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Pavlo Hrab

Date of birth: 09.05.1998

Summary

PhD candidate in Marine Microbiome Bioinformatics (WUR) with expertise at the interface of microbiology and computational science. Experienced in developing large-scale multi-omics pipelines to support cultivation strategies and applying machine learning to study bacterial lifestyles. Skilled in combining wet-lab isolation with computational analyses and in translating results across interdisciplinary teams

Work experience

Posdoctoral researcherWageningen University and Research
Bioinformatics group; Marnix Medema group

Jan 2026 - Sep 2026 Wageningen, Netherlands

PhD Candidate,
Wageningen University and Research
Bioinformatics group & Microbiology group
Supervisors: Detmer Sipkema; Marnix Medema

Jan 2022 - Dec 2025, Wageningen, Netherlands

Project: Meta'omic analysis of sponge microbiota

- Planned and led a **1-year long** uninterrupted bacteria isolation study in unconventional conditions, leading towards uncovering new physiological properties in isolates
- Built and analyzed **metagenomic and metatranscriptomic datasets** to characterize sponge-associated microbial communities and guide cultivation strategies
- Communicated my work in **7 multi-disciplinary** conferences, across microbiology, bioinformatics, and natural products fields
- Secured cross-institute collaboration with a manuscript in preparation

Technical Support Specialist,Information System Development

May 2021 - Oct 2022, Lviv, Ukraine

Education

MSc, Ivan Franko National University of Lviv Major - Genetics and Biotechnology. (diploma cum laude) Sep 2019 - Dec 2020 Lviv, Ukraine

BSc, Ivan Franko National University of Lviv Major - Biology.

Sep 2015 - Jun 2019 Lviv, Ukraine

Professional skills

Laboratory skills Cultivation and isolation of bacteria; PCR; DNA cloning.

Computational skills R; Python; bash; workflow automation (nextflow); phylogenetics; pan- and

metagenomics; (meta)transcriptomics; functional annotation; machine

learning; big data analysis.

public speaking at international conferences; scientific writing; project

coordination

Publications

 Zdouc, M. M., Blin, K., ... Hrab P., ... Medema, M. H. (2025). MIBiG 4.0: advancing biosynthetic gene cluster curation through global collaboration. Nucleic acids research, 53(D1), D678–D690. https://doi.org/10.1093/nar/gkae1115

- 2. Melnyk, S., **Hrab**, **P.**, & Ostash, B. (2022). Genomic potential of Streptomyces roseochromogenes NRRL 3504 for the production of specialized metabolites: analysis in silico. Visnyk of Lviv University. Biological series. 10.30970/vlubs.2022.87.04
- 3. **Hrab, P.**, Rückert, C., Busche, T., Ostash, I., Kalinowski, J., Fedorenko, V., Yushchuk, O., & Ostash, B. (2021). Complete genome sequence of Streptomyces cyanogenus S136, producer of anticancer angucycline landomycin A. 3 Biotech, 11(6), 282. https://doi.org/10.1007/s13205-021-02834-4

Conferences

- 1. **Pavlo Hrab**, Mitja Zdouc, Hans-Joachim Ruscheweyh, Shinichi Sunagawa, Detmer Sipkema and Marnix Medema "Marine Acidobacteriota as halogenation reservoirs: Discovery of novel biosynthetic gene clusters", ECMNP 2025, Piran, **Slovenia**, September 29 October 3, 2025 (oral talk)
- 2. **Pavlo Hrab**, Loureiro C., Schorn M., Sipkema D., Medema M. "Unraveling the Geodia barretti microbiome biosynthetic potential through the lens of cultivation", Natural Products (Meta) Genome Mining, Copenhagen, **Denmark**, May 30-31, 2022 (oral talk)

Awards and Honours

Summer School for Natural Products research

Invited speaker

August 28, 2025, Ukraine

Languages

English (advanced, C1), Ukrainian (native).

Hobbies

Reading, Water polo, Multiday trekking.