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Languages: German (native), English (fluent)

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 South Parks Road  
 Oxford OX1 3Q  
 United Kingdom

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## RESEARCH INTERESTS

Interference competition in bacteria  
 Bacterial interactions

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## METHODS

Experimental microbiology  
 Fluorescence microscopy

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## ACADEMIC HISTORY

**Independent Research Fellow**, Department of Biology, University of Oxford, United Kingdom 5/2021 – present  
*BBSRC Discovery Fellowship*

**Postdoctoral Researcher**, Department of Biology, University of Oxford, United Kingdom 11/2017 – 4/2021  
*Postdoc Mobility Fellowship - Swiss National Science Foundation*  
 Advisor: Prof. Kevin Foster

**PhD**, Life Science Zurich Graduate School, University of Zurich, Switzerland 6/2013 – 9/2017  
 Thesis title: "Evolution of cooperation and virulence in an opportunistic pathogen"  
 Advisor: Prof. Rolf Kümmerli

**Master of Science**, Microbiology and Immunology, ETH Zurich, Switzerland 9/2011 – 4/2013

**Bachelor of Science**, Biology, LMU Munich, Germany 9/2008 – 6/2011

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## 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.)

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**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

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|   |         |
|---|---------|
| <a href="#">FEMS Early Career Microbiologist Award</a>                    | 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

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

## INVITED SEMINARS

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|--|---------|
| MRC Centre for Molecular Bacteriology and Infection (CMBI) Seminar Series<br><b>Imperial College London, United Kingdom (upcoming)</b> | 02/2023 |
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**INVITED SEMINARS (cont.)**

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

**CONFERENCE ORGANIZATION**

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|---|------------------|
| Microbial Ecology & Evolution (MEEhubs) 2023<br><i>Co-lead organization of international conference</i>   | 6/2022 – present |
| 18 <sup>th</sup> Congress of the European Society for Evolutionary Biology (ESEB), Prague, Czech Republic<br><i>Organization of conference symposium</i><br>"The art of microscopic war – interference competition in microbes" | 8/2022           |

**CONFERENCE PRESENTATIONS**

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|   |        |
|---|--------|
| 18 <sup>th</sup> Congress of the European Society for Evolutionary Biology (ESEB), Prague, Czech Republic<br><i>Poster presentation</i>                   | 8/2022 |
| Microbiology Society Annual Conference, Edinburgh, United Kingdom<br><i>Oral presentation (event cancelled due to COVID19)</i>                            | 4/2020 |
| International $\mu$ BOX Meeting at Oxford, United Kingdom<br><i>Poster presentation</i>   | 9/2019 |
| 17 <sup>th</sup> Congress of the European Society for Evolutionary Biology (ESEB), Turku, Finland<br><i>Oral presentation</i>                             | 8/2019 |
| International Meeting on Phenotypic Heterogeneity and Sociobiology of Bacterial Populations (SPP1617), Hohenkammer, Germany<br><i>Poster presentation</i> | 3/2019 |

## CONFERENCE PRESENTATIONS (cont.)

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

## TEACHING

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

## SUPERVISION AND MENTORING

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| <b>Transfer of status Assessor</b> , Department of Biology, University of Oxford<br>Formal examination and assessment of Dphil student   | 12/2022          |
| <b>Mentoring Program, Department of Biology</b> , University of Oxford<br>Co-development of a mentoring program between postdocs and PhD students;<br>Regular mentoring activity | 11/2019- present |
| <b>Supervision of Master student</b> , University of Oxford<br>Christian Kirk  | 10/2021 - 5/2022 |
| <b>Supervision of Bachelor student</b> , University of Oxford<br>Christian Kirk  | 4/2020 - 4/2021  |
| <b>MEEVirtual Mentoring Program</b><br>Mentoring of junior researchers attending a scientific conference   | 8/2020           |

## SUPERVISION AND MENTORING (cont.)

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|---|-----------------|
| <b>PhD Mentoring Program, Life Science Graduate School Zurich</b><br>Mentoring of junior PhD students. Annika Hausmann, Arturo Rinaldi, Weronika Barcik | 6/2014 – 9/2017 |
| <b>Supervision of laboratory internship</b><br>Isa Moreno   | 1/2015- 4/2015  |

## INSTITUTIONAL AND SUPPORT ACTIVITIES

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

## OUTREACH

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|--|-----------------|
| <b>Twitter</b><br><a href="#">Active Twitter profile</a> with >23'000 followers, regular interactions with general public and dissemination of scientific content.                                   | 2010 - present  |
| <b>'Tidbits of Research' Podcast</b><br><a href="#">Interview</a> about my research and life as a scientist, aimed at a general audience   | 5/2022          |
| <b>FEMS Podcast – 'Microbes and Us'</b><br><a href="#">Interview</a> about my research, career development in academia and more  | 7/2021          |
| <b>Microbial Literacy Project</b><br>Co-development of a <a href="#">child-centric microbiology education framework</a> for use in UK education<br>Topic: Microbial Communities and Social Behaviour | 9/2020 - 4/2021 |
| <b>Skype A Scientist</b><br>Skyping with classrooms around the world as part of the "Skype A Scientist" initiative   | 4/2019 – 6/2020 |
| <b>Article in <i>New Scientist</i> magazine</b><br>Contributed to <a href="#">popular science article</a> on my recent publication   | 3/2020          |
| <b>Chalk Talk Seminar</b> , Dunn School of Pathology, University of Oxford, United Kingdom<br>Scientific presentation for a general audience, run by the <i>Oxford Scientist</i> magazine            | 11/2019         |
| <b>Science Jam</b> , Department of Biology, University of Oxford, United Kingdom<br>Organization of - and participation in – an intradepartmental outreach event                                     | 5/2019          |
| <b>Oxford Scientist School</b> , Oxford, United Kingdom<br>Guest judge for science writing competition for Secondary school pupils   | 1/2019          |

**OUTREACH (cont.)**

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|---|---------|
| <b>Teaching on Twitter</b>  | 10/2018 |
| Lecturer for the 1 <sup>st</sup> worldwide online open access microbiology course (“EUROmicroMOOC”)<br>Delivery of online lecture on “Bacterial cooperation”, accessible to a general audience via Twitter. |         |
| <b>‘Bacterial World’ Exhibition</b>   | 10/2018 |
| Contribution of microscopy images to exhibition in the Natural History Museum of Oxford   |         |
| <b>UNIQ Summer School</b> , University of Oxford, United Kingdom  | 8/2018  |
| Demonstrator for practical classes on antibiotics, delivered to state school students.  |         |
| <b>Science Lab Zurich</b> , Faculty of Science, University of Zurich, Switzerland   | 2/2017  |
| Organization and execution of guided tour through microbiology laboratories for local high school students.   |         |
| <b>International Physics Olympiad</b> , Faculty of Science, University of Zurich, Switzerland   | 7/2016  |
| Organization and execution of guided tour through microbiology laboratories for international high school students.   |         |
| <b>Info Day Biology</b> , Department of Biology, ETH Zurich, Switzerland  | 3/2012  |
| Oral presentation of Master degree in Biology at ETH to local high school students.   |         |
| <b>Open Day Biochemistry</b> , Max-Planck-Institute of Biochemistry, Martinsried, Germany   | 10/2010 |
| Assisting in presentation of biochemistry research to the general public.   |         |

**PEER REVIEW ACTIVITY**

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**Journals**

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

**Funding agencies**

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

**ADVANCED TRAINING (selection)**

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