



**Roberto Feuda**

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● **EDUCATION & TRAINING**

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01/10/2009 - 13/04/2013 - MAYNOOTH, IRELAND

**PHD IN BIOLOGY**- NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH

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Evolutionary Biology and Bioinformatics

Level in EQF: 8

07/07/2007 - 20/07/2009 - ROME, ITALY

**M.SC IN EVOLUTIONARY BIOLOGY**- UNIVERSITY OF ROME SAPIENZA

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Evolutionary Biology

Level in EQF: 7

01/10/2001 - 22/02/2007 - ROME, ITALY

**B.SC IN BIOLOGY**- UNIVERSITY OF ROME SAPIENZA

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Biology

Level in EQF: 6

● **WORK EXPERIENCE**

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09/2025 - CURRENT - BOLOGNA, ITALY

**ASSOCIATE PROFESSOR** UNIVERSITY OF BOLOGNA

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Research in Genomics, Molecular Biology, Developmental Biology and Phylogenomics

Teaching: Cellular and Developmental Biology and Comparative Anatomy

Principal Investigator

01/2025 - 09/2025 - LONDON, UNITED KINGDOM

**VISITING SCIENTIST** FRANCIS CRICK INSTITUTE

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Sabbatical in the lab of James Briscoe FRS research in developmental Biology and stem cell biology

08/2023 - 09/2025 - LEICESTER, UNITED KINGDOM

**ROYAL SOCIETY UNIVERSITY RESEARCH FELLOW/ASSOCIATE PROFESSOR** UNIVERSITY OF LEICESTER

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Research in Genomics, Molecular Biology, Developmental Biology and Phylogenomics

Principal Investigator

01/2024

**VISITING SCIENTIST** UNIVERSITY OF PAVIA

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10/2019 - 07/2023 - LEICESTER, UNITED KINGDOM

## LECTURER/ROYAL SOCIETY UNIVERSITY RESEARCH FELLOW UNIVERSITY OF LEICESTER

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Research in Genomics, Molecular Biology, Developmental Biology and Phylogenomics  
Principal Investigator

01/2018 - 09/2019 - BRISTOL, UNITED KINGDOM

### ROYAL SOCIETY UNIVERSITY RESEARCH FELLOW UNIVERSITY OF BRISTOL

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Developmental Biology; Systems Biology; Evolutionary Biology; Gene Regulatory Networks  
Principal Investigator

04/2013 - 12/2017 - PASADENA, UNITED STATES

### POSTDOCTORAL SCHOLAR CALIFORNIA INSTITUTE OF TECHNOLOGY

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Developmental Biology; Systems Biology; Gene Regulatory Network  
Supervisor: Prof Eric Davidson

01/2013 - 03/2013 - OXFORD, UNITED KINGDOM

### POSTDOCTORAL SCHOLAR UNIVERSITY OF OXFORD

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Opsin evolution  
Supervisor: Prof Peter Holland, FRS

## ● PROJECTS

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01/01/2026 - CURRENT

**The evolution of neurogenic Gene Regulatory Network** Funding Source: Fondo Italiano per la Scienza | Total Amount: €1,900,000 | Role: PI

01/10/2024 - CURRENT

**Illuminating the origin of light detection in animals** Funding Source: Leverhulme Trust | Total Amount: £450,000 | Role: Co-I

13/12/2023 - CURRENT

**Evolution of protein multifunctionality** Funding Source: Human Frontier Science Program | Total Amount: \$1,500,000 | Role: PI and Coordinator

01/01/2023 - 30/09/2025

**The origin and evolution of serotonergic neurons** Funding Source: The Royal Society | Total Amount: £495,000 | Role: PI

01/01/2018 - 29/09/2025

**How many times did the nervous system evolve?** Funding Source: The Royal Society | Total Amount: £653,000 | Role: PI

01/10/2021 - 29/09/2025

**The genomic and neuronal diversity in ctenophore** Funding Source: The Royal Society | Total Amount: £104,000 | Role: PI

