

Curriculum vitae

Aiswarya Prasad

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I am keen on leveraging microbiome engineering and synthetic biology to tackle critical challenges in health and agriculture. My goal is to integrate cutting-edge sequencing, multi-omic approaches, experimental approaches and automation to understand and manipulate complex microbial communities effectively.

Education

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| <i>Ph.D. in Quantitative Biology</i> University of Lausanne, Switzerland Thesis title: Ecology and Evolution of the honeybee gut microbiome | 2020 – Present |
| <i>BS and MS in Biology (4+1 yrs)</i> Indian Institute of Science, Bangalore | 2015 – 2020 |

Fellowships and Awards

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| <i>Faculty of Biology and Medicine (FBM) PhD Fellowship</i> International PhD fellowship award granted by the Faculty of Biology and Medicine (FBM), University of Lausanne | 2020 – 2023 |
| <i>Mathilde Agassiz scholarship</i> A scholarship of CHF 70k awarded to one chosen candidate recommended by the FBM. | 2020 – 2021 |
| <i>KVPY Fellowship</i> Stipend and contingency to fund BSc and MS awarded by the Indian government (All-India Rank: 335) | 2015 – 2020 |
| <i>Bronze Medal in iGEM Competition</i> Boston, USA Co-founded the first team from the institute and won a bronze medal at the iGEM competition. Co-secured 3 grants for research and travel from the Wellcome Trust Indian Alliance, the Govt. of India, DBT and the State government of Karnataka. | 2016 |

Publications

Mazel, F., Prasad, A., Engel, P. (2024) Host specificity of gut microbiota associated with social bees: patterns and processes. *Microbiology and Molecular Biology Reviews* (In Press)

A Prasad A., Pallujam A. D., et al (2024). Symbiont loss and gain, rather than co-diversification shapes honeybee gut microbiota diversity and function. [bioRxiv](https://doi.org/10.1101/2024.09.11.612390), 2024.09.11.612390 (In Review)

Baud, G. L., Prasad, A., Ellegaard, K. M., & Engel, P. (2023). *Turnover of strain-level diversity modulates functional traits in the honeybee gut microbiome between nurses and foragers*. [Genome Biology](https://doi.org/10.1093/gbe/ebad011), 24(1), 283.

Sarton-Lohéac, ... , Prasad, A., Sommerville, V., SAGE class 2019-2020 and 2020-2021, Bonilla-Rosso, G., & Engel, P. (2023). *Deep divergence and genomic diversification of gut symbionts of neotropical stingless bees*. [Mbio](https://doi.org/10.1093/mbe/mbad011), 14(2), e03538-22.

Invited Talks

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| <i>The Local Pangenome</i> Alicante, Spain Variation and specialization of structure and function of gut microbial community across host species | Oct 2023 |
| <i>Academic Seminar Series</i> School of Science, Monash University Malaysia Evolutionary and functional insight into gut microbial community diversity across honeybee species | Apr 2023 |

Conference Participation

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| <i>Gordon Research Conference and Seminar (Animal Microbe Symbiosis)</i> Lucca, Italy Poster: Evolutionary and functional insight into gut microbial community diversity across honeybee species using metagenomics | Jun 2023 |
| <i>CSHL Meeting: Microbiome</i> Cold Spring Harbor Laboratories, USA Poster: Whole-genome shotgun metagenomics reveals differences in gut microbiomes among honeybee species | Oct 2023 |
| <i>SymbNET PhD Summer School on Host-Microbe Symbiosis</i> Instituto Gulbenkian de Ciência, Lisbon Poster: Understanding the evolution of the gut microbiome across honeybee species | Jul 2022 |

Teaching

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| Teaching Assistant – SAGE (Sequence A GEnome) course <i>Masters-level course teaching bioinformatics through research</i> | 2021 - 2024 |
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Professional service

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| <i>Peer review of journal publications</i> <i>Ecological Monographs (1) and Insect Molecular Biology (1)</i> | 2023 – Present |
| <i>Workshop Evaluation Committee</i> <i>Workshop and tutorial selection for the BC2 (Basel Computational Biology Conference)</i> | Jan 2023 |
| <i>Local volunteer</i> <i>ISME-18 (International Society of Microbial Ecology) conference</i> | Aug 2022 |

Department service

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| <i>Organizing committee</i> Annual (DMF) Department Science Retreat | Sep 2023 |
| <i>DMF Faculty Hiring Committee</i> Postdoc/PhD Representative | May 2023 |

Outreach and Extracurricular engagement

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| Contributor - Methods in Microbiomics Set of guidelines and best practices for robust and reproducible pipelines | Jan 2024 |
| Open Science Meeting National center for competence in Research (NCCR) Microbiomes, Switzerland | Nov 2023 |
| Decolonizing North-South Research Collaboration Centre for Development and Environment, University of Bern | Aug 2022 |
| Moderator – Health and Data Privacy Committee iGEM India BioSummit (Online) | Jul 2020 |
| Delegate at United Nations Convention on Biological Diversity Sharm El-Sheikh, Egypt | Nov 2018 |

References

Philipp Engel
Professor, University of Lausanne
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Professor, Indian Institute of Science
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Florent Mazel
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