

August 2023

1. Positions

2022-present **Independent researcher.** The Environmental Biogeochemical Processes Laboratory of Prof. Orit Sivan. Ben-Gurion university of the Negev, Department of Earth and Environmental Sciences.

Position title: *Microbiome of archaea and bacteria communities from lake and permafrost sediments: Methanogenesis, methane-oxidation, nitrogen-cycle and iron-manganese reducers.*

2018-present **Seminar Organizer.** The Kinneret Limnological Laboratory, Israel Oceanographic and Limnological Research (IOLR) Institution.

Position title: *Initiating and coordinating seminar talks with various guest scientists.*

2. Higher Education

2020-2022 **Post-doc.** The Kinneret Limnological Laboratory, Israel Oceanographic and Limnological Research (IOLR) Institution.

Project title: *Functional genes and redox dynamics at the pelagic chemocline of Lake Kinneret.*

Host: Dr. Eckert Werner

2017-2020 **Post-doc.** The Kinneret Limnological Laboratory, Israel Oceanographic and Limnological Research (IOLR) Institution.

Project title: *Molecular ecology of the pathogen bacteria Legionella in lake Kinneret and its interaction with potential-hosts.*

Host: Dr. Ninio Shira

2012-2017: **P.h.D.** The Laboratory of Psychobiology, Faculty of Medicine, Technion - Israel Institute of Technology.

Dissertation title: *Impaired assembly of complex I of the respiratory chain as a possible cause for mitochondrial dysfunction in schizophrenia.*

Supervisor: Prof. Ben-Shachar Dorit

2007-2010: **M.Sc.** Marine Biotechnology, Department of Zoology, Tel Aviv University.

Thesis title: *Marine based cultivation of sponges and isolation of their associated bacteria, as first steps towards the accumulation of bioactive marine natural products.*

Supervisors: Prof. Ilan Micha, Dr. Hill T. Russell

2004-2007: **B.Sc.** Life Sciences and Science Education, Haifa University (**Suma Cum Laude**).

3. Other Higher Education

2010-2012: **Certified A.A.T therapist** - Animal Assisted Therapy, Therapeutic Interventions. The Magid Institute for Continuing Education, The Hebrew University of Jerusalem.

2004-2007: **Teaching Diploma** in Biology, Oranim Academic College.

4. Teaching - Head Lecturer

2022-present Microbial diversity and activity in the water industries: importance and implications, Kinneret Academic College.

2022-present: Biofilms in Aqueous Environments and Water Industries, Kinneret Academic College.

2015-present: Academic writing, The Magid Institute for Continuing Education, The Hebrew University of Jerusalem.

2015-2018 Advanced methods in statistics, Technion - Israel Institute of Technology. Guest lecturer.

2015-2018 Basic Statistics, Technion - Israel Institute of Technology. Guest lecturer.

2014-2022: Animal behavior, The Magid Institute for Continuing Education, The Hebrew University of Jerusalem.

2014-2015 Basic anatomy of the autonomic nervous system. Guest lecturer, The Psagot Institute and the Hebrew university.

5. Teaching Assistant

- 2015-2018: Basic Statistics, Technion - Israel Institute of Technology. Head Teaching Assistant.
- 2013-2018: Pharmacology, Technion - Israel Institute of Technology. Head Teaching Assistant.
- 2013-2018: Advanced methods in statistics, Technion - Israel Institute of Technology. Head Teaching Assistant.
- 2009-2011: Invertebrate zoology, Ruppin Academic Center.
- 2009-2011: The littoral of the Mediterranean Sea, Ruppin Academic Center.
- 2007-2008: Invertebrate zoology, Tel Aviv University.
- 2006-2007: Organic chemistry, Haifa University.