01/10/2019 - 29/09/2025

**The Molecular origin of Vision** Funding Source: The Royal Society | Total Amount: £150,000 | Role: PI

01/10/2020 - 29/09/2025

**The development of neurons at single cell level** Funding Source: The Royal Society | Total Amount: £95,000 | Role: PI

01/10/2019 - 31/12/2022

**The evolution of neurogenic tool kit** Funding Source: The Royal Society | Total Amount: £80,120 | Role: PI

01/01/2019 - 31/12/2019

**The patterning of neuron in sea urchin larvae** Funding Source: The Royal Society | Total Amount: £20,000 | Role: PI

01/10/2009 - 30/09/2013

**Comparative genomics and early animal evolution** Funding Source: Irish Council for Science and Engineering | Total Amount: £64,000 | Role: PI

## ● HONOURS AND AWARDS

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31/12/2018 The Royal Society

**Royal Society University Research Fellow** A University Research Fellowship is a highly competitive award that funds a researcher's salary and research costs, enabling them to establish an independent research programme at a university.

31/12/2015 National Academy of Sciences (USA)

**National Academy of Sciences travels support** Travel Support (competitive call): funding awarded through a competitive process to attend a conference on gene regulatory networks (GRNs).

31/12/2012 Woods Hole Marine Biology Laboratory

**Woods Hole Marine Biology Laboratory, Gene Regulatory Network travel support** Woods Hole Marine Biological Laboratory, Gene Regulatory Network travel support (~€1,000): competitive travel award to attend a specialist course/conference on gene regulatory networks.

31/12/2012 Society for Molecular Biology and Evolution, Dublin 2012

**Best poster Society for Molecular Biology and Evolution** Best Poster, SMBE 2012: award recognizing the highest-quality poster presentation at an international conference in molecular biology and evolution.  
description...

31/12/2011 Systematic Association

**Systematics Association travel grant** Systematics Association Belfast travel grant (~€300): competitive grant to support attendance at a scientific meeting in systematics/evolutionary biology.

31/12/2008 University of Rome Sapienza

**Fellowship from the Italian Ministry of Science, Education and Research** Write here the Fellowship from the Italian Ministry of Science, Education and Research (~€3,000): competitive fellowship supporting research training and academic development.

31/12/2007 University of Rome Sapienza

**Summer Research Fellowship University of Rome Sapienza** Summer Research Fellowship, University of Rome Sapienza (~€1,000): competitive summer studentship supporting early-stage research experience.

31/12/2007 National University of Ireland Maynooth

**Eureka Summer School in Bioinformatics** Eureka Summer School in Bioinformatics (~€3,000): competitive fellowship supporting participation in an intensive training programme in bioinformatics.

