

Baruh Polis MD, PhD, MSc, MBA

PERSONAL INFORMATION

First Name: **Baruh**

Family Name: **Polis**

Nationality: **Israeli**



baruhpolis@gmail.com



<https://www.linkedin.com/in/baruh-polis-822665143/>



+972-52-5654451

EDUCATION AND TRAINING:

- **YALE SCHOOL OF MEDICINE**, Department of Psychiatry, New Haven, CT, USA
Postdoctoral Associate, 03.2021- 06.2023
Studied how early life adversity alters neurodevelopment (with stress on glial function)
Advisor: Prof. Arie Kaffman
- **BAR-ILAN UNIVERSITY (Israel)**, Faculty of Medicine in the Galilee, Safed
Ph.D. in Medical Sciences, 2017-2021.
Thesis subject: "Arginase inhibition as a treatment of Alzheimer's disease"
Advisor: Dr. Abraham O. Samson.
- **UNIVERSITY OF HAIFA, (Israel)**, The Faculty of Natural Sciences, Sagol Department of Neurobiology, 2014-2016.
M.Sc. in Neurobiology (**CUM LAUDE**)
Thesis subject: "The contribution of the striatal cholinergic system to adaptive behavior, motor skills learning and habit formation"
Advisor: Dr. Genela Morris.
- **THE TECHNION, ISRAEL INSTITUTE OF TECHNOLOGY, HAIFA.** The William Davidson Faculty of Industrial Engineering & Management, 2012-2014.
MBA (*management of knowledge-based and technology-intensive firms*).
GPA 89/100
- **IVANOVO RESEARCH INSTITUTE OF MOTHERHOOD AND CHILDHOOD, IVANOVO ACADEMY OF MEDICINE (Russia)** 1994-1997,
Certified Laboratory Physician, Specialization in Clinical Laboratory Science, Medicinal and Pharmaceutical Chemistry, (**CUM LAUDE**)
- **IVANOVO STATE ACADEMY OF MEDICINE (Russia)** 1988-1994
Doctor of Medicine, Study Program – General Medicine, Adult Medical Care
GPA 87.8/100

Additional Training:

- **Oxford University**, England, September 2019, *“Credibility in Neuroscience” Oxford/Berlin Summer School.*
- **University Hospital Heidelberg**, Germany, September 2018, International Research Exchange Program, project *“Neuronal Organization in Brain Areas possibly involved in Animal Cognition,”* under the supervision of Prof. **Jürgen Haas.**
- **Max Delbrück Center for Molecular Medicine**, Berlin, Germany, July 2018, *“Glial cell biology”* course.
- **Utrecht University**, the Netherlands, July 2015, special program of *“Neural Circuit Development and Plasticity.”*
- **Neuroscience School of Advanced Studies (NSAS)**, Florence, Italy, May 2015, *“Learning and Memory, Cellular and System Mechanisms”* advanced course under the coordination of Professors **Susumu Tonegawa & Alcino J. Silva.**
- **Yale School of Management**, New Haven, CT, USA, October 2013. The course of *“Managing in the Global Economy.”*

Career & Academic Appointments:

1. August 2025-currently, **Technion - Israel Institute of Technology**, The Wolfson Faculty of Chemical Engineering
Senior Research Associate
Focus: Leading neurobiology and neurodegenerative disease research within Prof. Hossam Haick’s group, focusing on innovative diagnostic and therapeutic approaches.
2. August 2024-December 2026, **The Max Stern Yezreel Valley College**, Nursing Department.
Adjunct lecturer.
 - **Neurosurgery** (course number 418403101) for undergraduate students.
I developed new curricula, course materials, and assessments for an innovative Nursing study program.
3. September 2023-July 2025, **Bar-Ilan University**, The Azrieli Faculty of Medicine in the Galilee, Safed.
Research Laboratory Manager.
I conducted research, analyzed samples, and performed tests. I also supervised the lab operations and ensured that safety protocols are followed and all equipment is supplied and maintained.
4. July 2023-July 2024, **The Jerusalem College of Technology** - Lev Academic Center.
Adjunct lecturer.
 - **Scientific writing** (course number 160500) taught in English for undergraduate students.
I created new curricula, course materials, and assessments, as well as delivered lectures, tutorials, and seminars.
5. 2021- June 2023, **Yale University**, Department of Psychiatry, New Haven, CT, USA,
Postdoctoral Associate

