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2019- Reader, Organismal Biology Department, Queen Mary University of London (QMUL)  
2018- Fellow, Alan Turing Institute for Data Science and Artificial Intelligence  
2014-19 Senior Lecturer, Queen Mary University of London  
2012-14 Lecturer, Queen Mary University of London  
2010-11 Postdoc with L. Keller, Dept. Ecology & Evolution, U Lausanne  
2006-11 Embedded Bioinformatician with I. Xenarios, Vital-IT, Swiss Institute of Bioinformatics  
2005-09 PhD in Life Sciences: "Sociogenetics of fire ants" with L. Keller, U Lausanne  
99-2004 MSc: Bioinformatics & Modeling at National Institute of Applied Sciences, INSA de Lyon  
1999 Scientific Baccalaureate (Biology & Math) Cité Scolaire Internationale de Lyon  
Years in France: 10; USA: 9; Switzerland: 7; Germany: 4; Indonesia: 1; Quebec: 1. UK since 2012

## Funding (> £2,500,000 GBP)

2021-24	BBSRC standard grant	677,463 £
2020-23	NERC London PhD studentships (two)	200,000 £
2019-22	Colfuturo PhD Studentship host	115,000 £
2019-21	H2020 Marie Curie Fellowship Host (A Brahama; 842592)	212,934 €
2019-21	H2020 Marie Curie Fellowship Host (F Lopez-Osorio; 840185)	224,934 €
2019-22	BBSRC Productivity Investment Fund data science studentship (BB/S507556)	107,034 £
2016-19	NERC & BBSRC London PhD studentships (1 full, 2 shared)	200,000 £
2016-21	Co-I on NERC (NE/P012574/1) and ERC (638873)	60,000 £
2016	Mozilla Fellows for Science Fellowship Host (B Vieira)	55,000 \$
2015-17	FP7 Marie Curie Fellowship Host (623713; E Stolle)	221,606 €
2014-16	QMUL internal grants	70,000 £
2014-17	NERC grant: Bumblebee genomics (NE/L00626X/1)	520,313 £
2014-	Fellow of the Software Sustainability Institute	3,000 £
2014-17	Science without Borders PhD Scholarship host	160,000 £
2014-15	NERC Big Data Capital Call (co-I with Nichols) to QMUL	85,000 £
2013-14	NEScent Working Group (with Papanicolaou & Muñoz-Torres)	50,000 \$
2012-14	BBSRC sTDRF Genome Annotation (BB/K004204/1)	148,136 £
2011-	Small grants (Google Summer of Code, Amazon EC2, NERC NBAF, QMUL)	>30,000 £
2002-11	Travel grants (SMBE, Apple, OFQJ, Swiss Zool.Soc.& Fondation 450 <sup>ième</sup> )	>7,500 £
2009	<u>Infectigen</u> . With Keller, Zdobnov, Shoemaker, Valles	100,000 CHF

## Responsibilities & Indicators of Esteem

**Current supervision:** 2 Postdocs; PhD students (5 full, 2 shared); 2 MSc students; **PhD panel** of 6 students; **University Leadership:** Deputy Head of Department, Research computing committee representative for Biology; Genome Centre steering group. **Teaching:** Genome Bioinformatics (MSc), R Programming (MSc & 3rd year). Ecol. & Evol. Genomics (3rd year).

**Completed supervision:** 5 PhD students, 3 postdocs, 20+ Msc, intern or BSc project students.

**Talks:** Frequent invitations for departmental and conference presentations: 5 Keynotes, 14 Conference & Symposium talks, 15 departmental talks, and presentations at 6 Research schools/workshops.

**External PhD examinations:** 2 students (UCL, Lancaster).

**External committee member:** BBSRC Pool of Experts (2019-), JISC Research Data Shared Service Steering Group (2017-); BBSRC Guidance for Making Software Outputs (2017); London Centre for Ecology & Evolution (from 2013); NERC environmental omics (2015-).

**External consultant:** for Seven Bridges Genomics, Cytel. >1300 Twitter followers.

**Software** from my lab is among the 2.5% most popular bioinformatics software on GitHub (e.g., Sequenceserver has 80 "forks, >170 "stars" and thousands of users).