6. Scholarships, Awards, and Prizes

- 2016: Travel Scholarship for an International Conference or Workshop, The Ministry of Science, Technology and Space. The 2016 29th ECNP annual meeting.
- 2016: Young scientist scholarship for neuroscience research related to psychopathology, The Israel Society for Biological Psychiatry (ISBP).
- 2015: Travel Scholarship for an International Conference or Workshop, The Ministry of Science, Technology and Space. The 2015 45th ISF annual meeting.
- 2012: The Fein Scholarship. Technion - Israel Institute of Technology.
- 2008: The Lena Denziger scholarship, for excellence in teaching. Tel Aviv University.
- 2006: Excellence diploma, the 1000 awards project. Israel Ministry of Science Technology and Space.

7. Publications In Peer Reviewed Journals

Bergman, O., Be'eri-Shlevin, Y., and Ninio, S. 2023. Sodium levels and grazing pressure shape natural communities of the intracellular pathogen *Legionella*. *Microbiome*, 11 (167).

Vigderovich, H., Eckert, W., Elvert, M., Gafni, A., Rubin-Blum, M., **Bergman, O.**, and Sivan, O. 2023, Accepted. Aerobic methanotrophy increases the net iron reduction in

methanogenic lake sediments. *Front. Microbiol.* 14:1206414.

Bergman, O., Karry, R., Milhem, J., and Ben-Shachar, D. 2020. NDUFV2 pseudogene (NDUFV2P1) contributes to mitochondrial complex I deficits in schizophrenia. *Mol. Psychiatry.* 25, 805–820.

Bergman, O. and Ben-Shachar D. 2016. Mitochondrial oxidative phosphorylation system (OXPHOS) deficits in schizophrenia: Possible interactions with cellular processes. *Can. J. Psychiatry.* 61(8):457-69.

Bergman, O., Haber, M., Mayzel, B., Anderson, M.A., Shpigel, M., Hill, R.T., and Ilan, M. 2011. Marine-Based Cultivation of *Diacarnus* Sponges and the Bacterial Community Composition of Wild and Maricultured Sponges and Their Larvae. *Mar. Biotechnol.* 13:1169-1182.

Bergman, O., Mayzel, B., Anderson, M.A., Shpigel, M., Hill, R.T., and Ilan, M. 2011. Examination of Marine-Based Cultivation of Three Demosponges for Acquiring Bioactive Marine Natural Products. *Mar. Drugs.* 9(11):2201-2219.

8. Publications In Preparation

Bergman, O., Be'eri-Shlevin, Y., Ninio, S. (In preparation). Seasonal fluctuations and distribution of the pathogen *Legionella* spp. and its associated protozoan community in Lake Kinneret.

Bergman, O. & Ninio, S. (In preparation). Diversity and community composition of bacteria and protozoa of Lake Kinneret and its surrounding natural springs.

Bergman, O., Ninio, S., Sulimani, B., Eckert W. (In preparation) Functional genes and redox dynamics at the pelagic chemocline of lake kinneret.

9. Presentation In International Conferences

Bergman, O., Be'eri-Shlevin, Y., and Ninio, S. 2022. Variations in *Legionella* abundance and community composition related to high-sodium and grazing pressures in natural spring-clusters. 18th International Symposium on Microbial Ecology (ISME18), Lausanne, Switzerland.

Bergman, O., Be'eri-Shlevin, Y., and Ninio, S. 2022. *Legionella* adaptations to high-sodium and grazing pressure in four natural spring-clusters surrounding the sea of Galilee. 36th Congress of the International Society of Limnology (SIL), Berlin, Germany.

