

Curriculum Vitae – Alexandre R. T. Figueiredo

Personal Information

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Researcher ID: H-8548-2019

Academic history

Postdoctoral researcher, University of Oxford, United Kingdom 8/2021 - Present

Advisor: Prof. Dr. Sarah Knowles

PhD in Evolutionary Biology, University of Zurich, Zurich, Switzerland 1/2017 - 4/2021

Thesis: "The Ecology and Evolution of Bacterial Social Interactions and how they Shape Microbial Communities and Interactions with Hosts"

Advisors: Prof. Dr. Rolf Kümmerli and Prof. Dr. Andreas Wagner.

M.Sc. Evolutionary and Developmental Biology, University of Lisbon, Portugal 9/2014 - 12/2016

Thesis: "Mating Behavior and Male Competition in the spider mite *Tetranychus urticae*"

Advisor: Prof. Dr. Sara Magalhães.

Research Assistant, Instituto Gulbenkian de Ciência, Portugal. 4/2015 - 5/2015

Project: "An educated RNAi screen for systemic immune response in *Drosophila melanogaster*".

Advisor: Prof. Dr. Élio Sucena.

Volunteer Research Assistant, University of Lisbon, Portugal 9/2013 - 5/2014

Project "CICADACON – Testing the congruence between morphological, acoustic and genetic patterns on the divergence of selected species of Mediterranean cicadas (Insecta, Hemiptera)".

Advisors: Dr. Vera Nunes, Prof. Paula Simões and Prof. Octávio Paulo.

B.Sc. Evolutionary and Developmental Biology, University of Lisbon, Portugal 9/2010 - 6/2014

Final year specialization in Evolutionary and Developmental Biology.

Publications

Figueiredo, A.R.T., * Özkaya, Ö., * Kümmerli, R., Kramer, J. (2022) Siderophores drive invasion dynamics in bacterial communities through their dual role as public good versus public bad. *Ecology Letters* [\[Link\]](#)

Figueiredo, A.R.T., Wagner, A., Kümmerli, R. (2021) Ecology drives the evolution of diverse siderophore-production strategies in the opportunistic human pathogen *Pseudomonas aeruginosa*. *Molecular Ecology* [\[Link\]](#)

Figueiredo, A.R.T., & Kümmerli, R. (2020) Microbial mutualism: would you still need me, would you still feed me? *Current Biology*, 30, 18, PR1041-R1403. [\[Link\]](#)

Figueiredo, A. R. T., & Kramer, J. (2020). Cooperation and conflict within the microbiota and their effects on animal hosts. *Frontiers in Ecology and Evolution*, 8, 132. [\[Link\]](#)

Rodrigues, L. R., **Figueiredo, A. R. T.**, Van Leeuwen, T., Olivieri, I., & Magalhães, S. (2020). Costs and benefits of multiple mating in a species with first-male sperm precedence. *Journal of Animal Ecology*, 89(4), 1045-1054. [[Link](#)]

Zélé, F.,* Santos-Matos, G.,* **Figueiredo, A. R. T.**, Eira, C., Pinto, C., Laurentino, T.G., Sucena, É., & Magalhães, S. (2019). Spider mites escape bacterial infection by avoiding contaminated food. *Oecologia*, 189(1), 111-122. [[Link](#)]

Rodrigues, L. R., **Figueiredo, A. R. T.**, Varela, S. A., Olivieri, I., & Magalhães, S. (2017). Male spider mites use chemical cues, but not the female mating interval, to choose between mates. *Experimental and Applied Acarology*, 71(1), 1-13. [[Link](#)]

*equal contribution

Contributions to conferences

Oral Presentations:

- 2019 Congress of the European Society for Evolutionary Biology (ESEB), 8/2019, Turku, Finland.
- Workshop in Evolutionary Biology, 7/2019, Guarda, Switzerland

Poster presentations:

- American Society Microbiology - Young Researcher Symposium Switzerland, 7/2021, Online
- EMBO/EMBL Symposium – New approaches and Concepts in Microbiology, 7/2021, Online
- Swiss Society for Microbiology - Annual Congress 2019, 9/2019, Zurich, Switzerland.
- IGC Symposium 2018 - Microbial Eco-Evolutionary Dynamics. 10/2018, Oeiras, Portugal.
- Evolution 2018 - 2nd Joint Congress on Evolutionary Biology 8/2018, Montpellier, France.
- 2nd CE3C Annual Meeting – Frontiers in E3, 6/2016, Lisbon, Portugal
- XI National Meeting of Evolutionary Biology, 12/2015, Almada, Portugal.
- XII Congress of the Portuguese Ethological Society, 10/2015, Lisbon, Portugal.

Invited Lectures

- **Department of Quantitative Biomedicine**, University of Zurich, 12/2020, online
- **8th University of Zurich's URPP Evolution in Action Retreat**, 12/2020, online
- **ETH Zurich – University of Zurich “Evolutionary Microbiology Joint Group Meeting”**, 2/2020, Zurich, Switzerland.
- **7th University of Zurich's URPP Evolution in Action Retreat**, 9/2019, Grindelwald, Switzerland
- **ETH Zurich – University of Zurich “Evolutionary Microbiology Joint Group Meeting”** 10/2018, Zurich, Switzerland.
- **6th University of Zurich's URPP Evolution in Action Retreat**, 9/2018, Flüeli-Ranft, Switzerland.
- **Evolutionary Biology PhD Students Retreat**, 6/2018, Binn, Switzerland.
- **Zurich Interaction Seminars**, 5/2018, Zurich, Switzerland
- **5th University of Zurich's URPP Evolution in Action Retreat**, 9/2017, Brunnen, Switzerland.

