



Andrew Balmer



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Education

2018-Present: University of Cambridge:
D.Phil. (Ph.D) Biological Sciences

2015-2016: University of Cambridge:
M. Phil. (Masters) Biological Sciences

- Published first-author paper based on work from M.Phil. thesis.

2010-2014: University of Leeds:
B.Sc. Biology (International, University of Heidelberg, Germany)

- 1st Class Honours degree, with marks consistently in top 5 in class

Profile

A versatile biological sciences Ph.D. student with experience in analysis of epidemiological datasets, looking for exciting opportunities in that field. Broad range of experience in several aspects of scientific research and project management. Successful research output and demonstrated ability to solve complicated analysis problems, work in teams and develop bespoke data-analysis tools.

Current Position

2018-Present: University of Cambridge: D. Phil. (Ph.D.) student, Biological Sciences

- Main project: I develop bioinformatics tools to analyse complex antibiotic resistance data. I apply multidimensional scaling algorithms to resistance surveillance datasets, both to improve their visualisation and modelling, and to allow easier communication.
- Project management/data analysis skills through lab projects in infectious disease evolution.
- Awarded highly competitive [BBSRC DTP Studentship Award](#) (2018-2023) - £60k.
- 2 academic publications, with work from first year of Ph.D. published as pre-print ([bioRxiv](#)).
- Attended academic conferences within the U.K. and internationally.

Relevant Skills

- **Programming languages:** R (3 years of experience), and Python (beginner): Statistical analysis, multivariate methods, noise removal, modelling, visualisation of complex datasets.
- **Software:** R Studio, Image J/Fiji, SPSS, Microsoft Office, Prezi, Adobe Illustrator.
- **Project organisation:** Strong management, organisation, and administrative skills. Planned and implemented large-scale lab experiments and presented results in [academic publications](#). Organised series of [academic events](#) with 200+ attendees and several international speakers.
- **Science communication:** Strong communication, editing, and social skills for both academic and popular audiences. I have written popular science articles for high profile publications such as [Scientific American](#) and Yahoo News.
- **Leadership:** Founded a student popular science magazine and managed a small team of editors. Represented undergraduate cohort of 75+ students as Employability Representative. Organised and presented a short series of lectures on science communication.
- **Languages:** English (native), German (intermediate).

Selected Research Experience

2018 Research Intern, University of Cambridge

- Conducted daily lab work for a 200-day, collaborative, experimental evolution project.

- Achieved highest marks in cohort in modules such as advanced topics in evolution.

Awards

2018-2023: BBSRC DTP Studentship Award

- £60k over 4.5 years of Ph.D.

2014: Masters Bursary (Science)

- '[Postgraduate Search](#)' - £1000

2013: Partnership Award for Innovation

- Awarded University of [Leeds](#) Partnership award for innovation for my work on LUU Science magazine.

2012: Santander Research Scholarship - £500

- For undertaking research in the field of developmental genetics during study abroad year at the University of Heidelberg.

Social Media

 [LinkedIn](#)

 [Twitter](#)

 [Personal Website](#)

- Generated 291 experimentally evolved mutant lines of *Streptococcus suis*.

2017-2018 Research Intern, University of Cambridge

- Developed meta-analysis and literature review skills in field of infectious disease evolution.
- Compiled database of over 100 papers on the evolution of virulence in human pathogens

2017-2018 Senior Research Laboratory Technician, University of Cambridge

- Performed computational processing and analysis of recordings of animal behaviour.
- Designed and carried out several experiments relating to ongoing research projects.

2017-2018 Research Intern, Centre for Pathogen Evolution, University of Cambridge

- Used structural equation modelling (OpenMx) to quantify the effect of genetics and environment on response to influenza vaccination.

2014-2017 Research Assistant, University of Cambridge

- Designed and carried out several long-term experiments and conducted statistical-analyses in the field of evolutionary biology.

2012 -2013 Research Intern, University of Heidelberg

- Worked with a team to establish an efficient modular cloning system for *Arabidopsis thaliana*.

Commercial Experience

2016-2017: Synthetic Biology Strategic Research Initiative Assistant Coordinator

- Maintained online presence for a university wide [research initiative](#) with over [2k followers](#).
- Organised an academic [conference](#) with over 100 attendees and 2 speakers from abroad.

2012-2014: Founder and President of LUU Science magazine

- Founded a student-led popular [science magazine](#). Primarily involved in producing issues.
- Managed a team of 3 editors. Organised membership, advertising, and funding.

Publications

- Murray GGR, **Balmer AJ**, [...], Lucy Weinert. (2021) '[Mutation rate dynamics reflect ecological changes in an emerging zoonotic pathogen.](#)' bioRxiv.
- **Balmer AJ**, [...], van Bergen E, (2018): '[Developmental plasticity for male secondary sexual traits in a group of polyphenic tropical butterflies.](#)' Oikos.

References

Available on request