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University of Oxford
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New Biochemistry Building
South Parks Road
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United Kingdom

RESEARCH INTERESTS

Interference competition in bacteria
Bacterial interactions

METHODS

Experimental microbiology
Fluorescence microscopy

ACADEMIC HISTORY

Independent Research Fellow

Department of Biology, University of Oxford, United Kingdom

BBSRC Discovery Fellowship

5/2021 – present

Postdoctoral Researcher

Department of Biology, University of Oxford, United Kingdom

Postdoc Mobility Fellowship - Swiss National Science Foundation

Advisor: Prof. Kevin Foster

11/2017 – 4/2021

PhD, Life Science Zurich Graduate School, University of Zurich, Switzerland

Thesis title: "Evolution of cooperation and virulence in an opportunistic pathogen"

Advisor: Prof. Rolf Kümmerli

6/2013 – 9/2017

Master of Science, Microbiology and Immunology, ETH Zurich, Switzerland

9/2011 – 4/2013

Bachelor of Science, Biology, LMU Munich, Germany

9/2008 – 6/2011

PUBLICATIONS

Granato ET*, Smith WPJ*, Foster KR. Collective protection against the type VI secretion system in bacteria. *bioRxiv* (2022). <https://doi.org/10.1101/2022.09.12.507624> (*equal contribution)

Granato ET, Foster KR. The evolution of mass cell suicide in bacterial warfare. *Current Biology* (2020) <https://doi.org/10.1016/j.cub.2020.05.007>

Rezzoagli C, **Granato ET**, Kümmerli R. Harnessing bacterial interactions to manage infections: a review on the opportunistic pathogen *Pseudomonas aeruginosa* as a case example.

Journal of Medical Microbiology (2020) <https://doi.org/10.1099/jmm.0.001134>

Granato ET*, Meiller-Legrand TA*, Foster KR. The Evolution and Ecology of Bacterial Warfare.

Current Biology (2019) <https://doi.org/10.1016/j.cub.2019.04.024> (*equal contribution)

Rezzoagli C, **Granato ET**, Kümmerli R. *In vivo* microscopy reveals the impact of *Pseudomonas aeruginosa* social interactions on host colonization.

The ISME Journal (2019) <https://doi.org/10.1038/s41396-019-0442-8>

PUBLICATIONS (cont.)

Granato ET, Ziegenhain C, Marvig RL, Kümmerli R. Low spatial structure and selection against secreted virulence factors attenuates pathogenicity in *Pseudomonas aeruginosa*.
The ISME Journal (2018) <https://doi.org/10.1038/s41396-018-0231-9>

Granato ET, Kümmerli R. The path to re-evolve cooperation is constrained in *Pseudomonas aeruginosa*.
BMC Evolutionary Biology (2017) <https://doi.org/10.1186/s12862-017-1060-6>

Granato ET, Harrison F, Kümmerli R, Ross-Gillespie A. Do Bacterial “Virulence Factors” Always Increase Virulence? A Meta-analysis of Pyoverdine Production in *Pseudomonas aeruginosa* as a Test Case.
Frontiers in Microbiology (2016) <https://doi.org/10.3389/fmicb.2016.01952>

Kümmerli R, Santorelli L, **Granato ET**, Dumas Z, Griffin AS, West SA. Co-evolutionary dynamics between public good producers and cheats in the bacterium *Pseudomonas aeruginosa*.
Journal of Evolutionary Biology (2015) <https://doi.org/10.1111/jeb.12751>

SCHOLARSHIPS AND AWARDS

FEMS Early Career Microbiologist Award	6/2021
BBSRC Discovery Fellowship	2/2021
SNF Postdoc Mobility Fellowship	4/2019
SNF Early Postdoc Mobility Fellowship	11/2017
ASM Student and Postdoctoral Travel Award	3/2016
Research Fund of the University of Zurich (Forschungskredit)	1/2016
Student Oral Presentation Award, Evolutionary Medicine Conference, Zurich	7/2015
Scholarship of the German National Merit Foundation	9/2011

INVITED CONFERENCE PRESENTATIONS

Invited presentation Microbiology Society Focus Meeting “Evolution” , Manchester, United Kingdom	11/2022
Plenary Lecture FEMS Conference on Microbiology , Belgrade, Serbia	7/2022
Invited presentation World Microbe Forum (ASM/FEMS virtual conference)	6/2021
Invited presentation Microbial Ecology & Evolution Virtual Conference	8/2020