Prizes, Awards, Fellowships

Funding (total funds awarded: **121'723 CHF**):

- SNSF Postdoc.Mobility Fellowship (2022-2024) – 120'300 CHF
- 2019 IEU Travel Grant (University of Zurich) – 673 CHF.
- 2018 IPMB Travel Grant (University of Zurich) – 750 CHF.

Awards:

- 2nd place Best Poster Award at the “American Society for Microbiology – Young Researcher's Symposium Switzerland”, 6/2021, Online
- Best poster award at the "2nd Center for Ecology, Evolution and Environmental Changes Annual Meeting – Frontiers in E3”, 6/2016 Lisbon, Portugal.

Institutional Responsibilities

9/2018 – 4/2021

Elected representative of the PhD students in the Steering Committee of *University Research Priority Programs - Evolution in Action*.

Roles: Represent and defend the interests of PhD students funded by this agency. Evaluation of grant proposals for URPP Pilot Projects (20.000 CHF) and URPP PhD Student fellowships (>250.000 CHF).

Supervision of students/junior researchers

11/2018 – 4/2019

MSc student, Lorenzo Alimonti (Erasmus Student: University of Zurich & Roma Tre University).

Teaching activities

Spring Semester - 2017, 2018, 2019

Evolutionary Microbiology – 96 hours/semester.

Assisting and supervising MSc and BSc students during the design, performance, analysis, and presentation of microbiology experiments.

Autumn Semester - 2017, 2018, 2019

Molecular Biology & Microbiology – 25 hours/semester.

Supervision and assistance of students performing introductory microbiology experiments.

Peer Review

Grant proposals

- URPP Evolution in Action - Pilot Projects
- URPP Evolution in Action - PhD Project applications

Journal articles

- Systematic and Applied Acarology
- FEMS Microbiology Ecology
- Ecology and Evolution

Active memberships in scientific societies

Since 2015 - Portuguese Association of Evolutionary Biology (APBE).

Since 2015 - Portuguese Ethological Society (SPE).

Since 2017 - Association of Junior Researchers of the University of Zurich (VAUZ).

Since 2017 - British Ecological Society (BES).

Since 2018 - European Society for Evolutionary Biology (ESEB).

Since 2021 - American Society for Microbiology (ASM)

Organization of Conferences

8/2019

Co-organizer (with Jos Kramer, University of Zurich, and Elisa Granato, University of Oxford) of the “Open Symposium - Species Interactions sub-theme” at the 2019 Congress of the European Society for Evolutionary Biology, Turku, Finland.

9/2018 – 6/2019

Co-organizer (with Paco Majic and Joe Wan, ETH Zurich) of the “Zurich Interaction Seminars” a lecture series for and by graduate students in ecology and evolution at University of Zurich and ETH Zurich.

Outreach Activities.

- “Darwin’s Beagle” Blog Post – Portuguese Association of Evolutionary Biology (APBE) – Entry about my research and scientific interests in a blog dedicated to evolutionary biology research in Portugal, and Portuguese evolutionary biologists abroad [[Link](#)] (in Portuguese).
- Interview for the “CE3C - Center for Ecology, Evolution and Environmental Changes” website, in Portuguese, [[Link](#)]
- Consulting expert for the “Associated Press” – 11/2020 [[Link](#)]
- Invited Speaker at “Pint of Science Zurich” session “My Tiny Friends, Microbe Party!” 5/2019, Zurich, Switzerland.
- Photographer for “Pint of Science – Zurich” - 5/2019, Zurich, Switzerland
- Hosting and guiding high school students in the lab. 1/2019, Zurich, Switzerland
- Volunteer at “Open Day in the Faculty of Sciences” – Demonstration of small experiments in animal behavior and ecology, for high school students and undergraduates. 4/2016, Lisbon, Portugal

Training and Courses (selection)

- Microbiome Data Analysis **Workshop** (University of Hasselt, Belgium – online), 4/2021
- Detecting the Genomic Signal of Polygenic Adaptation and the Role of Epistasis in Evolution **Symposium**, 8/2017 – 9 2017, Zurich, Switzerland.
 - Integrated methods to detect polygenic adaptation from genomic data - **Summer School** 8/2017, Birmensdorf, Switzerland.
 - Teaching Science at University – **MOOC** University of Zurich, Switzerland
 - Scientific writing in the Sciences and Medicine – **Course** University of Zurich, Switzerland
 - Scientific Presentation – **Course**, University of Zurich, Switzerland
 - Introduction to Python – **Course**, Champalimaud Center for the Unknown, Lisbon, Portugal

Personal Skills

Languages:

- Portuguese (native).
- English (C2) - Certificate of Proficiency in English (CPE)
- Spanish (B2).
- German (B1)

Digital Skills:

- **Programming languages:** R, unix/bash scripting (genomic data), python, C++, Matlab.
- **Other software and skills:** ImageJ, Integrated Genome Viewer, website management, Microsoft Office.

Other certifications

- PILAB – Animal handling (mice)
- Driver’s License: B permit.