6. 2017- 2021, **Bar-Ilan University**, The Azrieli Faculty of Medicine in the Galilee, Safed.
Senior teaching assistant in frontal courses for medical students
 - Bioenergetics (course number 788133501)
 - Neoplasia (course number 788134301)
 - Medical humanities (course number 788133701)
7. 2016- 2017, **Bar-Ilan University**, The Azrieli Faculty of Medicine in the Galilee, Safed.
Research Associate.
8. 2002-2003, **The Technion** – Israel Institute of Technology, Faculty of Biomedical Engineering, Haifa.
Teaching assistant in frontal courses for undergraduate students
 - Biophysics and neurophysiology for engineers (course number 336537)
 - Body systems physiology for engineers (course number 276011)

Mentoring Activities:

- Supervising ORT Braude College of Engineering student's final project. 2018-2019.
- Supervising High School final biology projects. (Gallilium - Enrichment and excellence in science and technology projects), 2017- 2020.

Volunteer Work Experience:

- The International Society for Neurochemistry (**ISN**) ambassador to Israel, 2019-2021.

Reviewing and Editorial Experience:

Peer reviewer for scientific journals (**Elsevier certified reviewer**)

1. Frontiers in Nuclear Medicine (*Associate Editor*)
2. Frontiers in Molecular Neuroscience (*Review Editor in Neuroplasticity and Development*)
3. Frontiers in Behavioral Neuroscience (*Review Editor in Motivation and Reward*)
4. Journal of Alzheimer's Disease
5. Cellular and Molecular Life Sciences
6. European Journal of Neuroscience
7. FEBS Open Bio
8. Aging (Albany NY)
9. Fundamental & Clinical Pharmacology
10. Neurobiology of Disease
11. Journal of Pharmacological Sciences
12. Journal of Clinical Medicine
13. Cells
14. Nutrients
15. Molecules
16. Neurotoxicity Research
17. Toxicology in Vitro
18. Neural Regeneration Research

Grant Review Activities:

1. The Czech Science Foundation (**GACR**) project proposal reviewer (2024)

Professional Honors & Recognition:

- British Neuroscience Association bursary to attend Oxford Summer School on "Open Research and Credibility in Neuroscience", September **2019**, Oxford University, UK.
- The International Society for Neurochemistry (ISN) travel award to attend the **2019** ISN-ASN Meeting in Montréal.
- Best lecture award. The 8th Translational Research Meeting. March 18, **2019**, Faculty of Medicine in the Galilee, Bar Ilan University, Israel.
- Excellence Support Scholarship **2018-2020**, Faculty of Medicine in the Galilee, Bar Ilan University, Israel.
- Master of Science, Haifa University, Israel CUM LAUDE **2015**
- Professional specialization in Clinical Laboratory Science CUM LAUDE **1997**
- The Rector Scholarship of Ivanovo State Medical Academy (**1988-1994**)

PUBLICATIONS

h-index-19, i10 index-26, # of citations-1137

Peer-Reviewed Journal Articles

Original Research:

1. Sahabuddin Ahmed*, **Baruh Polis***, Sumit Jamwal, Basavaraju G Sanganahalli, Zoe MacDowell Kaswan, Rafiad Islam, Dana Kim, Christian Bowers, Lauryn Giuliano, Thomas Biederer, Fahmeed Hyder, Arie Kaffman, ***Transient Impairment in Microglial Function Causes Sex-Specific Deficits in Synaptic and Hippocampal Function in Mice Exposed to Early Adversity***, *Brain, Behavior, and Immunity*, **2024**, 122; 95-109, **Q1**
2. Rafiad Islam, Jordon D White, Tanzil Mahmud Arefin, Sameet Mehta, Xinran Liu, **Baruh Polis**, Lauryn Giuliano, Sahabuddin Ahmed, Christian Bowers, Jiangyang Zhang, Arie Kaffman, ***Early Deprivation Impairs Perforant Pathway Connectivity and Contextual Memory in Adolescent Male Mice***, *Biol Sex Differ.*, **2024**, 7;15(1):39., **IF 8.81, Q1**
3. Kiran K. Dayananda, Sahabuddin Ahmed, Daniel Wang, **Baruh Polis**, Rafiad Islam, Arie Kaffman, ***Early life stress impairs synaptic pruning in the developing hippocampus***, *Brain, Behavior, and Immunity*, Volume 107, January **2023**, Pages 16-31, <https://doi.org/10.1016/j.bbi.2022.09.014>, **IF 19.23, Q1**
4. Hadas Samuels, Malki Malov, Trishna Saha, Karin Ben Zaken, Naama Bloch, **Baruh Polis** and Abraham O. Samson, ***Autoimmune disease classification based on PubMed text mining***, *Journal of Clinical Medicine*, **2022**, 11, 4345. <https://doi.org/10.3390/jcm11154345>, **IF 4.964, Q1**
5. **Baruh Polis**, Margherita Squillario, Vyacheslav Gurevich, Kolluru D. Srikanth, Michael Assa, Abraham O. Samson, ***Effects of Chronic Arginase Inhibition with Norvaline on Tau Pathology and Brain Glucose Metabolism in Alzheimer's Disease Mice***, *Neurochemical Research*, **2022**, doi: 10.1007/s11064-021-03519-3, **IF 4.414, Q1**

6. Bodhisattwa Banerjee, Iryna Khrystoporova, **Baruh Polis**, Inbar Ben Zvi, David Karasik, **Acute Hypoxia Elevates Arginase 2 and Induces Polyamine Stress Response in Zebrafish via Evolutionarily-conserved Mechanism**, *Cellular and Molecular Life Sciences*, **79**, **41** (2022), <https://doi.org/10.1007/s00018-021-04043-x>, **IF 9.207, Q1**.
7. Gennadiy Fonar*, **Baruh Polis***, Dev Sharan Sams, Almog Levi, Assaf Malka, Natalia Bal, Alexander Maltsev, Evan Elliott, Abraham O. Samson, **Modified Snake α -Neurotoxin Averts β -Amyloid Binding to $\alpha 7$ Nicotinic Acetylcholine Receptor and Reverses Cognitive Deficits in Alzheimer's Disease Mice**, *Molecular Neurobiology*, **2021**, <https://doi.org/10.1007/s12035-020-02270-0>, **IF 5.682, Q1**.
8. Sivan Lian Ashkenazi*, **Baruh Polis***, Orit David, Genela Morris, **Striatal cholinergic interneurons exert inhibition on competing default behaviors controlled by the nucleus accumbens and dorsolateral striatum**, *European Journal of Neuroscience*, **2020**, <https://doi.org/10.1111/ejn.14873>, **IF 3.386, Q1**.
9. **Baruh Polis**, Kolluru D Srikanth, Vyacheslav Gurevich, Hava Gil-Henn, Naamah Bloch, Abraham O. Samson, **Arginase Inhibition Supports Survival and Differentiation of Neuronal Precursors in Adult Alzheimer's Disease Mice**, *International Journal of Molecular Sciences* **2020**, **21**, 1133; doi:10.3390/ijms21031133, **IF 6.208, Q1**.
10. Michael A. Gilinsky, Yulia K. Polityko, Arkady L. Markel, Tatyana V. Latysheva I, Abraham O. Samson, **Baruh Polis**, Sergey E. Naumenko, **Norvaline reduces blood pressure and induces diuresis in rats with inherited stress-induced arterial hypertension**, *BioMed Research International*, Volume **2020**, **14** February **2020**, <https://doi.org/10.1155/2020/4935386> **IF 3.246, Q2**
11. **Polis B**, Gurevich V, Assa M, Samson AO. **Norvaline Restores the BBB Integrity in a Mouse Model of Alzheimer's Disease**. *Int J Mol Sci*. September **2019**; **20**(18):4616. doi:10.3390/ijms20184616, **IF 6.208, Q1**
12. **Baruh Polis**, Kolluru D Srikanth, Vyacheslav Gurevich, Hava Gil-Henn, Abraham O. Samson, **L-Norvaline, a New Therapeutic Agent against Alzheimer's Disease**, *Neural Regeneration Research*, **2019**, **14**(9), DOI:10.4103/1673-5374.255980, **IF 6.058, Q2**.
13. **Baruh Polis**, Kolluru D Srikanth, Evan Elliot, Hava Gil-Henn , Abraham O. Samson, **L-norvaline Reverses Cognitive Decline and Synaptic Loss in a Murine Model of Alzheimer's Disease**, *Neurotherapeutics*, October **2018**, **15**(4), 1036-1054, DOI: 10.1007/s13311-018-0669-5, **IF 7.62, Q1**
14. Gennadiy Fonar*, **Baruh Polis***, Tomer Meirson, Alexander Maltsev, Abraham O. Samson, **Subcutaneous Sustained-release of Poly-arginine Ameliorates Cognitive Impairment in a Transgenic Mouse Model of Alzheimer's Disease**, *Advances in Alzheimer's Disease*, December **20** **2018**, Vol.7, No.4, 153-182, DOI: 10.4236/aad.2018.74011.
15. Gennadiy Fonar*, **Baruh Polis***, Tomer Meirson, Alexander Maltsev, Evan Elliott, Abraham O. Samson, **Intracerebroventricular Administration of L-arginine Improves Spatial Memory Acquisition in Triple Transgenic Mice Via Reduction of Oxidative Stress and Apoptosis**. *Translational Neuroscience*, **2018** May **31**; **9**:43-53. DOI: 10.1515/tnsci-2018-0009, **IF 2.04, Q3**