## ● CONFERENCES & SEMINARS

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01/2026 Rome, Italy

**Sapienza University of Rome (invited talk)**

03/2025 London, UK

**The Francis Crick Institute (invited talk)**

03/2025 London, UK

**University College London (invited talk)**

09/2024 London, UK

**Imperial College London (invited talk): invited seminar as part of a faculty job interview**

03/2024 Padova, Italy

**University of Padova (invited talk)**

01/2024 Pavia, Italy

**University of Pavia (invited talk)**

11/2023 Reno, USA

**University of Reno, Nevada (invited talk)**

03/2023 London, UK

**Imperial College London (invited talk): invited seminar as part of a faculty job interview**

03/2023 Lausanne, Switzerland

**EPFL Lausanne (invited talk)**

07/2022 Roscoff, France

**Monod Conference on the Origin of Metazoa (invited talk)**

07/2022 Naples, Italy

**Euro Evo-Devo (invited talk)**

11/2019 Bergen, Norway

**SARS Centre for Marine Molecular Biology (invited talk)**

04/2019 Heidelberg, Germany

**The evolution and identify of cell types Symposium EMBL**

02/2019 London, UK

**Crick Beddington Developmental Biology Symposium, The Francis Crick Institute**

12/2018 Nottingham, UK

**University of Nottingham (invited talk)**

10/2018 Woods Hole, MA, USA

**XXV Developmental Biology of Sea Urchin, Plenary Speaker**

10/2018 Bristol, UK

**University of Bristol (invited talk)**

09/2018 Exeter, UK

**University of Exeter (invited talk)**

03/2018 Cambridge, UK

**MRC Laboratory for Molecular Biology (invited talk)**

04/2017 Woods Hole, MA, USA

**XXIV Developmental Biology of Sea Urchin, Plenary Speaker**

03/2017 Scottsdale, AZ, USA

**Mayo Clinic Scottsdale (invited talk)**

06/2016 Pasadena, CA, USA

**Annual Retreat of the Division of Biology and Biological Engineering, California Institute of Technology**

02/2016 Pasadena, CA, USA

**Gene regulatory network workshop, California Institute of Technology (invited talk)**

10/2015 Woods Hole, MA, USA

**XXIII Developmental Biology of Sea Urchin**

06/2012 Dublin, Ireland

**Society for Molecular Biology and Evolution**

05/2012 Venice, Italy

**EMBO Workshop Evolution in time of genomics**

06/2011 Oklahoma City, OK, (USA)

**Society for Evolutionary Studies**

● **SUPERVISION- PHD AND POSTDOC**

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2025 - CURRENT

**Filippo Nicolini | Postdoctoral Scholar |**

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2025 - CURRENT

**Ruman Khalid | PhD student |**

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2023 - CURRENT

**Dong Feng Wang | Postdoc scholar |**

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2023 - CURRENT

**Frannie Stephens | PhD student |**

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2021 - CURRENT

**DaeNia La Rode | PhD student |**

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2021 - 2025

**Clifton Lewis | PhD student |**

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Now Postdoc at the University of Galway

2021 - 2025

**Julien Devilliers | PhD student |**

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Now Postdoc at the Virginia Tech

2020 - 2025

**Matthew Gouly | PhD student |**

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Now Postdoc at KU Leuven

2019 - 2024

**Alessandra Aleotti | PhD student |**

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Now Postdoc at the University of Southampton

2020 - 2022

**Carlos Rivera Rivera | Marie Curie Fellow |**

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Now Postdoc at the University of Manchester

2020 - 2021

**Maryam Ghaffari Saadat | Postdoc scholar |**

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Now Postdoc at the University of Manchester

● **OTHER RESPONSABILITIES**

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2023 - CURRENT

**Faculty at the Gene Regulatory Networks course in Woods Hole (USA)**

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2018 - CURRENT

**Editorial Board of the journal Proceeding of the Royal Society B**

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2009 - CURRENT

**Editorial activity: Nature Comm, PNAS, Development, MBE, GBE, BMC journals, Proceeding of the Royal Society B, Biological Journal of the Linnean Society, PLoS Biology and many others**

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2026

**Thesis defense committee; External opponent. Institut de la Mer de Villefranche-sur-mer, Sorbonne Université, France**

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2023

**Thesis defense committee; External opponent. University of Genova, Italy**

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2023

**Organization of a conference on Gene Regulatory Network in Development and Disease, St Catherine's College, Oxford, UK, co-organized with Tatjana Sauker-Spengler, Paola Oliveri and Stefan Hoppler**

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2023

**Organization of a symposium on the Evolution of the sensory System, SMBE in Ferrara with Lino Ometto and Belinda Chang**

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2021

**Thesis defense committee; External opponent. Queen's Mary University, UK**

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2020

**Organization of EvolMar conference (scientific committee)**

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2020

**Thesis defense committee; External opponent. University of Bergen, Norway**

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2019

**Organization of a symposium on the Molecular Basis of Major transition in Biology, SMBE in Manchester with Jordi Paps and Mary O'Connell**

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2019

**Thesis defense committee; External opponent. SARS, Norway**

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2018

**Organizer of the British Echinoderm Meeting, Bristol**

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2018

**Organization of the Systematic Association conference, Bristol**

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● **MEDIA COVERAGE SELECTED**

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**The Economic Times**

<https://economictimes.indiatimes.com/magazines/panache/genes-related-to-learning-memory-aggression-date-back-to-more-than-650-million-years/articleshow/101841979.cms>

