Barak Dror – Curriculum Vitae

Personal Information

Birth Date: August 4, 1989

Country of Birth: Israel

Family Status: Married

Address: Emek Hachola 88/7, Modiin

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Higher Education

2017-Current The Hebrew University of Jerusalem, Israel.
PhD in Biotechnology (expected graduation- Summer 2021)
Supervisors: Dr. Eddie Cytryn (ARO) and Prof. Eduard Jerkewitz (HUJI).
Thesis title: Elucidating the temporal dynamics and potential function of NRPS/PKS genes in the rhizosphere.

2019-2021 The Hebrew University of Jerusalem, Israel.
Master in Business Administration (MBA)- Biomed Entrepreneurship track

2015-2017 The Hebrew University of Jerusalem, Israel.
Agroecology and Plant Health, M.Sc., **Magna cum laude.**
Supervisors: Dr. Dani Eshel and Prof. Shlomo Sela, ARO, Israel.
Thesis title: Involvement of dextran synthesis in the pathogenicity of Leuconostoc mesenteroides.

2012-2015 Tel-Aviv University, Israel.
Biology- Ecology and Evolution, B.Sc.

Professional Experience

2020-Current **Teaching Assistant, 55873- Introduction to Medical Drug and Device Development, Biomed MBA, the Hebrew University of Jerusalem**

This MBA course introduces basic concepts in developing new drugs and medical device (identifying market need, market research, regulation, R&D, etc.). In this role, I support the course instructors, monitor and grade student assignments and reports and prepare new content.

2017-2020 **Founder and Manager, FaculTech Entrepreneurship Hub**

I initiated and co-founded FaculTech, an innovation hub and accelerator aimed toward undergraduate and graduate students in the domains of agriculture and food technologies. I co-founded the hub from scratch, including raising funds, building the annual program, managing its social media pages, developing a wide network of industry and academia professionals, and co-managing the first Agtech/Foodtech accelerator in Israel involving graduate students.

2018 **Data Science Intern, Indigo Agriculture Inc. (Boston, MA, USA)**

During a 3-months summer internship, I applied bioinformatics and statistical tools on bacterial genomic data to reveal and assess primary and secondary metabolism pathways. I was involved in building platforms for evaluating in-house genomic pipelines for research and development and for patentability of bacterial strains.

Professional Skills

Molecular Biology and Microbiology

- Nucleic acid extraction (DNA/RNA), PCR, qPCR, Flow Cytometry, RI-HPLC.
- Bacterial isolation and growing, inoculation assays.

Bioinformatics and Statistics

- Applying and developing pipelines for DNA and RNA sequence analysis (Meta-omics, short- and long-read sequencing).
- Linux, Python (data cleaning and analysis, applying ML methods using Scikit).
- Statistical analyses and data visualization using R+RStudio.

Soft skills

- Project management (prioritizing, organizing)
- Academic and non-academic writing (academic papers, grant proposals).
- Team building and leadership
- Communication- data analysis and visualization.

Other Activities

2021 **Selected Fellow**, Flagship Pioneering Fellows Program (Boston, MA)

2021 **Selected Participant**, Pillar VC Frequency.Grad Entrepreneurship Program

2017-2019 **Co-organizer**, Microbial Ecology Conference for Graduate Students
In this role I co-organized the annual 'Sandwich Club' conference, bringing together 100-150 graduate students and researchers in the field of microbial ecology from all across Israel.

Awards

2019 Winner, Smith Award for Outstanding Graduate Students (15,000$)

2019 Winner, 'Greenstein' Scholarship for Outstanding Graduate Students (3000$)

2019 Winner, 'Nathen Jaffe' Scholarship for Outstanding Graduate Students (3000$)

2018 Winner, Rieger Foundation Award for Outstanding Graduate Students (5000$)

2017 Winner, 'Lily Teper' Scholarship for Outstanding Graduate Students (3000$)

2017 Winner, 'Danziger' Scholarship for Outstanding Graduate Students (3000$)

Publications List (1st author only)

1. **Dror B**. et al. (2019) High levels of CO_2 induce the pathogenicity of lactic acid bacteria by up-regulating dextran-synthesis genes. Applied and Environmental Microbiology, 85(1), e00473-18.
2. **Dror, B.**, Jurkevitch, E., Cytryn E. (2020). State-of-the-art methodologies to identify antimicrobial secondary metabolites in soil bacterial communities-A review. Soil Biology and Biochemistry, 107838.
3. **Dror, B**.,Zhongqiang Wang, Sean F. Brady, Jurkevitch, E., Cytryn E. (2020). Elucidating the scope and potential function of non-ribosomal peptide and polyketide secondary metabolites in the root microbiome, mSystems (accepted).