

elisa.granato@zoo.ox.ac.uk

+44 18 65 61 33 38

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

RESEARCH INTERESTS

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

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“)

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.)

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 [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

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 (EMBL-EBI), Cambridge, United Kingdom	10/2020
MEEVirtual 2020 - Microbial Ecology & Evolution Virtual Conference	8/2020
Centre for Life's Origins and Evolution (CLOE) Summer Symposium University College London, United Kingdom	6/2020

INVITED PRESENTATIONS (cont.)

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

CONTRIBUTED CONFERENCE PRESENTATIONS

World Microbe Forum (joint FEMS + ASM conference) <i>Oral presentation</i>	6/2021
Microbiology Society Annual Conference, Edinburgh, United Kingdom <i>Oral presentation (event cancelled due to COVID19)</i>	4/2020
International μ Box Meeting at Oxford – Universities of Basel, Switzerland & 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 ACTIVITIES

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

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

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
 Treasurer; Social Media & Outreach Representative

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

OUTREACH

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 >14'000 followers, regular interactions with general public & dissemination of scientific content.

OUTREACH (cont.)

Microbial Literacy Project	9/2020 - 4/2021
Development of a child-centric microbiology education framework for use in UK education Topic: Microbial Communities and Social Behaviour	
Article in popular science magazine	3/2020
Interviewed by <i>New Scientist</i> magazine and contributed to article on my recent publication https://www.newscientist.com/article/2236441-bacteria-sacrifice-themselves-when-under-attack-to-save-their-colonies/	
Chalk Talk Seminar	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	
Science Jam	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	
Oxford Scientist school	1/2019
Guest judge for science writing competition for Secondary school pupils Oxford, United Kingdom	
Teaching on Twitter	10/2018
Lecturer for the 1 st worldwide online open access microbiology course ("EUROmicroMOOC") Preparation and delivery of online lecture on "Bacterial cooperation", accessible to a general audience via Twitter.	
'Bacterial World' Exhibition	10/2018
Contribution of microscopy images to exhibition in the Natural History Museum of Oxford	
UNIQ Summer School	8/2018
Demonstrator for practical classes on antibiotics, delivered to state school students. Department of Biochemistry, University of Oxford, United Kingdom	
Science Lab Zurich	2/2017
Organization and execution of guided tour through microbiology laboratories for Swiss high school students. Faculty of Science, University of Zurich, Switzerland	
International Physics Olympiad	7/2016
Organization and execution of guided tour through microbiology laboratories for international high school students. Faculty of Science, University of Zurich, Switzerland	
Info Day Biology	3/2012
Oral presentation of Master in Biology at ETH to Swiss high school students. Department of Biology, ETH Zurich, Switzerland	
Open Day Biochemistry	10/2010
Assisting in presentation of biochemistry research to the general public. Max-Planck-Institute of Biochemistry, Martinsried, Germany	

PEER REVIEW ACTIVITY

Journals

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

Grant applications

- Swiss National Science Foundation
- UKRI Medical Research Council

COURSEWORK AND TRAINING (selection)

Mentorship Training (4 hours) Department of Zoology, University of Oxford, United Kingdom	10/2019
Public Engagement with Research (2 hours) Department of Zoology, University of Oxford, United Kingdom	2/2019
Advanced Microscopy Course (20 hours) Micron Advanced Imaging Facility, University of Oxford, United Kingdom	11/2017
Mentorship Training (30 hours) Life Science Zurich Graduate School, Zurich, Switzerland	1/2016
Logic and Reasoning for Scientists (30 hours) Life Science Zurich Graduate School, Zurich, Switzerland	3/2015
Voice Training and Presentation Skills (30 hours) Center for Advanced Training, Zurich, Switzerland	5/2014
Project Management for Research (30 hours) Center for Advanced Training, Zurich, Switzerland	10/2013
Leadership Skills (30 hours) Center for Advanced Training, Zurich, Switzerland	11/2013

PERSONAL SKILLS

Languages: <ul style="list-style-type: none"> German (native) English (fluent) Italian (beginner) Dutch (beginner) French (beginner) 	Digital Competences: <ul style="list-style-type: none"> MS Office Suite R, MatLab Adobe InDesign Zotero Reference Manager ZEN imaging software FIJI image analysis software
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------