**EurekaAlert!**

<https://www.eurekaalert.org/news-releases/995657>

**The Guardian**

<https://www.theguardian.com/science/2017/nov/30/evolution-row-ends-as-scientists-declare-sponges-to-be-sister-of-all-animals>

**The Time**

<https://www.thetimes.co.uk/article/humble-sea-sponge-is-ancestor-of-all-humanity-ksw6gn37b>

**The Newsweek**

<http://www.newsweek.com/sponges-are-ancestors-all-animals-728657>

**The Independent**

<https://www.independent.co.uk/news/science/humans-sponge-creatures-evolution-750-million-years-ago-ancestor-species-a8087056.html>

**Il Corriere della Sera**

[http://www.corriere.it/opinioni/17\\_dicembre\\_04/spugne-biologia-sulle-nostre-origini-a201620a-d851-11e7-83d0-5335217d8231.shtml](http://www.corriere.it/opinioni/17_dicembre_04/spugne-biologia-sulle-nostre-origini-a201620a-d851-11e7-83d0-5335217d8231.shtml)

**Scientific American**

<https://blogs.scientificamerican.com/thoughtomics/animal-vision-evolved-700-million-years-ago/>

● **SKILLS**

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mentor individuals | write scientific publications | promote the transfer of knowledge | discuss research proposals | publish academic research

● **LANGUAGE SKILLS**

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Mother tongue(s): **ITALIAN**

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**UNDERSTANDING**

**SPEAKING**

**WRITING**

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Listening

Reading

Spoken production Spoken interaction

ENGLISH	C2	C2	C2	C2	C2
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## ● PUBLICATIONS

### [Weckle is a molecular switch that diverts Toll signalling from innate immunity towards growth by engaging Yki](#)

Perez-Sanchez, M.D., Li, G., Moncrieffe, M., Rojo-Cortes, F., Malinowska, K., Sample, E., Maddick, M., Moreira, M., Connolly, E.C., Parsons, A., Feuda, R., Gay, N.J., Hidalgo, A. bioRxiv

### [Glucocorticoid Treatment Dampens Kynurenine Pathway Activation and Cytokine Release in Immune Stimulated Human Microglia](#)

Esposito Soccoio, M., Mason, R. P., Devilliers, J., Feuda, R., Collier, M. E. W., Giorgini F. International Journal of Tryptophan Research

### [Evolutionarily Conserved Transcriptional Regulators Control Monoaminergic Neuron Development](#)

2025

Lewis, C.; Goulty, M.; Wroblewska, A.; Croxall, N.; Onion, D.; Robinson, S.; Zinzen, R. P.; Solana, J.; Kyriacou, C. P.; Rosato, E.; Feuda, R. . bioRxiv

### [Monoaminergic Neurons Share Transcriptional Identity across Bilateral Animals](#)

2025

3. Goulty, M.; Lewis, C.; Nicolini, F.; Khalid, R.; Syed, H.; Oliveri, P.; Thomas, M. G.; Rosato, E.; Feuda, R. bioRxiv

### [Molecular Characterisation of Neurons across Animals Identifies Conserved Gene Expression](#)

2025

Rivera-Rivera, Carlos J., Feuda, R, and Pisani, D. bioRxiv

### [A Pre-Bilaterian Origin of Phototransduction Genes and Photoreceptor Cells](#)

2025

Aleotti, A., Flaviano G., and Feuda, R bioRxiv

### [Molecular and Functional Divergence of Zebrafish Sox Paralogues Controlling Endoderm Formation and Left-Right Patterning](#)

2025

Johal, S.; Elsayed, R.; Wang, D.; Talbot, C. D.; Feuda, R.; Panfilio, K. A.; Nelson, A. C. Genome Biology and Evolution

### [Single-Nucleus Transcriptomic Atlas of the Adult Aedes Aegypti Mosquito](#)

2025

8. Goldman, O.V., DeFoe A.E., Qi Y, Jiao Y., Weng S, Leah Hourie-Zeevi, Priyanka Lakhiani, ... Feuda, R. ... et al. . Cell