INVITED SEMINARS

MRC Centre for Molecular Bacteriology and Infection (CMBI) Seminar Series Imperial College London, United Kingdom	02/2023
Systems Biology Department Colloquium National Centre for Biotechnology, Madrid, Spain	02/2023
Fall Seminar Series Max Planck Institute for Evolutionary Biology, Plön, Germany	12/2021
Research Group Leader Selection Symposium Max Planck Institute for Terrestrial Microbiology, Marburg, Germany	11/2021
Molecular Microbiology Division Seminar Series University of Dundee, United Kingdom	10/2021
Department of Biology Invited Seminar Series University of Oxford, United Kingdom	10/2021
Collaborative Research Centre (CRC) AquaDiva Seminar Series Friedrich-Schiller-University, Jena, Germany	6/2021
Life Science & Medical School Seminar Series University of Warwick, United Kingdom	1/2021
Zam Iqbal Research Group Seminar European Bioinformatics Institute, Cambridge, United Kingdom	10/2020
Centre for Life's Origins and Evolution (CLOE) Summer Symposium University College London, United Kingdom	6/2020
Swiss Federal Inst. of Aquatic Science & Technology (EAWAG) Departmental Seminar ETH Zurich, Switzerland	4/2020
Junior Awards for Microbiology University of Birmingham, United Kingdom	6/2019

CONFERENCE ORGANIZATION

Microbial Ecology & Evolution (MEEhubs) 2024 <i>Co-lead organization of international conference</i>	6/2022 – present
18 th Congress of the European Society for Evolutionary Biology (ESEB), Prague, Czech Republic <i>Organization of conference symposium</i> "The art of microscopic war – interference competition in microbes"	8/2022

CONTRIBUTED CONFERENCE PRESENTATIONS

Gordon Research Conference – Microbial Population Biology, Andover, NH, USA <i>Poster presentation (upcoming)</i>	7/2023
18 th Congress of the European Society for Evolutionary Biology (ESEB), Prague, Czech Republic <i>Poster presentation</i>	8/2022
Microbiology Society Annual Conference, Edinburgh, United Kingdom <i>Oral presentation (event cancelled due to COVID19)</i>	4/2020

CONTRIBUTED CONFERENCE PRESENTATIONS (cont.)

International μ BOX Meeting at Oxford, United Kingdom <i>Poster presentation</i>	9/2019
17 th Congress of the European Society for Evolutionary Biology (ESEB), Turku, Finland <i>Oral presentation</i>	8/2019
International Meeting on Phenotypic Heterogeneity and Sociobiology of Bacterial Populations (SPP1617), Hohenkammer, Germany <i>Poster presentation</i>	3/2019
17 th International Symposium on Microbial Ecology (ISME), Leipzig, Germany <i>Poster presentation</i>	8/2018
1 st International TRANSIT workshop on Cross-disciplinary Research, York, United Kingdom <i>Oral presentation</i>	4/2018
16 th Congress of the European Society for Evolutionary Biology (ESEB), Groningen, Netherlands <i>Oral presentation</i>	8/2017
116 th General Meeting of the American Society of Microbiology (ASM), Boston, USA <i>Poster presentation</i>	6/2016
Behaviour, Ecology, Environment and Evolution Meeting, University of Zurich, Switzerland <i>Oral presentation</i>	3/2015
15 th Congress of the European Society for Evolutionary Biology (ESEB), Lausanne, Switzerland <i>Poster presentation</i>	8/2015
Evolutionary Medicine Conference, Zurich, Switzerland <i>Oral presentation</i>	7/2015
15 th International Symposium on Microbial Ecology (ISME), Seoul, South Korea <i>Poster presentation</i>	8/2014
Workshop in Evolutionary Biology, Guarda, Switzerland <i>Oral presentation</i>	6/2014

TEACHING

Lead course organizer and examiner , Experimental Evolution Department of Biology, University of Oxford	2/2019 – present
Teaching assistant , Evolutionary Microbiology Faculty of Science, University of Zurich	2/2014 – 4/2017
Teaching assistant , General Microbiology Department of Biology, LMU Munich	3/2010

SUPERVISION AND MENTORING

Thesis Committee Member , Department of Biochemistry, University of Oxford Formal examination, assessment, and guidance of MSc student	1/2023- present
Co-supervision of graduate student , Department of Biology, University of Oxford George Shillcock	1/2023 – present

SUPERVISION AND MENTORING (cont.)