Book Chapters & Reviews:

1. Eyal, S., Alfasi, S., Ben Zaken, K., Sawaid, I. O., Segev, L., Mesfin, S., Frankel, P., Ezzy, R., Saha-Detroja, T., Madhavan, S., Bloch, N., **Polis, B.**, & Samson, A. O. (2026). *Consensus Molecules Associated with Parkinson's Disease*. *Neurology International*, 18(2), 23. IF 3.0, Q2, <https://doi.org/10.3390/neurolint18020023>
2. **Baruh Polis**, Melodie Zaknoun, Doaa Tehawey, Maria Gulinello, Chaim Putterman, *Evaluating Neuropsychiatric Disease in Mouse Models of Systemic Lupus Erythematosus*. *Current protocols* vol. 5,7, 2025: e70185. doi:10.1002/cpz1.70185
3. Sahabuddin Ahmed, **Baruh Polis**, Arie Kaffman., *Microglia: The Drunken Gardeners of Early Adversity*, *Biomolecules*, 2024; 14(8):964. IF 4.8, Q1, <https://doi.org/10.3390/biom14080964>
4. **Baruh Polis**, and Abraham O Samson., *Addressing the discrepancies between animal models and human Alzheimer's disease pathology: implications for translational research*, *Journal of Alzheimer's Disease*, 2024, vol. 98, no. 4, pp. 1199-1218, IF 4.0, Q1
5. **Baruh Polis**, and Abraham O Samson., *Enhancing cognitive function in older adults: dietary approaches and implications*, *Frontiers in nutrition* vol. 11 1286725. 31 Jan. 2024, doi:10.3389/fnut.2024.1286725 IF 5.0, Q1
6. Iska Avitan, Yudit Halperin, Trishna Saha, Naamah Bloch, Dana Atrahimovich, **Baruh Polis**, Abraham Samson, Ori Braitbard, *Towards a Consensus on Alzheimer's Disease Comorbidity?* *Journal of Clinical Medicine*, September 2021, 10(19), 4360; <https://doi.org/10.3390/jcm10194360>, IF 4.964, Q1.
7. **Baruh Polis**, David Karasik, Abraham O Samson, *Alzheimer's disease as a chronic maladaptive polyamine stress response*, *Aging (Albany N.Y.)*, 2021, V. 13, <https://doi.org/10.18632/aging.202928> IF 5.955, Q1.
8. **Baruh Polis**, Abraham O. Samson, *The role of the metabolism of branched-chain amino acids in the development of Alzheimer's disease and other metabolic disorders*, *Neural Regeneration Research*, 2020;15:1460-70, doi: 10.4103/1673-5374.274328, IF 5.135, Q2.
9. **Baruh Polis**, Abraham O. Samson, "A new perspective on Alzheimer's disease as a brain expression of a complex metabolic disorder." In: *Alzheimer's Disease*. Thomas Wisniewski (Editor), Codon Publications, 2019, Brisbane, Australia, ISBN: 978-0-646-80968-7, PMID: 31895518, DOI: 10.15586/alzheimersdisease.2019.ch1
10. **Baruh Polis**, Abraham O. Samson, *Arginase as a potential target in the treatment of Alzheimer's disease*, *Advances in Alzheimer's Disease*, Vol.7 No.4, November 2018, 119-140. DOI: 10.4236/aad.2018.74009.

