

FILIP RUZICKA

E: ruzicka.filip@gmail.com; W: filruzicka.github.io, github.com/filipluca; T: +447828499993

PROFESSIONAL EXPERIENCE

- 2023– Independent research fellow (Marie Skłodowska Curie Fellowship)
Hosts: Prof. Beatriz Vicoso, Prof. Duncan Greig
Institute of Science and Technology Austria (Vienna, Austria), University
College London (UCL)
- 2019–23 Postdoc
Supervisor: Dr Tim Connallon
Monash University (Melbourne, Australia)

EDUCATION

- 2015–18 PhD, Evolutionary Genetics
Supervisors: Profs. Max Reuter and Kevin Fowler
University College London (London, UK)
- 2012–13 MRes Biodiversity, Evolution & Conservation
Institute of Zoology, Natural History Museum (London, UK)
University College London (London, UK)
- 2009–12 Bsc Biological Sciences
University College London (London, UK)

PUBLICATIONS

- 2025 **Ruzicka, F.***, Zwoinska, M.K.*, Goedert, D., Kokko, H., Li Richter X-Y., Moodie, I.R., Nilén, S., Olito, C., Svensson, E.I., Czuppon, P., Connallon, T. A century of theories of balancing selection. *bioRxiv*
Connallon, T., Czuppon, P., Olito, C., Goedert, D., Kokko, H., Nava-Bolaños, A., Nilén, S., Svensson, E.I., Zwoinska, M.K., Dutoit, L.*, **Ruzicka, F.***. Predicting the prevalence of genetic trade-offs among adaptive substitutions. *Evolution* 24:qpaf061
- 2024 McDonough, Y., **Ruzicka, F.**, Connallon, T. Reconciling theories of dominance with the relative rates of adaptive substitution on sex chromosomes and autosomes. *Proceedings of the National Academy of Sciences U.S.A.* 121(44): e2406335121
- 2022 **Ruzicka, F.**, Holman, L., Connallon, T. Polygenic signals of sex differences in selection in humans from the UK Biobank. *PLOS Biology*, 20:e3001768
Ruzicka, F., Reuter, M. Evolutionary Genetics: Dissecting a sexually antagonistic polymorphism. *Current Biology (Dispatch)*, 35:PR828-R830
Connallon, T., Beasley, I.J., McDonough, Y., **Ruzicka, F.** How much does the unguarded X contribute to sex differences in lifespan? *Evolution Letters* 6:319–329
Ruzicka, F., Connallon, T. An unbiased test reveals no enrichment of sexually antagonistic polymorphisms on the human X chromosome. *Proceedings of the Royal Society B: Biological Sciences* 289:202123142
- 2021 **Ruzicka, F.**, Connallon T., Reuter, M. Sex differences in deleterious mutational effects in *Drosophila melanogaster*: combining quantitative and population genetic insights. *Genetics* 219:iyab143

Jardine, M., **Ruzicka, F.**, Diffley, C., Fowler, K., Reuter, M. A non-coding indel polymorphism in the *fruitless* gene of *Drosophila melanogaster* exhibits antagonistically pleiotropic effects. *Proceedings of the Royal Society B: Biological Sciences* 288:20202958

