i> Seeds: Insights into Microbiome-Driven Sustainability" TU Graz diglib, 2025

- [J] 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
- [O] 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
- [P] 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
- [O] 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
- [O] 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
- [P] 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
- [J] 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
- [P] Lobato C., Cernava T. & Berg G., "Exploring the Cannabis Seed Microbiome" 10th ISS Congress & 3rd International Conference on Holobionts, 2022
- [P] Lobato C., Cernava T. & Berg G., "Exploring the Cannabis Seed Microbiome" miCROPe International Symposium 2022
- [P] 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
- [O] 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
- [J] 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
- [P] 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
- [T] Lobato C., "[A Study of Alternative Initiation Codons in Candida cylindracea](#)" RIA, 2016
- [P] Gamboa S., Lobato C., Oliveira H., Oom M.M. & Bahcevandziev K., "Flow Cytometry for the Assessment of Equine Sperm Chromatin" GTIE, 2015

## SCIENCE OUTREACH

- **TU Graz Lange Nacht der Forschung 2024** May 2024  
*Organization of the UBT stand at the Long Night of Research 2024*
- **10th Theodor Escherich Symposium on Microbiome Research** Jan 2024  
*Session chair*
- **TU Graz Science Day 2023: New Worlds in Production** Sep 2023  
*Science communication seminar: Healthy seed microbiome - healthy Cannabis plants*
- **9th Theodor Escherich Symposium on Microbiome Research** Nov 2022  
*Session chair*
- **Seed Microbiome Working Group (SMWG)** 2022 - ongoing  
*Co-founder and organizing member* 
- **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*

## PROFESSIONAL DEVELOPMENT & SERVICE

- **Peer reviewer:** Environmental Microbiome Journal 2024 - ongoing
- **[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

## 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