**Shaqed Carasso**

Geva-Zatorsky Lab, The Ruth and Bruce Rappaport Faculty of Medicine

Technion – Israel Institute of Technology

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| **RESEARCH INTERESTS** | |
| Bioinformatics, Gut microbiome, Bacterial genomics, Microbial-host interactions, Phage-bacteria dynamics | |
| **ACADEMIC DEGREES** | | |
| 2021- March 2025 | **Ph.D., Bioinformatics** • Technion – Israel Institute of Technology  *Thesis*: Phase Variations of the Bacteroides Genus.  *Main Advisor*: Associate Professor Naama Geva-Zatorsky.  *Associate Advisor*: Dr. Itai Sharon (MIGAL Galilee Research Institute).  GPA: 88.9 | |
| 2018-2021 | **M.Sc., Medical Sciences** • Technion – Israel Institute of Technology  *Cum Laude Thesis*: Fecal Microbiota Transplantation and Phage Therapy to Eradicate Antibiotic Resistant Bacteria.  *Advisor*: Associate Professor Naama Geva-Zatorsky.  GPA: 91.1, Thesis grade: 99 | |
| 2014-2018 | **B.Sc., Biology** • Technion – Israel Institute of Technology GPA: 86.1, Ranked 2nd in class | |
| **TEACHING & MENTORING EXPERIENCE** | | |
| 2021 – present | Teaching Assistant, Medical Bacteriology Lab (Undergraduate Course, Technion – Israel Institute of Technology) | |
| 2021,2022 | Mentored final research projects for two biotechnology bachelor students from Hadassah Academic College in Jerusalem | |
| **FELLOWSHIPS, AWARDS & HONORS** | | |
| 2024 | Jacobs Award for an Excellent Publication • Technion award for best publication | |
| 2024 | Best Poster Award – The Technion’s Faculty of Medicine graduate research day | |
| 2023 | Gutwirth Excellence Scholarship | |
| 2022 | Teva's BioInnovation Student Fellowship & Mentorship Program | |
| 2020-2024 | The Faculty of Medicine Excellence Scholarship for graduate students • five semesters | |
| 2017 | Outstanding bachelor student in the Faculty of Biology award | |
| 2017-2018 | Faculty of Biology Dean's list • three semesters | |
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| **PUBLICATIONS** | | |
| **Refereed papers in professional journals:** | | |
| 1. #Bar-Yoseph H, **#Carasso S**, Shklar S, Korytny A, Even Dar R, Daoud H, Nassar R, Maharshak N, Hussein K, Geffen Y, Chowers Y, Geva-Zatorsky N, Paul M. Oral capsulized fecal microbiota transplantation for eradication of carbapenemase-producing Enterobacteriaceae colonization with a metagenomic perspective, *Clinical Infectious Diseases*, 2020. **# Equal Contribution**. | | |
| 2. Ben-Assa N, Coyne MJ, Fomenkov A, Livny J, Robins WP, Muniesa M, Carey V, **Carasso S**, Gefen T, Jofre J, Roberts RJ, Comstock LE, Geva-Zatorsky N, Analysis of a phase-variable restriction modification system of the human gut symbiont *Bacteroides fragilis*, *Nucleic Acids Research*, 2020. | | |
| 3. Berkowitz E, Kopelman Y, Kadosh D, **Carasso S**, Tiosano B, Kesler A, Geva-Zatorsky N, “More Guts than Brains?”–The Role of Gut Microbiota in Idiopathic Intracranial Hypertension, *Journal of Neuro-Ophthalmology*, 2021. | | |
| 4. **Carasso S**, Fishman B, Lask LS, Shochat T, Geva-Zatorsky N, Tauber E, Metagenomic analysis reveals the signature of gut microbiota associated with human chronotypes. *FASEB J.*, 2021. | | |
| 5. Marai I, Carasso D, **Carasso S**, Carasso S. The Mechanical Cost of Decreasing Conduction Velocity: A Mathematical Model of Pacing-Induced Lower Strain. *J Atr Fibrillation,* 2021. | | |
