

elisa.granato@zoo.ox.ac.uk

+44 18 65 61 33 38

OrcID: [orcid.org/0000-0003-1581-2899](https://orcid.org/0000-0003-1581-2899)[www.elisagranato.com](http://www.elisagranato.com)Twitter: [@Prokaryota](https://twitter.com/Prokaryota)Google Scholar: [scholar.google.com/citations?user=ogvPDWEAAAAJ](https://scholar.google.com/citations?user=ogvPDWEAAAAJ)University of Oxford  
Departments of Zoology & Biochemistry  
New Biochemistry Building  
South Parks Road  
Oxford OX1 3QU  
United Kingdom

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## RESEARCH INTERESTS

- Interference competition in bacteria
- Microbial cooperation
- Virulence evolution
- Social evolution

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## ACADEMIC HISTORY

**Research Fellow**, Department of Zoology, University of Oxford, United Kingdom 05/2021 – present  
BBSRC Discovery Fellowship. Host: Prof. Kevin Foster

**Postdoctoral Researcher**, Department of Zoology, University of Oxford, United Kingdom 11/2017 – 04/2021  
Advisor: Prof. Kevin Foster

**Ph.D.**, 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  
Master Thesis in Microbiology (grade 6.0 - „excellent“)

**Bachelor of Science**, Biology, LMU Munich, Germany 9/2008 – 6/2011  
Bachelor Thesis in Microbiology (grade 1.0 - „excellent“)

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## PUBLICATIONS

**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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BBSRC Discovery Fellowship [375'000 GBP]	2/2021
SNF Postdoc Mobility Fellowship [82'500 CHF]	4/2019
<i>The ISME Journal</i> Cover Art Competition 2018, Top 3 Finalist	8/2018
SNF Early Postdoc Mobility Fellowship [81'750 CHF]	11/2017
ASM Student and Postdoctoral Travel Award [750 USD]	3/2016
Student Oral Presentation Award (Evolutionary Medicine Conference, Zurich)	7/2015
Research Fund of the University of Zurich (Forschungskredit) [86'000 CHF]	1/2016 – 2/2017
Scholarship of the German National Merit Foundation [12'000 EUR]	9/2011 – 4/2013
Award for graduating in the top 10% of class, Bachelor of Science, LMU Munich, Germany	6/2011

## INVITED PRESENTATIONS

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Collaborative Research Centre (CRC) AquaDiva Seminar Series Friedrich-Schiller-University, Jena, Germany - upcoming	6/2021
Life Science & Medical School Seminar Series University of Warwick, United Kingdom	1/2021
Zam Iqbal Research Group Seminar European Bioinformatics Institute (EMBL-EBI), Cambridge, United Kingdom	10/2020
MEEVirtual 2020 - Microbial Ecology & Evolution Virtual Conference Organizers: Sara Mitri (UNIL Lausanne), Sam Brown (Georgia Tech), Wolfram Moebius (Univ. of Exeter), David Baltrus (Univ. of Arizona)	8/2020
Summer Symposium, Centre for Life's Origins and Evolution (CLOE) University College London, United Kingdom (delivered online)	6/2020

**INVITED PRESENTATIONS (cont.)**

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Departmental Seminar, Swiss Federal Inst. of Aquatic Science & Technology (EAWAG) ETH Zurich, Switzerland (delivered online)	4/2020
Junior Awards for Microbiology University of Birmingham, United Kingdom	6/2019

**CONTRIBUTED CONFERENCE PRESENTATIONS**

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World Microbe Forum (joint FEMS + ASM conference) <i>Oral presentation</i> - upcoming	6/2021
Microbiology Society Annual Conference, Edinburgh, United Kingdom <i>Oral presentation</i> (event cancelled due to COVID19)	4/2020
International $\mu$ BOx Meeting at Oxford – Universities of Basel, Switzerland & Oxford, United Kingdom <i>Poster presentation</i>	9/2019
17 <sup>th</sup> 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 <sup>th</sup> International Symposium on Microbial Ecology (ISME), Leipzig, Germany <i>Poster presentation</i>	8/2018
1 <sup>st</sup> International TRANSIT workshop on Cross-disciplinary Research, York, United Kingdom <i>Oral presentation</i>	4/2018
16 <sup>th</sup> Congress of the European Society for Evolutionary Biology (ESEB), Groningen, Netherlands <i>Oral presentation</i>	8/2017
116 <sup>th</sup> 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 <sup>th</sup> 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 <sup>th</sup> 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 ACTIVITIES

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**Course organizer**, Experimental Evolution 2/2019 - present  
 Organization and execution of a yearly 2-weeks laboratory course for Bachelor students; grading of written reports; supervision of four teaching assistants.  
 Department of Zoology, University of Oxford

**Teaching assistant**, Evolutionary Microbiology 2/2014 – 4/2017  
 Organization and execution of a yearly 4-weeks full-time laboratory course for Bachelor and Master students; grading of written and oral reports.  
 Faculty of Science, University of Zurich

**Teaching assistant**, General Microbiology 3/2010  
 Assistance in execution of a 2-weeks laboratory course for Bachelor students.  
 Department of Biology, LMU Munich