DPhil Admissions Committee Member , Department of Biology, University of Oxford Formal assessment and interviewing of prospective PhD students	2/2023
Transfer of Status Assessor , Department of Biology, University of Oxford Formal examination, assessment, and guidance of DPhil student	1/2023
Mentoring Program , Department of Biology, University of Oxford Co-development of a mentoring program between postdocs and PhD students. Regular mentoring activity	11/2019 – 6/2022
Supervision of Master student , Department of Biology, University of Oxford Christian Kirk	10/2021 – 5/2022
Supervision of Bachelor student , Department of Biology, University of Oxford Christian Kirk	4/2020 – 4/2021
MEEVirtual Mentoring Program Mentoring of junior researchers attending a scientific conference	8/2020
PhD Mentoring Program, Life Science Graduate School Zurich Mentoring of junior PhD students. Annika Hausmann, Arturo Rinaldi, Weronika Barcik	6/2014 – 9/2017
Supervision of laboratory internship Isa Moreno	1/2015- 4/2015

INSTITUTIONAL AND SUPPORT ACTIVITIES

Personnel Committee – Research Staff Representative Department of Biology, University of Oxford, United Kingdom	10/2021 – present
FutureProfs , Department of Biochemistry, University of Oxford, United Kingdom Founder of a peer-to-peer support group among postdoctoral researchers working towards an academic career	11/2019 – present
Early Career Researcher Network , University of Oxford, United Kingdom Organization of scientific, social, and training events for early career researchers Personnel Committee Representative; Social media & Outreach Representative	9/2018 – 07/2021
Committee for Appointment of Faculty , University of Zurich, Switzerland Representative for mid-level faculty	2017

OUTREACH

Twitter Active Twitter profile with >24'000 followers, regular interactions with general public and dissemination of scientific content.	2010 – present
'Tidbits of Research' Podcast Interview about my research and life as a scientist, aimed at a general audience	5/2022
FEMS Podcast – 'Microbes and Us' Interview about my research, career development in academia and more	7/2021

OUTREACH (cont.)

Microbial Literacy Project Co-development of a child-centric microbiology education framework for use in UK education Topic: Microbial Communities and Social Behaviour	9/2020 – 4/2021
Skype A Scientist Skyping with classrooms around the world as part of the “Skype A Scientist” initiative	4/2019 – 6/2020
Article in <i>New Scientist</i> magazine Contributed to popular science article on my recent publication	3/2020
Chalk Talk Seminar , Dunn School of Pathology, University of Oxford, United Kingdom Scientific presentation for a general audience, run by the <i>Oxford Scientist</i> magazine	11/2019
Science Jam , Department of Biology, University of Oxford, United Kingdom Organization of - and participation in – an intradepartmental outreach event	5/2019
Oxford Scientist School , Oxford, United Kingdom Guest judge for science writing competition for Secondary school pupils	1/2019
Teaching on Twitter Lecturer for the 1 st worldwide online open access microbiology course (“EUROmicroMOOC”) Delivery of online lecture on “Bacterial cooperation”, accessible to a general audience via Twitter.	10/2018
‘Bacterial World’ Exhibition Contribution of microscopy images to exhibition in the Natural History Museum of Oxford	10/2018
UNIQ Summer School , University of Oxford, United Kingdom Demonstrator for practical classes on antibiotics, delivered to state school students.	8/2018
Science Lab Zurich , Faculty of Science, University of Zurich, Switzerland Organization and execution of guided tour through microbiology laboratories for local high school students.	2/2017
International Physics Olympiad , Faculty of Science, University of Zurich, Switzerland Organization and execution of guided tour through microbiology laboratories for international high school students.	7/2016
Info Day Biology , Department of Biology, ETH Zurich, Switzerland Oral presentation of Master degree in Biology at ETH to local high school students.	3/2012
Open Day Biochemistry , Max-Planck-Institute of Biochemistry, Martinsried, Germany Assisting in presentation of biochemistry research to the general public.	10/2010

PEER REVIEW ACTIVITY - JOURNALS

- Nature Microbiology
- Nature Communications
- Current Biology
- eLife
- Microbial Ecology
- mBio
- ISME
- Proc Soc B
- iScience
- Comms Biology
- PLOS One
- Microbiology
- Biofilm
- FEMS Microbial Ecology
- BMC Evolutionary Biology

PEER REVIEW ACTIVITY – FUNDING AGENCIES

- Swiss National Science Foundation (SNF)
- UKRI - Medical Research Council (MRC)
- UKRI - Biotechnology and Biological Sciences Research Council (BBSRC)

ADVANCED TRAINING (selection)

Leadership Training (24 h), University of Oxford, United Kingdom	9/2022
Race Awareness Training (1.5 h), University of Oxford, United Kingdom	7/2022
Mentorship Training (4 h), University of Oxford, United Kingdom	10/2019
Mentorship Training (30 h), Life Science Zurich Graduate School, Zurich, Switzerland	1/2016
Voice Training and Presentation Skills (30 h), Center for Advanced Training, Zurich, Switzerland	5/2014
Project Management for Research (30 h), Center for Advanced Training, Zurich, Switzerland	10/2013