Invited Editorials & Commentaries:

1. **Baruh Polis**, Abraham O. Samson, *Neurogenesis versus neurodegeneration: the broken balance in Alzheimer's disease*, *Neural Regeneration Research* 2021, 16(3):496-497, <https://doi.org/10.4103/1673-5374.293138>, IF 6.058, Q2.

2. **Baruh Polis**, Michael A. Gilinsky, Abraham O. Samson, ***Reports of L-Norvaline Toxicity in Humans May Be Greatly Overstated***, *Brain Sciences*, **2019**, 9(12), 382; doi:10.3390/brainsci9120382 IF 3.333, Q2
3. **Baruh Polis**, Hava Gil-Henn, ***Commentary on Giralt et al.: PTK2B/Pyk2 overexpression improves a mouse model of Alzheimer's disease***, *Experimental Neurology*, **2019 Jan**; 311:313-317, DOI: 10.1016/j.expneurol.2018.08.011, IF 5.62, Q1

Published Theses:

- **Baruh Polis**, “Arginase inhibition as a treatment of Alzheimer’s disease”, PhD Thesis, Bar-Ilan University (2021)
- **Baruh Polis**, “The role of the striatal cholinergic system in adaptive behavior, motor skills learning and habit formation.” Master’s Thesis, Haifa University (2016)

Books:

- **Baruh Polis**, Abraham Samson, ***Arginase as a potential target in the treatment of Alzheimer’s disease***, September 2018, Lambert Academic Publishing, ISBN-13: 978-3-659-97089-4

Invited Speaking Engagements, Lectures & Workshops:

- “***A new perspective on Alzheimer's disease as a brain expression of a complex metabolic disorder***”, The Azrieli Faculty of Medicine Scientific International Workshop, March 3-4, 2020, Safed, Israel.
- “***Norvaline: a potent Alzheimer’s disease-modifying agent***”, International Conference on Alzheimer's Disease & Dementia, Theme: Exploring Newer Treatment Interventions for Alzheimer's & Dementia. July 08-10, 2019, Paris, France.
- “***Norvaline as a novel AD-modifying agent***” First Joint UK-Israel Dementia Prevention Conference, June 17-19, 2019, Tel Aviv.
- “***Arginase inhibition improves spatial memory acquisition in AD model mice via escalation of neuroplasticity-associated genes expression***” The 26th Tel Aviv University Alzheimer Disease meeting, June 27-28, 2018

Peer-Reviewed Presentations & Symposia Given at Meetings:

2022

- **Baruh Polis**, Rafiad Islam, Thomas D. Prevot, Arie Kaffman, ***The advantages of using automated home-cage monitoring to characterize defensive and social deficits in adult mice exposed to complex trauma early in life***. Society for Neuroscience (SfN) meeting, San Diego, USA, November 2022.

2020

- **Baruh Polis**, Abraham O. Samson, ***Norvaline improves glucose brain intake via elevation of insulin receptor and GLUT3 levels in Alzheimer’s disease mice***, 14th World Congress on Controversies in Neurology (CONy), October 2020, (Virtual Event).
- **Baruh Polis**, Vyacheslav Gurevich, Abraham O. Samson, ***Norvaline regulates glucose metabolism and insulin pathway in the brains of Alzheimer’s disease mice***, Poster session

presented at Alzheimer's Association International Conference® (AAIC), July 2020, (Virtual Event).

- **Baruh Polis**, *Norvaline affects glucose metabolism and insulin pathway in the brains of AD mice*, The 28th Tel Aviv University Alzheimer Disease Conference, July 2020, Tel Aviv, Israel, (Zoom meeting).