## Reviewer for Funders and Journals

**Funders:** BBSRC (reviewer & pool of experts member), NERC, Swiss NSF, Research Foundation Flanders, INRA (France), CNPq (Brazil). **Journals:** Nature, PNAS, Genome Biol, Nat Ecol Evol, Proc B, Mol Ecol, Sci Rep, Biol Lett, Mol Biol Evol, Genome Biol Evol, Bioinformatics, Nat Comm, BMC Genomics, BMC Evol Biol, Insect Mol Biol, Nucl Acids Res, Bull Insectol, Insectes Soc, PLoS One, Curr Zool, iConcept Press, Heredity, G3, PeerJ, Insect Sci, Biol Invasions, GigaScience. **Editing:** PLoS Genet, Brief Func Genomics, PCI Evol Biol.

## Selected Publications (°corresponding; \*equal) >2000 Citations, h-index 21; i10-index 32

**in review** Genomic architecture and evolutionary conflict drive allele-specific expression in the social supergene of the red fire ant.

**in press** Healthy pollinators: Evaluating pesticides with molecular medicine approaches. *Trends in Ecology & Evolution*. Osorio-Lopez & Wurm°.

**2019** SequenceServer: a modern graphical user interface for custom BLAST databases. *Molecular Biology and Evolution* msz185. Twenty authors & Wurm°.

Degenerative expansion of a young supergene. *Molecular Biology and Evolution* msy236. Stolle, Pracana, Paris, Brown, Castillo-Carrillo, Rossiter, Wurm°.

Caste- and pesticide-specific effects of neonicotinoid pesticide exposure on gene expression in bumblebees. *Molecular Ecology* 28:1964. Colgan, Fletcher, three others, Stolle, Chittka, Wurm°.

The first draft genomes of the ant *Formica exsecta*, and its *Wolbachia* endosymbiont reveal extensive gene transfer from endosymbiont to host. *BMC Genomics* 20:301. Dhaygude, Nair, Johansson, Wurm, Sundström.

**2018** Foraging bumblebees acquire a preference for neonicotinoid-treated food with prolonged exposure. *Proceedings of the Royal Society B*. Arce, Ramos Rodrigues, Yu, Colgan, Wurm, Gill.

Genes and genomic processes underpinning the social lives of ants. *Current Opinion in Insect Science* 25:83. Favreau, Ruiz, Santiago, Hammond, Wurm°.

**2017** Fire ant social chromosomes: Differences in number, sequence and expression of odorant binding proteins. *Evolution Letters* 1:199. Pracana, Levantis, Martínez-Ruiz, Stolle, Priyam, Wurm°.

The fire ant social chromosome supergene variant Sb shows low diversity but high divergence from SB. *Molecular Ecology* 26: 2864. Pracana, Priyam, Nichols, Wurm°.

Impact of controlled neonicotinoid exposure on bumblebees in a realistic field setting. *Journal of Applied Ecology* 54:1199. Arce, David, Randall, Ramos Rodrigues, Colgan, Wurm, Gill.

**2016** GeneValidator: identify problems with gene predictions. *Bioinformatics* 32:1559. Dragan, Moghul, Priyam, Bustos, Wurm°.

**2015** Arthropod genomics beyond fruit flies: bridging the gap between proximate and ultimate causation. *Briefings in Functional Genomics* 14:381 Wurm°.

**2014** Convergent genetic architecture underlies social organization in ants. *Current Biology* 24:2728. Purcell, Brelsford, Wurm, Perrin, Chapuisat.

Transposable element islands facilitate adaptation to novel environments in an invasive species. *Nature Communications* 5:5495. Sixteen authors including Wurm.

**2013** A Y-like social chromosome causes alternative social organization in fire ants. *Nature* 493:664. Wang\*, Wurm°, Nipitwattanaphon, Riba-Grognuz, Huang, Shoemaker, Keller°.

Social insect genomes exhibit dramatic evolution in gene composition and regulation while preserving regulatory features linked to sociality. *Genome Research* 23:1235. 38 authors including Wurm.

**2012** The genomic impact of 100 million years of social evolution in seven ant species. *Trends in Genetics* 28:14. Gadau°, Helmkampf, Nygaard, Roux, Simola, Smith, Suen, Wurm, Smith.

Epigenetics: The making of ant castes. *Current Biology* 22:R835-8. Chittka, Wurm, Chittka°.

**2011** The genome of the fire ant *Solenopsis invicta*. *PNAS* 108:5679. Wurm° et al (38 authors).

Relaxed selection is a precursor to the evolution of phenotypic plasticity. *PNAS* 108:15936. Hunt, Ometto, Wurm, Shoemaker, Yi, Keller, Goodisman°.