- Ben-Shachar, D., Karry, R., **Bergman, O.**, and Yatchenko, Y. 2021. Interference With Mitochondrial First Complex as a Possible Mechanistic Cause for Mitochondrial Dysfunction in Schizophrenia. Annual Scientific Convention and Meeting, Biological Psychiatry, 89(9), S5.
- Ben-Shachar, D., **Bergman, O.**, and Karry, R. 2018. Deficits in Mitochondrial Complex I in Schizophrenia: A Possible Link to Pseudogene Regulation. 73rd SOBP Annual Meeting, New York, USA.
- Bergman, O.**, Karry, R., and Ben-Shachar, D. 2016. Complex I impairments in schizophrenia; a complex story. 29th ECNP Congress. Vienna, Austria.
- Bergman, O.**, Karry, R., and Ben-Shachar, D. 2015. Abnormalities in the assembly process of mitochondrial complex I in schizophrenia: a possible cause for mitochondrial dysfunction. Society for Neuroscience (SfN). Chicago, USA.
- Bergman, O.**, Karry, R., and Ben-Shachar, D. 2015. Mitochondrial Multifaceted Dysfunction in schizophrenia: evidence from molecular, biochemical and cellular studies. Cell Symposia: Multifaceted Mitochondria. Cell Press. Chicago, USA.
- Bergman O.**, Robicsek O., Karry R., Asor E., Klein E., and Ben-Shachar D. 2015. Mitochondrial Multifaceted Dysfunction in schizophrenia: evidence from molecular, biochemical and cellular studies. World Congress of Psychiatric Genetics (WCPG). Toronto, Canada.
- Bergman, O.**, Shpigel, M., and Ilan, M. 2010. Marine-based cultivation of sponges for obtaining bioactive marine natural products. 13th International Symposium on Marine Natural Products. Phuket, Thailand.
- Bergman, O.**, Hill, R.T., and Ilan, M. 2010. Characterization of the culturable sponge-associated bacterial consortium from two marine sponges: *Diacarnus erythraenus* and *Theonella swinhoei*, as first steps towards obtaining bioactive marine natural products. 8th International Sponge Conference. Girona, Spain.

10. Presentation In National Conferences

- Bergman, O.**, Be'eri-Shlevin, Y., and Ninio, S. Molecular ecology of the bacterial pathogen Legionella in four spring clusters surrounding Lake Kinneret. Monitoring and research of lake Kinneret, from present to future perspectives. 2022. The Israeli Water Authority and Israel Oceanographic and Limnological Research (IOLR), Israel.

- Bergman, O.,** Be'eri-Shlevin, Y., Lupu, A., and Ninio S. 2021. Molecular ecology of the bacterial pathogen *Legionella* in four spring clusters surrounding Lake Kinneret. MicroEco2, Microbial Ecology Symposium for Young Researchers. The Weizmann Institute of Science, Israel.
- Bergman, O.,** Karry, R., and Ben-Shachar, D. 2016. Complex I impairments in schizophrenia: a complex story. 20th International Conference of the Israel Society for Biological Psychiatry (ISBP). Goshrim, Israel.
- Bergman, O.,** Karry, R., and Ben-Shachar, D. 2015. Impairments in the synthesis of the first complex of the respiratory chain as a possible cause for mitochondrial dysfunction in schizophrenia. 19th International Conference of the Israel Society for Biological Psychiatry (ISBP). Goshrim, Israel.
- Bergman, O.,** Karry, R., and Ben-Shachar, D. 2014. Impairments in the synthesis of the first complex of the respiratory chain as a possible cause for mitochondrial dysfunction in schizophrenia. 23rd International Conference of the Israeli Society for Neuroscience (ISFN). Eilat, Israel.
- Bergman, O.,** Karry, R., and Ben-Shachar, D. 2013. Alteration in protein levels and activity of Complex I of the respiratory chain in schizophrenia. 17th International Conference of the Israeli Society for Biological Psychiatry. Goshrim, Israel.

11. Courses and Certificates

- 2018: Next-Generation sequencing data analysis. Tel-Hai College, Israel.
- 2016: Scientific writing, Research Methods and Statistical Analyses. RAMBAM Hospital Health Care Campus. The Research department and the Epidemiology Unit, Israel.
- 2014: Mitochondria - Measuring Mitochondrial Function and Dysfunction. Hands-On Course. The Mitochondrial Hub. IMRIC, Faculty of Medicine, Hebrew University of Jerusalem, Israel.