### [An Ocean of Opsins](#)

2025

De Vivo, G.; Pelletier, E.; Feuda, R.; D'Aniello, S. Genome Biology and Evolution

### [Hematophagy generates a convergent genomic signature in mosquitoes and sandflies](#)

2025

10. Devilliers, J., Warren, B., Rosato, E., Kyriacou, C., and Feuda, R Genome Biology and Evolution

### [An Optimized SPLiT-Seq Protocol for Insects](#)

2025

Devilliers, J., Emili, E., Vanni, V., Solana, J., Feuda, R Insect Genomics: Methods and Protocols. Springer US, New York, NY, pp. 259–272

### [Molecular correlates of swarming behaviour in Aedes aegypti males](#)

2024

Devilliers, J., Marshall, H., Warren, B., Kyriacou, C.P., Araripe, L.O., Bruno, R.V., Rosato, E., and Feuda, R. Biology Letters

### [The origin, evolution and molecular diversity of the chemokine system](#)

2024

Aleotti, A., Goulty, M., Lewis, C., Giorgini, F., & Feuda, R Life Science Alliance

### [Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary](#)

## [consequences](#)

Yu, D., Ren, Y., Uesaka, M., Beavan, A. J. S., Muffato, M., Shen, J., Li, Y., Sato, I., Wan, W., Clark, J. W., Keating, J. N., Carlisle, E. M., Dearden, R. P., Giles, S., Randle, E., Sansom, R. S., Feuda, R., et al. *Nature Ecology & Evolution*

## [Shallow Whole-Genome Sequencing of \*Aedes japonicus\* and \*Aedes koreicus\* from Italy and an Updated Picture of Their Evolution Based on Mitogenomics and Barcoding](#)

Zadra, N., Tatti, A., Silverj, A., Piccinno, R., Devilliers, J., Lewis, C., Arnoldi, D., Montarsi, F., Escuer, P., Fusco, G., De Sanctis, V., Feuda, R., Sánchez-Gracia, A., Rizzoli, A., & Rota-Stabelli, O. *Insects*

## [BRA<sup>FV600E</sup>-mutated serrated colorectal neoplasia drives transcriptional activation of cholesterol metabolism](#) 2023

Rzasa, P., Whelan, S.,..., Feuda, R., et al. <https://doi.org/10.1038/s42003-023-05331-x>. *Communications Biology*

## [The monoaminergic system is a bilaterian innovation](#) 2023

16. Goulty, M., Botton-Amiot, G., Rosato, E., Sprecher, S. G., & Feuda, R. *Nature Communications*

## [Duplication and Losses of Opsin Genes in Lophotrochozoan Evolution](#) 2023

De Vivo, G., Crocetta, F., Ferretti, M., Feuda, R., & D'Aniello, S. *Molecular Biology and Evolution*

## [Phylogenomics: Is less more when using large-scale datasets?](#) 2022

Pisani, D., Rossi, M. E., Marlétaz, F., & Feuda, R. *Current Biology*

## [Homologous gene regulatory networks control development of apical organs and brains in Bilateria](#) 2022

Feuda, R., & Peter, I. S. *Science Advances*

## [Resolving tricky nodes in the tree of life through amino acid recoding](#) 2022

Giacomelli, M., Rossi, M. E., Lozano-Fernandez, J., Feuda, R., & Pisani, D. *iScience*

## [The temporal dynamics of the sea urchin regulome](#) 2022

Feuda, R. *Biology Open*

## [Rethinking Opsins](#) 2022

Feuda, R., Menon, A. K., & Göpfert, M. C. *Molecular Biology and Evolution*

## [Profiling cellular diversity in sponges informs animal cell type and nervous system evolution](#) 2021

23. Musser, J. M., Schippers, K. J., Nickel, M., Mizzon, G., Kohn, A. B., Pape, C., Hammel, J. U., Wolf, F., Liang, C., Hernández-Plaza, A., Achim, K., Schieber, N. L., Francis, W. R., R. S. V., Kling, S., Renkert, M., Feuda, R. et al. *Science*

## [Ciliary photoreceptors in sea urchin larvae indicate pan-deuterostome cell type conservation.](#) 2021

24. Valencia, J. E., Feuda, R., Mellott, D. O., Burke, R. D., & Peter, I. S. Valencia, J. E., Feuda, R., Mellott, D. O., Burke, R. D., & Peter, I. S.

