

Shalev Yaacov

PERSONAL DETAILS

Jerusalem, Israel
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ShalevYaacov0@gmail.com
GitHub: [Shalev-CompBio](#)
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Licensed driver and skipper (12, 13, 30), certified diver (2 stars)

EDUCATION

M.Sc. Genomics & Bioinformatics, Biotechnology | Hebrew University
2024 – Present

Recipient of the Faculty Excellence Scholarship (2024–2026).

Researching evolutionary genomics and disease-associated networks in Prof. Yuval Tabach's lab.

B.Sc. Marine Biotechnology | Ruppin Academic Center
2021 – 2024

GPA: 91/100

Conducted a year-long research project on octopus motor learning and neural plasticity.

LANGUAGES

Hebrew: Native

English: Fluent

Arabic: Basic

ATHLETICS

Israeli National Thai Boxing Champion (2012-2017):

4x National Champion.

Developed elite self-discipline, resilience, and performance under pressure.

Master's student in Genomics & Bioinformatics, Biotechnology program, at the Hebrew University of Jerusalem, Prof. Yuval Tabach lab. Awarded the Faculty of Biotechnology Excellence Scholarship (2024-6).

Holds a B.Sc. in Marine Biotechnology with an internship in Marine Agriculture, graduated with GPA of 91.

Recognized for academic excellence, sharp analytical skills, and quick learning. Combines effective communication, innovative thinking, and a strong results-driven mindset.

RESEARCH

M.Sc. Research | Prof. Yuval Tabach Lab | PRESENT

Utilizing Normalized Phylogenetic Profiling (NPP) across ~2,000 eukaryotic genomes to identify co-evolved gene modules and functional networks.

Predictive Framework: Developing an integrative pipeline using multi-omics data and machine learning to prioritize novel Inherited Retinal Disease (IRD) gene candidates.

Clinical Validation: Validating findings against a clinically curated dataset of 1,300+ unsolved IRD cases to resolve missing heritability.

Protein Engineering - Miruku Collab. | Prof. Oded Shoseyov Lab | 2025

Executed recombinant protein expression, purification, and characterization using *E.coli* and *Arabidopsis thaliana* systems.

Co-authored a book chapter on molecular farming for protein and fat production in the volume "*Alternative Dairy Products and Technologies*".

B.Sc. Project - Octopus Motor Learning | Dr. Nir Neshet Lab | 2024

Behavioral Research: Designed and analyzed experiments on octopus motor learning, investigating neural plasticity and strategy-based adaptive learning in complex motor tasks.

COMPUTATIONAL & LAB SKILLS

- Coding & Bioinformatics:** Python (Pandas, Scikit-learn), R (Statistics & Viz), Linux/Bash, Git/GitHub. Specialized in NPP (Normalized Phylogenetic Profiling), multi-omics integration, and comparative genomics.
- ML & Data Modeling:** Applying Supervised Learning (Naïve Bayes, XGBoost, Random Forest) for predictive ranking and functional module discovery. Strong foundation in algorithmic thinking and data-driven prioritization.
- Molecular Biology (Wet-Lab):** Expression of bovine Lactoferrin & human Keratin in *E. coli* and *Arabidopsis*; proficient in transgenic plant selection, transformation, FPLC purification, cloning, qPCR, and ELISA.
- Tools & Databases:** OMIM, ClinVar, gnomAD, HPO, Ensembl, NCBI, UCSC Genome Browser, AlphaFold, EnrichR, FUMA, Rummagene, STRING, Cytoscape, UniProt, GeneCards, PDB, PyMOL, BLAST, Clustal Omega.

MILITARY SERVICE

Squad Commander & Platoon Sgt | IDF Combat Engineering | 2017-2020

Led combat teams in field operations and managed the battalion operations room, oversaw the training and command of new recruits. Certified Heavy Engineering Equipment Commander (09) and Combat Pioneer Commander (08).

VOLUNTEER EXPERIENCE

United Hatzalah & Jerusalem Veterinary Center | 2021 - 2025

Monitored vitals and provided companionship for the elderly via the "Ten Kavod" project (~140 hrs/year).

Assisted in veterinary procedures and emergency cases, gaining hands-on experience in clinical management.