

# CAROLINA LOBATO

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

 [carolina-lobato](https://www.linkedin.com/in/carolina-lobato) |  [cbclobato](https://github.com/cbclobato) |  [cbclobato](https://twitter.com/cbclobato)

Graz, Steiermark, Austria

## EXPERIENCE

- **Institute of Environmental Biotechnology – Graz University of Technology**  Jan 2021 - Dec 2024  
*University Assistant* Graz, Austria
  - **Supervision:** Univ.-Prof. Dipl.-Biol. Dr.rer.nat. Gabriele Berg
- **Institute of Environmental Biotechnology – Graz University of Technology**  Apr - Dec 2020  
*Research Assistant – HydroBioBis* Graz, Austria
  - **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  
*Research Fellow – HybridOak* Lisboa, Portugal
  - **Supervision:** Prof. Dr. Leonor Morais-Cecílio
- **Forest Ecology Group – ISA, University of Lisbon**  May 2017 - Mar 2018  
*Research Fellow – BIOTECH II* Lisboa, Portugal
  - **Supervision:** Prof. Dr. José Carlos Rodrigues & Dr. Ana Alves
- **CERNAS – Polytechnic University of Coimbra**  Sep 2013 - Jun 2014  
*Graduate Research Intern* Coimbra, Portugal
  - **Supervision:** Dr. Sandra Gamboa

## EDUCATION

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

## TEACHING EXPERIENCE

- **Environmental Microbiology (MOL.963UF)** 2023-2024  
*Guest Lecture on The Seed Microbiome* Institute of Environmental Biotechnology
- **Laboratory Course Microbiome Analysis (MOL.972UF)** 2023-2024  
*Teaching Assistant* Institute of Environmental Biotechnology
- **Laboratory Course Environmental Biotechnology (MOL.935UF)** 2023-2024  
*Teaching Assistant* Institute of Environmental Biotechnology
- **Biodiversity and Applied Microbiology (MOL.731UF)** 2021-2024  
*Teaching Assistant* Institute of Environmental Biotechnology
- **Biodiversity and Applied Microbiology (PLA.221UF)** 2021-2024  
*Teaching Assistant* Institute of Environmental Biotechnology
- **Laboratory Course Biotechnology (CHE.177UF)** 2021-2024  
*Teaching Assistant* Institute of Environmental Biotechnology
- **Environmental Microbiology (MOL.963UF)** 2021-2022  
*Teaching Assistant* Institute of Environmental Biotechnology

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| • <b>Laboratory Course Microbiology (MOL.209UF)</b><br><i>Teaching Assistant</i>   | 2022<br>Institute of Environmental Biotechnology |
| • <b>Laboratory Course Bioinformatics (MOL.923UF)</b><br><i>Teaching Assistant</i> | 2021<br>Institute of Environmental Biotechnology |
| • <b>Genetic Engineering</b><br><i>Undergraduate Preceptor</i>                     | 2013<br>Higher School of Agriculture             |

## RESEARCH MENTORSHIP

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

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| [S] | Chen X., Olimi E., <b>Lobato C.</b> , Berg G. & Cernava T., "The Tomato Seed Microbiome is Mainly Shaped by Host Genotype and Production Site" <i>New Phytologist</i> , 2025  |
| [S] | Olimi E., Wuggenig R., <b>Lobato C.</b> , 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" <i>Environmental Microbiology</i> , 2025 |
| [S] | <b>Lobato C.</b> , Abdelfattah A., Berg G. & Cernava T., "Defining the Cultured and Uncultured Bacterial Fractions in <i>Cannabis</i> Seeds" <i>Environmental Microbiome</i> , 2025   |
| [T] | <b>Lobato C.</b> , " <a href="#">The Microbiome of Cannabis Seeds: Insights into Microbiome-Driven Sustainability</a> " TU Graz diglib, 2025  |
| [J] | <b>Lobato C.</b> , Freitas J.M., Habich D., Kögl B., Berg G. & Cernava T., " <a href="#">Wild Again: Recovery of a Beneficial Cannabis Seed Endophyte from Low Domestication Genotypes</a> " <i>Microbiome</i> , 2024   |
| [O] | <b>Lobato C.</b> , Freitas J.M., Habich D., Kögl B., Berg G. & Cernava T., "Symbiotic Futures: Leveraging Seed Microbiomes for Sustainable <i>Cannabis</i> Cultivation", <i>LANDSCAPE Berlin</i> , 2024   |
| [P] | <b>Lobato C.</b> , Freitas J.M., Habich D., Kögl B., Berg G. & Cernava T., "Symbiotic Futures: Leveraging Seed Microbiomes for Sustainable <i>Cannabis</i> Cultivation", 5th Plant Microbiome Symposium Amsterdam (PMS), 2024   |
| [O] | <b>Lobato C.</b> , Freitas J.M., Habich D., Berg G. & Cernava T., "Healthy <i>Cannabis</i> Seeds Harness a Geno- and Chemotype Specific Microbial Signature" <i>Slovenian Microbiome Network Symposium (SMNS)</i> 2023  |
| [O] | <b>Lobato C.</b> , Freitas J.M., Habich D., Berg G. & Cernava T., "Exploring the microbiome of <i>Cannabis</i> Seeds Through Domestication and Breeding Stages" 2nd Young AMICI Symposium, 2023   |
| [P] | <b>Lobato C.</b> , Freitas J.M., Habich D., Berg G. & Cernava T., "Uncovering <i>Cannabis</i> Seed Endophytic Diversity and Composition Across Varieties" 16th Symposium on Bacterial Genetics and Ecology (BAGECO), 2023   |
| [J] | Abdelfattah A., Tack A., <b>Lobato C.</b> , Wassermann B. & Berg G., " <a href="#">From Seed to Seed: The Role of Microbial Inheritance in the Assembly of the Plant Microbiome</a> " <i>TIM</i> , 2023   |
| [P] | <b>Lobato C.</b> , Cernava T. & Berg G., "Exploring the <i>Cannabis</i> 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

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- **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

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

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**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