2019

- **Baruh Polis**, *Abraham O. Samson, A new perspective on Alzheimer's disease as a brain expression of a complex metabolic disorder*, Poster session presented at 23rd ESN Biennial Meeting, September 2019, Milan, Italy.
- **Baruh Polis**, *Abraham O. Samson, Norvaline: a novel Alzheimer's Disease-modifying Agent*, Poster session presented at the Join ISN-ASN Meeting, August 2019, Montreal, Canada.
- **Baruh Polis**, *Abraham O. Samson, Norvaline: a Potent Alzheimer's Disease-modifying Agent*, Poster session presented at the FENS annual Brain Conference: "Understanding and targeting Alzheimer's disease", May 2019, Copenhagen, Denmark.
- **Baruh Polis**, *Abraham O. Samson, L-Norvaline, a New Therapeutic Agent against Alzheimer's Disease*, Poster session presented at the international Festival of Neuroscience, BNA 2019, April 2019, Dublin, Ireland.
- **Baruh Polis**, *Abraham O. Samson, Arginase as a potential target in the treatment of Alzheimer's disease*, Poster session presented at the 14th International Conference on Alzheimer's and Parkinson's Diseases: Mechanisms, Clinical Strategies and promising Treatments of Neurodegenerative Diseases, Lisbon, Portugal, March 2019.
- **Baruh Polis**, *Abraham O. Samson, Norvaline, a novel Alzheimer's disease-modifying agent*, Oral presentation at the 8th annual translational research day at the Faculty of Medicine in the Galilee, March 2019, Safed.
- **Gennadiy Fonar**, **Baruh Polis**, *Tomer Meirson, Natalia Bal, Alexander Maltsev, Pavel Balaban, Evan Elliott, Avraham O. Samson, Modified Snake α -Cobratoxin Rescues the Amyloid-beta-induced Inhibition of $\alpha 7$ Nicotinic Acetylcholine Receptors and Ameliorates Spatial Memory Deficit in Alzheimer's Mice*, Poster session presented at the 27 annual meeting of the Israel Society for Neuroscience, January 2019, Eilat.

2018

- **Baruh Polis**, *Kolluru D Srikanth, Hava Gil-Henn, Abraham O. Samson, L-Norvaline reverses cognitive decline and synaptic loss in a murine model of Alzheimer's disease*. Poster session presented at the 11th FENS forum of Neuroscience, Berlin, 7-11 July 2018.
- **Gennadiy Fonar***, **Baruh Polis***, *Abraham O. Samson, Modified snake alpha-Cobratoxin relieves memory deficit of Alzheimer's mice and competes with Amyloid beta binding for nicotinic acetylcholine receptors*. 11th FENS forum of Neuroscience, Berlin, 7-11 July 2018.
- **Gennadiy Fonar***, **Baruh Polis***, *Tomer Meirson, Alexander Maltsev, Abraham O. Samson, Poly-arginine peptide ameliorates cognitive decline in a transgenic mouse model of Alzheimer's disease via induction of neuroprotective cellular pathways and*

facilitation of hippocampal synaptic plasticity. The 26th Tel Aviv University Alzheimer Disease meeting, June 27-28, 2018

- **Baruh Polis**, Kolluru Devi Dutt Srikanth, Tomer Meirson, Hava Gil-Henn & Abraham O. Samson. *L-Norvaline improves spatial memory in Alzheimer's disease model mice via escalation of neuroplasticity-associated gene expression, activation of neuroprotective pathways, and reduction of microglial density.* Poster session presented at the 7th annual translational research day at the Faculty of Medicine in the Galilee, February 2018, Safed.
- *Kolluru Devi Dutt Srikanth, Dev Sharan Sams, Baruh Polis, Darpan Chakraborty, Hanoch Kaphzan, Evan Elliot, Hava Gil-Henn. Unraveling the Role of Pyk2 in Synaptic Plasticity and Dendritic Stabilization.* Poster session presented at the 7th annual translational research day at the Faculty of Medicine in the Galilee, February 2018, Safed.

2017

- **Baruh Polis**, Avraham Samson. **Intracerebroventricular administration of L-arginine improves spatial memory acquisition in triple transgenic mice via reduction of oxidative stress and apoptosis.** Poster session presented at the annual meeting of the Israel Society for Neuroscience, December 2017, Eilat.
- **Baruh Polis**, Genela Morris. **The contribution of the striatal cholinergic system to adaptive behavior, motor skills learning and habit formation.** Poster session presented at the sixth annual translational research day at the Faculty of Medicine in the Galilee, March 2017, Safed.