## [Genomic adaptations to aquatic and aerial life in mayflies and the origin of insect wings](#) 2020

25. Almudi, I., Vizueta, J., Wyatt, C. D. R., de Mendoza, A., Marlétaz, F., Firbas, P. N., Feuda, R., Masiero, G., Medina, P., Alcaina-Caro, A., et al. *Nature Communications*

## [Phylogenomics of Opsin Genes in Diptera Reveals Lineage-Specific Events and Contrasting Evolutionary Dynamics in \*Anopheles\* and \*Drosophila\*](#)

Feuda, R., Goulty, M., Zadra, N., Gasparetti, T., Rosato, E., Segata, N., Rizzoli, A., Pisani, D., Ometto, L., & Stabelli, O. R. *Genome Biology and Evolution*

## [Sensory Neuroscience: A Taste for Light and the Origin of Animal Vision](#) 2020

Pisani, D., Rota-Stabelli, O., & Feuda, R. *Current Biology*

**[A Novel Approach to Investigate the Effect of Tree Reconstruction Artifacts in Single-Gene Analysis Clarifies Opsin Evolution in Nonbilaterian Metazoans](#)**

Fleming, J. F., Feuda, R., Roberts, N. W., & Pisani, D. *Genome Biology and Evolution*

**[Improved Modeling of Compositional Heterogeneity Supports Sponges as Sister to All Other Animals](#)**

2017

Feuda, R., Dohrmann, M., Pett, W., Philippe, H., Rota-Stabelli, O., Lartillot, N., Wörheide, G., & Pisani, D. . *Current Biology*

**[Reply to Halanych et al.: Ctenophore misplacement is corroborated by independent datasets.](#)** 2016

Pisani, D., Pett, W., Dohrmann, M., Feuda, R., Rota-Stabelli, O., Philippe, H., Lartillot, N., & Wörheide, G. *Proceedings of the National Academy of Sciences*

**[Conservation duplication and divergence of five opsin genes in insect evolution](#)** 2016

Feuda, R., Marletaz, F., Bentley, M. A., & Holland, P. W. *Genome Biology and Evolution*

**[Functional opsin retrogene in nocturnal moth](#)** 2016

Xu, P., Feuda, R., Lu, B., Xiao, H., Graham, R. I., & Wu, K. *Mobile DNA*

**[Genomic data do not support comb jellies as the sister group to all other animals](#)** 2015

Pisani, D., Pett, W., Dohrmann, M., Feuda, R., Rota-Stabelli, O., Philippe, H., Lartillot, N., & Wörheide, G. *Proceedings of the National Academy of Sciences*

**[Tracing the evolutionary history of the mole \*Talpa europaea\* through mitochondrial DNA phylogeography and species distribution modelling](#)**

Feuda, R., Bannikova, A. A., Zemlemerova, E. D., Febbraro, M. D., Loy, A., Hutterer, R., Aloise, G., Zykov, A. E., Annesi, F., & Colangelo, P. *Biological Journal of the Linnean Society*

**[Phylogenetic Signal Dissection Identifies the Root of Starfishes](#)** 2015

Feuda, R., & Smith, A. B. *PLoS One*

**[The comb jelly opsins and the origins of animal phototransduction](#)** 2014

Feuda, R., Rota-Stabelli, O., Oakley, T. H., & Pisani, D. *Genome Biology and Evolution*

**[Metazoan opsin evolution reveals a simple route to animal vision](#)** 2012

Feuda, R., Hamilton, S. C., McInerney, J. O., & Pisani, D. *Proceedings of the National Academy of Sciences*

**[Resolving phylogenetic signal from noise when divergence is rapid: a new look at the old problem of echinoderm class relationships](#)**

Pisani, D., Feuda, R., Peterson, K. J., & Smith, A. B. *Molecular Phylogenetics and Evolution*