- 2020 **Ruzicka, F.***, Connallon, T.*. Is the X chromosome a hot spot for sexually antagonistic polymorphisms? Biases in current empirical tests of classical theory. *Proceedings of the Royal Society B: Biological Sciences* 287:20201869
- Ruzicka, F.***, Dutoit, L.*, Czuppon, P., Jordan, C.Y., Li, X-Y, Olito, C., Runemark, A., Svensson, E.I., Yazdi, H.P., Connallon, T. The search for sexually antagonistic genes: Practical insights from studies of local adaptation and statistical genomics. *Evolution Letters* 4:398-415
- 2019 **Ruzicka, F.***, Hill, M.S.*, Pennell, T.M.*, Flis, I., Ingleby, F.C., Mott, R., Fowler, K., Morrow, E.H., Reuter, M. Genome-wide sexually antagonistic variants reveal long-standing constraints on sexual dimorphism in fruit flies. *PLOS Biology* 17:e3000244
- 2018 and previous Connallon, T., Olito, C., Dutoit, L., Papoli, H., **Ruzicka, F.**, Yong, L. (2018). Local adaptation and the evolution of inversions on sex chromosomes and autosomes. *Philosophical Transactions of the Royal Society B: Biological Sciences* 373:20170423
- Reuter, M., Camus, M. F., Hill, M.S., **Ruzicka, F.**, Fowler, K. (2017). Evolving plastic responses to external and genetic environments. *Trends in Genetics (Forum)* 33:169-170
- Davies, T., **Ruzicka, F.**, Lavery, T., Walters, C.L., Pettorelli, N. (2016). Ultrasonic monitoring to assess the impacts of forest conversion on Solomon Island bats. *Remote Sensing in Ecology and Conservation* 2:107-118
- Andujar, C., Arribas, P., **Ruzicka, F.**, Crampton-Platt, A., Timmermans, M.J.T.N., Vogler, A.P. (2015). Phylogenetic community ecology of soil biodiversity using mitochondrial metagenomics. *Molecular Ecology* 24:3603-3617

PRIZES & AWARDS

- 2020 ECR Award, Australasian Evolution Society
- 2018 Runner-up, ECR Talk, the UK Genetics Society's Autumn Symposium "Genotype to Phenotype to Fitness"
- Winner, Final Year Talk, UCL GEE Postgraduate Symposium
- 2017 Winner, Second Year Poster, UCL GEE Postgraduate Symposium
- 2013 Darwin Prize for Best Student, UCL MRes programme

FUNDING

- 2023 EUR134,260, IST BRIDGE Fellowship (Horizon Europe, Marie-Sklodowska Curie Actions, #101034413)
- 2020 A\$1,000, ECR Award (Australasian Evolution Society)
- 2019 A\$5,000, ECR Theme Leadership (Monash School of Biological Sciences)
- A\$10,000, ECR Career Development Award (Monash School of Biological Sciences)
- 2017 £800, attendance 26th ESEB Congress (UCL Graduate School Fund)
- 2016 £3,000, CEE Summer Symposium (London Centre for Ecology & Evolution, the UK Genetics Society)
- 2015 CHF450, 'Evolutionary Biology in Guarda' Summer School (University of Basel)
- £7,500, Further PhD research funds (UK Natural Environment Research Council)
- 2014–18 £64,000, PhD Studentship (UK Natural Environment Research Council)

PRESENTATIONS

- 2025 Talk, 58th Population Genetics Group (Sheffield, UK)
- 2024 Invited talk, International Laboratory for Human Genome Research, National Autonomous University of Mexico (online)
Talk, 3rd Joint Congress for Evolutionary Biology (Montréal, Canada / online)
Talk, UCL GEE Joint General Meeting (London, UK)
Poster, Probabilistic Modelling in Genomics (Vienna, Austria)
- 2023 Invited talk, Edinburgh University (Edinburgh, UK)
Invited talk, Lund University (Lund, Sweden)
Invited talk, Institute of Science and Technology Austria (Vienna, Austria)
Poster, Jacques Monod Conference “Sex unfolded” (Roscoff, France)
Talk, 56th Population Genetics Group (London, UK)
- 2021 Talk, Australasian Evolution Society (Melbourne, Australia)
- 2020 Plenary talk, Australasian Evolution Society (online)
Talk, Monash Genetics Genomics & Health seminar series (Melbourne, Australia)
- 2019 Talk, Australasian Evolution Society (Sydney, Australia)
Talk, Monash ECR Science Symposium (Melbourne, Australia)
Talk, Monash School of Biological Sciences seminar series (Melbourne, Australia)
Poster, 27th European Society for Evolutionary Biology (Turku, Finland)
Talk, Genetics Society of Australasia (Melbourne, Australia)
Talk, 52nd Population Genetics Group (Oxford, UK)
- 2018 Talk, The Genetics Society’s Autumn Symposium “Genotype to Phenotype to Fitness” (Exeter, UK)
Talk, UCL GEE Postgraduate Symposium (London, UK)
Talk, 51st Population Genetics Group (Bristol, UK)
- 2017 Talk, 26th European Society for Evolutionary Biology (Groningen, Netherlands)
Poster, UCL GEE Postgraduate Symposium (London, UK)
- 2015 Talk, European Meeting of PhD Students in Evolutionary Biology (Stirling, UK)
Poster, Quantitative Genomics (London, UK)
Talk, UCL GEE Postgraduate Symposium (London, UK)
Talk, NERC DTP Panel (UCL)