| 6. #Hadar Mudrik-Zohar H, **#Carasso S**, Gefen T, Zalmanovich A, Katzir M, Cohen Y, Paitan Y, Geva-Zatorsky N, Chowers M, Microbiome Characterization of Infected Diabetic Foot Ulcers in Association with Clinical Outcomes: Traditional Cultures versus Molecular Sequencing Methods. *Front. Cell. Infect. Microbiol.* 2022.  **# Equal Contribution**. | | |
| 7. Mandelbaum N, Zhang L, **Carasso S**, Ziv T, Lifshiz-Simon S, Davidovich I, Luz I, Berinstein E, Gefen T, Cooks T, Talmon Y, Balskus E. P., Geva-Zatorsky N, Extracellular vesicles of the Gram-positive gut symbiont *Bifidobacterium longum* induce immune-modulatory, anti-inflammatory effects, *npj Biofilms and Microbiomes.* 2023. | | |
| 8. #Naddaf R, **#Carasso S**, Reznick-Levi G, Hasnis E, Qarawani A, Maza I, Gefen T, Half E. E., Geva-Zatorsky N, Gut microbial signatures are associated with Lynch syndrome (LS) and cancer history in Druze communities in Israel, *Scientific Reports*. 2023. **# Equal Contribution**. | | |
| 9. **#Carasso S**, #Zaatry R, #Hajjo H, #Kadosh-Kariti D, Ben-Assa N, Naddaf N, Mandelbaum N, Pressman S, Chowers Y, Gefen T, Jeffrey K.L., Jofre J, Coyne M.J., Comstock L.E., Sharon I, Geva-Zatorsky N, Inflammation and bacteriophages affect DNA inversion states and functionality of the gut microbiota, *Cell Host & Microbe*. 2024. **# Equal Contribution**. | | |
| **Patents:** 10. (*pending*) Geva-Zatorsky N, **Carasso S**, Gefen T, Keshet R, Hajjo H, Zaatry R, Sharon I, Reversible bacterial phase-variations and uses thereof in diagnostic and therapeutic applications, WO2024176230A1. World Intellectual Property Organization; 2024.  11. (*pending)* Geva-Zatorsky N, Gefen T, Kariti D, Ben-Assa N, Abboud R, **Carasso S**, Zaatry R, Bacteriophages as a tool to manipulate gut commensal immune-modulation activity, WO2024194876A1. World Intellectual Property Organization; 2024. | | |
| **Preview articles:** | | |
| 12. **Carasso S**, Hajjo H, Geva-Zatorsky N, Phage-Bacteria Associations: Analyze. Match. Develop Therapies. *Cell Host & Microbe*, 2020. | | |
| **CONFERENCES** | | |
| **Invited talks** |  | |
| February 2023 | “Gut *Bacteroides* exhibit genomic phase variations under inflammatory conditions”, ILANIT | FISEB Experimental Biology Conference • Eilat, Israel | |
| September 2023 | “Bacterial DNA inversions and functional plasticity during inflammation and encounter with bacteriophages”, EMBL Symposium The human microbiome • Heidelberg, Germany | |
| **Posters** |  | |
| June 2023 | “Inflammation and bacteriophages affect DNA inversion states and functionality of the gut microbiota”, 10th Annual Broad-ISF Symposium • Jerusalem, Israel | |
| June 2024 | “Bacterial DNA inversions and functional plasticity during inflammation and encounter with bacteriophages”, Jacobs Graduate Research Day • Technion, Haifa, Israel | |
| June 2024 | “Long-term impact: bacteriophage-driven DNA inversions shape *Bacteroides fragilis* functionality”, 10th International Human Microbiome Consortium Congress (IHMC) • Rome, Italy | |
| September 2024 | “Bacterial DNA inversions and functional plasticity during inflammation and encounter with bacteriophages”, Israel Society for Microbiology 2024 Annual Meeting • Bar Ilan University, Ramat Gan, Israel | |