

Emeline Favreau

emeline.favreau.15@ucl.ac.uk

Bioinformatics PostDoc at University College London with Seirian Sumner, I am currently specialising in wasp genomics and transcriptomics to understand the **evolution of social organisation**, from the field to the lab and the cluster.

Publications

4 Priyam ... **Favreau** et al (2019) Sequenceserver: a modern graphical user interface for custom BLAST databases. *Molecular Biology and Evolution*. <https://doi.org/10.1093/molbev/msz185>

3 Linard, Crampton-Platt, Moriniere, Timmermans, Andújar, Arribas, Miller, Lipecki, **Favreau**, Hunter, Gómez-Rodríguez, Barton, Nie, Gillett, Breeschoten, Bocak and Vogler (2018) The contribution of mitochondrial metagenomics to large-scale data mining and phylogenetic analysis of Coleoptera. *Molecular Phylogenetics and Evolution*. 128: 1-11.

2 **Favreau**, Martínez-Ruiz, Rodrigues Santiago, Hammond and Wurm (2018) Genes and genomic processes underpinning the social lives of ants. *Current Opinion in Insect Science*. 3926 (4):451-479.

1 Lyal and **Favreau** (2015) The Rectal Valve in Curculionoidea and other Coleoptera (Insecta). *Zootaxa*. 3926 (4):451-479.

Education

2015-2019: **PhD in ant genomics**, QMUL. Supervisors: Dr Y. Wurm and Dr M. Reuter. NERC DTP.

2013 – 2014: MRes Biosystematics at Imperial College London & Natural History Museum, London. Supervisor: Prof A. Vogler. Merit.

2008 – 2011: BSc Environmental Sciences at Oxford Brookes University, Oxford 1st Class (Hons).

Technical

Bioinformatics skills tailored for comparative genomic and transcriptomic analysis

- Data wrangling, R statistical packages, RMarkdown
- Unix Shell writing, HPC
- Version control, git
- Pipeline building:
 - *de novo* **whole genome** assembly and variant calling
 - genome annotation with **RNAseq** data
- Statistical analyses, including GWAS and power analysis
- Population genomics for haplodiploid organisms

Wet lab skills tailored for **short and long reads sequencing**

- Sampling (both team-based and solo fieldwork)
- DNA extraction, including designing my own protocols
- Library preparation

Conferences

▪ Oral presentations

- 2018 Sept **Invited talk**, UC Davis Santiago Ramirez Group, USA
- Sept **Invited talk**, ASU Social Insect Research Group, USA
- Aug IUSSI 2018, Guarujá, Brazil
- Mar **Invited talk**, UCL GEE Seminar, London
- Feb QMUL SBCS Postgraduate Symposium, London
- 2017 Jun Evolution conference, Portland, Oregon, USA
- Jan 50th Population Genetics Group Meeting, Cambridge
- 2016 Dec North-West section of IUSSI Winter Meeting, London

▪ Posters

- 2018 Aug Evolution conference, Montpellier, France
- 2017 Aug ESEB congress, Groningen, Netherlands
- Feb QMUL SBCS Postgraduate Symposium, London
- 2016 Sept NERC DTP conference, London

▪ Symposium organiser

- 2018 Aug Organising and Chairing “Evolution of social organization” symposium at IUSSI Brazil 2018

Grants & Awards

£100,811 for studies, £4,000 for research

2019	Conference Grant, Genetics Society, Population Genetics Group Meeting
2018	QMUL PostGraduate Research Fund for US fieldwork Travel Grant, Royal Entomological Society, IUSSI Brazil 2018 Travel Grant, Royal Society of Biology, IUSSI Brazil 2018 Conference Grant, Genetics Society, Population Genetics Group Meeting
2017	Conference Grant, Genetics Society, ESEB
2015	PhD Scholarship from London NERC DTP
2014	Conference Grant, RES, 2 nd Young Natural History Scientists' Meeting, France
2013	Masters Scholarship from Entente Cordiale Study Grant, Ruby and Will George Trust

Teaching Experience

2017-18	Mentoring Ecology and Evolutionary Biology Masters research project
2017	Field course assistant, module Tropical Ecology South Africa
2016-19	Teaching assistant, Masters Bioinformatics course

Employment

2015	Science Technician, Raynes Park High School (6-month full time)
2012-15	Coleoptera & Hymenoptera Curator, Natural History Museum London (part-time)
2012	Ecologist , Centre for Ecology and Hydrology, Wallingford (6-month fieldwork)

Personal Development

2016	Social Evolution PhD Course, IST Austria
2016	French Ant Course by French Section of IUSSI, Banyuls-sur-mer, France
2015	NERC DTP Skills for PhD, NHM London

Outreach

2019	Science correspondent with a US middle school student (Letters to a Pre-Scientist)
2018	Explaining our research to local community, QMUL Festival of Communities, London
2017	SoapBox Science Support Volunteer, Brighton

Professional Society Affiliations

2018	Society for Molecular Biology and Evolution Society of Systematic Biologists
2017	Linnean Society of London International Union for the Study of Social Insects (French Section) European Society for Evolutionary Biology
2016	Royal Entomological Society Genetics Society International Union for the Study of Social Insects (North-west Section)

Reviewer for

PeerJ
Myrmecological News Blog
Insect Science