2016

- **Baruh Polis**, Genela Morris. **A role of the striatal cholinergic system in adaptive behavior, motor skills learning and habit formation.** Poster session presented at the annual meeting of the Israel Society for Neuroscience, December 2016, Eilat.

Membership in Professional Associations & Organizations:

- Israel Society for Neuroscience (ISFN) – member since **2016**
- British Neuroscience Association (BNA) – member since **2018**
- American Academy of Neurology (AAN) – member since **2018**
- International Society for Neurochemistry (ISN) – member since **2019** (ambassador in Israel)
- International Society to Advance Alzheimer's Research and Treatment (ISTAART) - member since **2019**
- American Society for Neurochemistry (ASN) - member since **2019**
- European Society for Neurochemistry (ESN) - member since **2019**
- Molecular and Cellular Cognition Society (MCCS) – member since **2019**
- Society for Neuroscience (SFN) member since **2022**

Areas of Research Interest:

- Understanding of the biological bases and mechanisms of memory acquisition and recall in mammals.
- Explication of the etiology and pathogenesis of neurodegenerative disorders and Alzheimer's disease in particular.

- Identifying therapeutic targets and strategies for Alzheimer's disease and other neurodegenerative disorders treatment through signaling pathways.
- Elucidation of emerging drugs' molecular mechanisms.

Expertise:

- Experienced in efficiently conducting biomedical research projects: design, planning, budgeting, development, implementation, coordination, data collection, accurate documentation, and reporting.
- Experienced in preparing and delivering lectures, mentoring students, and evaluating their performances. My expertise lies in medical and bioinformatics domains, and I have worked with students from both fields.
- Knowledgeable in neurobiology, including development, cell signaling, immunology, neurodegeneration, and therapeutic strategies.
- Highly experienced in administrative work, office communication, conducting seminars & conferences, including online.

Experimental Skills:

- Stereotactic animal brain surgery; intracerebral microinjections; cannulation; chronic bilateral brain infusion.
- Transcardial perfusion; tissue cryoprotection; brain slice preparation.
- PET/CT scanning and imaging for small laboratory animals.
- General microbiology and basic cell culture; media preparation; culturing techniques; culture maintenance; cells differentiation and transfection techniques.
- Light microscopy and fluorescence microscopy.
- Two-dimensional gel electrophoresis and western blotting.
- RNA extraction; cDNA synthesis; quantitative real-time PCR.
- Immunohistochemical staining.
- Golgi staining.
- Dil labeling of neurons.
- Morphometric and densitometric image analysis of neurons and glial cells with Neurolucida®, Image-Pro®, Zen 2.5, Imaris 10.0.
- Functional interpretation of the genes derived from the omics assays with enrichment analysis based on the functional annotation of the differentially expressed genes using Ingenuity® Pathway Analysis, David, and g:Profiler.
- Laboratory animal handling and restraint (mice, rats, dogs), domestic animal handling and restraint (cats, dogs, etc).
- Behavioral tests in rodents. Analysis of the animal behaviors with EthoVision XT.
- Ability to understand relevant scientific content and ensure scientific accuracy.
- Excellent critical thinking skills and ability to prioritize and think about long-term decisions' ramifications.

Other Skills and Abilities:

Communication Skills:

- Able to enthuse others and inspire a positive attitude to setting up new procedures, as demonstrated by effective implementation.
- Energetic and resourceful with creative problem-solving and conflict-management skills.
- Excellent report writing and presentation skills, evident in work and university studies.
- Able to get along well with co-workers and accept supervision.
- Willing to try new things and interested in improving efficiency on assigned tasks.

Organizational Skills:

- Concerned with quality.
- Task-oriented, paying attention to details.
- Able to organize and manage an organization by initiating new ideas, implementing decisions, enforcing policies, and supervising others on an administrative level.
- Capable of motivating and guiding a team towards achieving an inspiring and engaging goal.

LANGUAGES:

- Russian (native)
- Hebrew (fluent)
- English (fluent)

OTHER: Amateur violinist and painter. Active basketball player and competitor for several years. Learned discipline and teamwork. Ambitious, highly self-motivated, outgoing, hardworking, reliable and have a solid work ethic.