Julien Devilliers

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Current position

- **PhD candidate** in Genetics, "Molecular characterisation and evolution of the sensory system in mosquitoes" (University of Leicester, Leicester, UK) 09/2021-now (Viva 9/12/2024). Supervisor: Roberto Feuda (Department of Genetics, Genomics and Cancer Sciences, University of Leicester, UK).

Previous research experiences

- "*Evolution of colour pattern and visual abilities in* Morpho *butterflies*" (MSc, 2021, 5 months). Supervisors: Violaine Llaurens and Vincent Debat (ISYEB – MNHN/CNRS)

- Review on "*The evolution of vision in butterflies: from molecules to ecology"* (MSc, 2020, 2 months). Supervisors: Vincent Debat and Violaine Llaurens (ISYEB – MNHN/CNRS)

- *"Molecular phylogeny of* Perisphaerus *genus (Blaberidea, Perisphaerinae)"* (BSc, 2019, 1 month). Supervisor: Frédéric Legendre (ISYEB – MNHN)

Other academic roles

- 09/2022-09/2024 – Post-Graduate Researcher representative of the Department of Genetics and Genome Biology (University of Leicester, UK)

- 2023 – Co-organiser Neurogenetics group scientific retreat (Chester, UK)

Conferences

- Talk "Evolution of the sensory system in dipterans and the origin of hematophagy" at Ento22 (Royal Entomological Society, 2022, Lincoln, UK)

- Poster "Evolution of the sensory system in mosquitoes" at EuroEvoDevo2022 (European Society for Evolutionary Developmental Biology, 2022, Naples, Italy)

- Poster "Multiple emergences of hematophagy in Diptera: Is there a genetic background required for such behaviour?" at SMBE2023 (Society of Molecular Biology and Evolution, 2023, Ferrara, Italy)

- Talk "A*nopheles gambiae*, male vs. female: a single cell transcriptomics approach" at Ento23 (Royal Entomological Society, 2023, Penryn, UK)

- Talk "Molecular evolution of vision in mosquitoes" at 3rd Joint Congress on Evolutionary Biology (ESEB/ASN/SSB/SSE, 2024, Montréal, Canada)

- Talk "Molecular evolution of vision: combining single-cell, bulk RNA-seq and microscopy to unravel the visual system in mosquitoes." at Ento24 (Royal Entomological Society, 2024, Liverpool, UK)

Presentations as invited speaker

- 23/03/2023 – Lab visit team Evolution et Développement des Variations Phénotypiques (MNHN, Paris, France) “Evolution of the sensory system and the emergence of blood feeding behaviour in Diptera”

- 11/01/2024 – Vice-chancellor’s visit Department of Genetics and Genomes Biology (University of Leicester, Leicester, UK) “Molecular investigation of the sensory system in mosquitoes”

- 16/05/2024 – Lab visit Centre for Advance Study of Collective Behaviour (University of Konstanz, Konstanz, Germany) “A multidisciplinary approach of the evolution of vision in butterflies and mosquitoes”

Student supervision

- Harini Suresh (MSc, 2023) - Molecular investigation of vision and sexual dimorphism in the Malaria mosquito, *Anopheles gambiae*

- Ruman Khalid (MSc, 2024) – Mapping visual proteins in the Malaria mosquito, *Anopheles gambiae*

Teaching

- Demonstrator BS1050: From Individuals to Populations - An Introduction to Genetics (UoL)

- Introduction to R for PhD students (UoL)

- First year statistics [adapted for PhD students with Eamonn Mallon] (UoL)

- Demonstrator BS2009: Genomes (UoL)

Outreach

- Pint of science 2023 – Vision in butterflies and evolution of colour patterns in mimicry communities

- AutumnFest 2023 – Presentation mosquitoes at the Alumni day at University of Leicester

Publications

Zadra, N.; Tatti, A.; Silverj, A.; Piccinno, R.; **Devilliers, J**.; Lewis, C.; Arnoldi, D.; Montarsi, F.; Escuer, P.; Fusco, G.; et al. Shallow Whole-Genome Sequencing of Aedes japonicus and Aedes koreicus from Italy and an Updated Picture of Their Evolution Based on Mitogenomics and Barcoding. Insects 2023, 14, 904. https://doi.org/10.3390/insects14120904

Devilliers J., Marshall H., Warren B., Kyriacou C.P., Araripe L.O., Bruno R.V., Rosato E., Feuda R. "Molecular correlates of swarming behaviour in *Aedes aegypti* males." Biology Letters 20, no. 10 (2024): 20240245. https://doi.org/10.1098/rsbl.2024.0245

Devilliers J., Warren B., Rosato E., Kyriacou C.P., Feuda R.; Hematophagy generates a convergent genomic signature in mosquitoes and sandflies, bioRxiv 2024.08.07.607008; doi: https://doi.org/10.1101/2024.08.07.607008 (submitted to Genome Biology and Evolution, 2024).