

## 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

<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

<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 – Nature communications)

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*, 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*, 14(2), e03538-22.

**Invited Talks**

<i>Microbiome Virtual International Forum</i> Online Evolution and Functional Potential of Gut Microbiota in Honeybees – a comparative metagenomics approach ( <a href="#">video link</a> )	Nov 2024
<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**

<i>Microbiome Virtual International Forum</i> Online Selected Talk: Evolution and Functional Potential of Gut Microbiota in Honeybees: A Comparative Metagenomic Approach	Nov 2024
<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**

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

<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

*Organizing committee* Sep 2023  
Annual (DMF) Department Science Retreat

*DMF Faculty Hiring Committee* May 2023  
Postdoc/PhD Representative

## Outreach and Extracurricular engagement

[Contributor](#) - Methods in Microbiomics Jan 2024  
Set of guidelines and best practices for robust and reproducible pipelines

Open Science Meeting Nov 2023  
National center for competence in Research (NCCR) Microbiomes, Switzerland

Decolonizing North-South Research Collaboration Aug 2022  
Centre for Development and Environment, University of Bern

[Moderator](#) – Health and Data Privacy Committee Jul 2020  
iGEM India BioSummit (Online)

[Delegate](#) at United Nations Convention on Biological Diversity Nov 2018  
Sharm El-Sheikh, Egypt

## References

Philipp Engel  
Professor, University of Lausanne  
[philipp.engel@unil.ch](mailto:philipp.engel@unil.ch)

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