## SUPERVISION AND MENTORING

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**Supervision of Bachelor student**, University of Oxford 4/2020 - present  
 Christian Kirk

**MEEVirtual Mentoring Program** 8/2020  
 Mentoring of junior researchers attending a scientific conference (online)

**Mentoring Program, Department of Zoology**, University of Oxford, United Kingdom 11/2019- present  
 Co-development of a mentoring program between postdoctoral researchers and PhD students  
 Regular mentoring activity

**PhD Mentoring Program, Life Science Graduate School Zurich** 6/2014 – 9/2017  
 Mentoring of junior PhD students  
 Annika Hausmann, Arturo Rinaldi, Weronika Barcik

**Supervision of laboratory internship** 1/2015- 4/2015  
 Isa Moreno

## INSTITUTIONAL AND SUPPORT ACTIVITIES

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**FutureProfs**, Department of Biochemistry, University of Oxford, United Kingdom 11/2019 - present  
 Development of a peer-to-peer support group among postdoctoral researchers aiming for an academic career

**Early Career Researcher Network**, University of Oxford, United Kingdom 9/2018 – present  
 Organization of scientific, social, and training events for early career researchers  
 Social Media & Outreach Representative

**Committee for Appointment of Faculty**, University of Zurich, Switzerland 2017  
 Representative for mid-level faculty

## OUTREACH

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**Skype A Scientist** 4/2019 - present  
 Skyping with class rooms around the world as part of the SkypeAScientist initiative.

**Twitter** 2010 - present  
 Active Twitter profile with >12'000 followers, regular interactions with general public & dissemination of scientific content.

**OUTREACH (cont.)**

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<b>Microbial Literacy Project</b>	9/2020 - 4/2021
Development of a child-centric microbiology education framework for use in UK education Topic: Microbial Communities and Social Behaviour	
<b>Article in popular science magazine</b>	3/2020
Interviewed by <i>New Scientist</i> magazine and contributed to article on my recent publication <a href="https://www.newscientist.com/article/2236441-bacteria-sacrifice-themselves-when-under-attack-to-save-their-colonies/">https://www.newscientist.com/article/2236441-bacteria-sacrifice-themselves-when-under-attack-to-save-their-colonies/</a>	
<b>Chalk Talk Seminar</b>	11/2019
5 minute presentation for a general audience, run by the <i>Oxford Scientist</i> magazine Dunn School of Pathology, University of Oxford, United Kingdom	
<b>Science Jam</b>	5/2019
Organization of - and participation in - a departmental event where researchers presented their work in an accessible and creative way Department of Zoology, University of Oxford, United Kingdom	
<b>Oxford Scientist school</b>	1/2019
Guest judge for science writing competition for Secondary school pupils Oxford, United Kingdom	
<b>Teaching on Twitter</b>	10/2018
Lecturer for the 1 <sup>st</sup> worldwide online open access microbiology course ("EUROmicroMOOC") Preparation and 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>	8/2018
Demonstrator for practical classes on antibiotics, delivered to state school students. Department of Biochemistry, University of Oxford, United Kingdom	
<b>Science Lab Zurich</b>	2/2017
Organization and execution of guided tour through microbiology laboratories for Swiss high school students. Faculty of Science, University of Zurich, Switzerland	
<b>International Physics Olympiad</b>	7/2016
Organization and execution of guided tour through microbiology laboratories for international high school students. Faculty of Science, University of Zurich, Switzerland	
<b>Info Day Biology</b>	3/2012
Oral presentation of Master in Biology at ETH to Swiss high school students. Department of Biology, ETH Zurich, Switzerland	
<b>Open Day Biochemistry</b>	10/2010
Assisting in presentation of biochemistry research to the general public. Max-Planck-Institute of Biochemistry, Martinsried, Germany	

## PEER REVIEW ACTIVITY

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### Journals

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

### Grant applications

- Swiss National Science Foundation
- UKRI Medical Research Council

## COURSEWORK AND TRAINING (selection)

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<b>Mentorship Training</b> (4 hours) Department of Zoology, University of Oxford, United Kingdom	10/2019
<b>Public Engagement with Research</b> (2 hours) Department of Zoology, University of Oxford, United Kingdom	2/2019
<b>Advanced Microscopy Course</b> (20 hours) Micron Advanced Imaging Facility, University of Oxford, United Kingdom	11/2017
<b>Mentorship Training</b> (30 hours) Life Science Zurich Graduate School, Zurich, Switzerland	1/2016
<b>Logic and Reasoning for Scientists</b> (30 hours) Life Science Zurich Graduate School, Zurich, Switzerland	3/2015
<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
<b>Leadership Skills</b> (30 hours) Center for Advanced Training, Zurich, Switzerland	11/2013

## PERSONAL SKILLS

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<b>Languages:</b> German (native) English (fluent) Italian (beginner) Dutch (beginner) French (beginner)	<b>Digital Competences:</b> MS Office Suite R, MatLab Adobe InDesign Zotero Reference Manager ZEN imaging software FIJI image analysis software
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