LEADERSHIP

- 2024– Co-organiser, “EvoLunch” Seminar Series (ISTA)
- 2022–23 Co-organiser, SMBE Symposium “Genetics and Evolution of Sex Differences” (online)
- 2020–21 Co-organiser, School of Biological Sciences Seminar Series (Monash)
- 2019–21 ECR representative, School of Biological Sciences “Evolution” Theme (Monash)
- 2016–18 Co-organiser, UCL GEE Friday Seminars for Young Researchers (UCL)
- 2016 Co-organiser, London Centre for Ecology & Evolution Summer Symposium: “War & Peace: The Dynamics of Evolutionary Conflict” (London)

TEACHING

- 2024–25 Tutor, “Population genetics: the basics” PhD course (ISTA)
- 2020–21 Co-leader, “Foundations of Evolutionary Biology” PhD course in population and quantitative genetics (Monash)
- 2019–21 Guest lecturer, Evolutionary & Ecological Genetics (Monash), Genomics & Population Genetics (Monash)
- 2015–20 Tutor, Genomics & Population Genetics (Monash), Evolutionary & Ecological Genetics (Monash), Sex Genes & Evolution (UCL), Computational Biology (UCL), Evolutionary Genetics (UCL)

SUPERVISION

2021–22 Naarah Bovingdon (Honours, Monash)
Yasmine McDonough (Honours, Monash)
Natalie Schmiedl (Undergraduate, Monash)
2020 Justyna Cyza (Undergraduate, Monash)
2019 Isobel Beasley (Undergraduate, Monash)
2018 Olivia Davidson (MRes, UCL)
2016 Harvi Pawar (Undergraduate, UCL)
Didem Snaith (Undergraduate, UCL)
Max Houghton (MRes, UCL)
2015 Sadé Bates (Msci, UCL)

REVIEWING

2019– *PNAS, Nature Ecology and Evolution, PLOS Biology, PLOS Genetics, Molecular Biology and Evolution, The American Naturalist, Proceedings B, Genome Biology and Evolution, Evolution Letters, Genetics, Evolution, Journal of Evolutionary Biology, Behavioural Ecology and Sociobiology, Heredity*
National Science Foundation (USA), Human Frontiers Science Program
Postdoctoral Fellowships, The Austrian Academy of Sciences DOC fellowships (Austria)

PUBLIC ENGAGEMENT

2020 *Evolution Letters* research blog
2018 Scientific expert for ‘Agonism/Antagonism’ art exhibition at UCL Grant Museum of Zoology
2016–17 *The Genetics Society* Summer newsletter
2014–17 Tutor, “Generating Genius” volunteer programme to support STEM secondary school students from low socio-economic backgrounds
2009–13 Leader, “Roots & Shoots” volunteer programme to communicate scientific and environmental issues to primary school children

TRAINING & WORKSHOPS

2017–24 ESEB Special Topics Network (Lund, Sweden; Montpellier, France; Ingelheim am Rhein, Germany)
2019–20 GENETICS Peer Review Training Programme (online)
2015 Guarda Summer School (Guarda, Switzerland)

REFEREES

Tim Connallon Lecturer, School of Biological Sciences, Monash University (Melbourne, Australia). **E:** Tim.connallon@monash.edu

Max Reuter Professor, Dept. of Genetics Evolution & Environment, University College London (London, UK). **E:** m.reuter@ucl.ac.uk

Beatriz Vicoso Professor, Institute of Science and Technology Austria (Vienna, Austria). **E:** k.fowler@ucl.ac.uk