

Shir Sharon

PhD

She/her

July 2023

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A visiting Scholar in the PFAS Project lab; A PhD specializing in molecular biology; Published author in the fields of microbiology and plant science; former fellow in the office Dr. Alon Tal, a member of the Israeli house of representatives (Knesset).

Environmental activity

09/2022-
Present
Boston, MA

**Visiting Scholar in the [PFAS Project lab](#)
Social Science Environmental Health Research Institute at
Northeastern University**

- Investigating the effectiveness of varying world-wide attempts to reduce PFAS via legislation or policy.

07/2021-
08/2022
Jerusalem, Israel

**Fellow in the office of Dr. [Alon Tal](#)
The Knesset**

The unicameral legislature of Israel

- Content manager and coordinator of the Subcommittee for the Impact of Environment and Climate on Health, attended by members of the government, academia and environmental organizations.
- Research analysts of global environmental legislation and policies, specifically regarding ecological corridors and protection of nature reserves.

02/2021-
08/2022
Jerusalem, Israel

**Head of Public engagement
Save the Jerusalem Hills**

A nonprofit environmental NGO advocating preservation the forests o
Jerusalem

- One of seven Leading members responsible for strategy and financial management.

- Chief executor of tours, rallies, assemblies, talks and lectures advocating green urban development.

10/2020-
08/2022
Jerusalem, Israel

**Head of Sustainability and Environment
Awakening in Jerusalem**

A nonprofit political NGO represented in Jerusalem's municipal government

- Responsible for conceptualizing and writing municipal environmental policies, presented monthly to the mayor.
- Environmental consultant to [Yovav Tzur](#), a member of the Jerusalem City Council.

Education

2012-2020

PhD degree

Microbiology and Molecular Genetics

Dissertation title: Sensing of the Type Three Secretion System of Enteropathogenic *Escherichia coli* by Host Epithelial Cells

Instructor: [Dr. Ilan Rosenshine](#)

The Hebrew University of Jerusalem, Israel

2011-2012

MSc degree

Plant Sciences

Thesis title: Metals Dynamics in Photosynthesis in Cyanobacterium *Synechocystis* sp. strain PCC 6803

Instructor: [Dr. Nir Keren](#)

The Hebrew University of Jerusalem, Israel

2008-2011

BSc degree

Biology

The Hebrew University of Jerusalem, Israel

Research Grant

July 2020
86K\$ /year

The Israel Science Foundation (ISF)

A five-year grant for the study of Sensing of Type III Secretion System by Epithelial Cells

Published Papers

1. Litvak Y*, **Sharon S***, Hymas M, Zhang L, Kobi S, Katsowich N, Nussbaum G, Dong N, Shao F, Rosenshine I. *PLOS pathogens*. (2017). *Epithelial cells detect functional type III secretion system of enteropathogenic Escherichia coli through a novel NF- κ B signaling pathway*. PMID: 28671993. Link: [10.1371/journal.ppat.1006472](https://doi.org/10.1371/journal.ppat.1006472)

* Equal Contribution

2. **Sharon S**, Salomon E, Kranzler C, Lis H, Lehmann R, Georg J, Zer H, Hess WR, Keren N. *Biochim. Biophys. Acta*. (2014). *The hierarchy of transition metal homeostasis: iron controls manganese accumulation in a unicellular cyanobacterium*. PMID: 25261790. Link: [10.1016/j.bbabi.2014.09.007](https://doi.org/10.1016/j.bbabi.2014.09.007)
3. Salomon E, Bar-Eyal L, **Sharon S**, Keren N. *Biochim. Biophys. Acta*. (2013). *Balancing photosynthetic electron flow is critical for cyanobacterial acclimation to nitrogen limitation*. PMID: 23201479. Link: [10.1016/j.bbabi.2012.11.010](https://doi.org/10.1016/j.bbabi.2012.11.010)

Presentations

1. **Titles for the Subcommittee for the Impact of Environment and Climate on Health, Israeli Parliament**
 - i. Noise pollution as a growing concern of an overpopulated country (06/2022)
 - ii. Public exposure to chemicals affecting the Endocrine system (PFAS) (05/2022)
 - iii. "Sick building syndrome": Importance of monitoring indoor air quality (05/2022)
 - iv. Towards a Climate Bill: The expected implications of climate change (05/2022)
 - v. The Haifa Bay as an industrial health hazard zone: A followup (03/2022)
 - vi. Governmental declaration #1022: Shading cities by planting trees (02/2022)
 - vii. The detrimental effect of continuous public exposure to Asbestos (01/2022)
 - viii. Importance of nature to the mental health of the Israeli population (01/2022)
 - ix. Environmental and health repercussions of wood-burning stoves (01/2022)
 - x. The impact of climate change on public health (12/2021)
 - xi. The Haifa Bay as an industrial health hazard zone (11/2021)

2. **Points of Order, Jerusalem city council**
 - i. Adopting waste management policies that favor reduction and recycling **(02/2022)**
 - ii. Preservation of trees across the city of Jerusalem **(11/2021)**
 - iii. Setting boundaries to the expansion of the city into open lands **(06/2021)**
 - iv. Taking measures to prevent exposure of citizens to pesticides **(05/2021)**
 - v. Declaring the Jerusalem Hills as a nature reserve **(04/2021)**
 - vi. Establishing a national park in the Jerusalem Hills **(03/2021)**
 - vii. Joining the international Climate Change Response Amendment initiative **(02/2021)**
 - viii. Developing a clear policy to preserve Jerusalem's "green lungs" **(01/2021)**
 - ix. Funding kindergarten dishwashers, to reduce use of single use plastics **(12/2020)**

3. **EMBO | EMBL Symposium: Innate Immunity in Host-Pathogen Interactions.** Heidelberg, Germany. *Recognition of enteropathogenic Escherichia coli by epithelial cells involves ubiquitin accumulation at points of infection, triggered by the Type III secretion system.* **(07/2018)**

4. **Ubiquitin-Proteasome System Israeli Club:** Molecular mechanisms in health and disease. Haifa, Israel. *Type III secretion system dependent ubiquitination of enteropathogenic Escherichia coli by epithelial cells is essential for pathogen recognition system.* **(11/2017)**

5. **Gordon Research Conferences:** Microbial Adhesion & Signal Transduction convention. Newport, RI, United States. *Detection of the type III secretion system of enteropathogenic Escherichia coli by epithelial cells results in activation of the NF- κ B signaling pathway.* **(06/2017)**

Personal Information

Nationalities: Israel; Canada

City of residence: Boston, MA
