Curriculum vitae

PERSONAL INFORMATION

Family name, First name: **Yaara Oren**
Researcher unique identifier(s): **0000-0002-2509-4504**
Date of birth: **26/06/1984**
Nationality: **Israel**
URL for web site: https://www.yaaraoren.sites.tau.ac.il/

EDUCATION

2008-2015	**PhD.** (Direct Program for Outstanding Students). Departments of Cell Biology and Molecular Microbiology, Tel Aviv University, Israel. Mentors: Prof. Tal Pupko and Prof. Eliora Ron. "Thesis title: Comparative regulomics of bacteria as a tool for understanding strain specific adaptive changes". This work won the Proceedings of the National Academy of Science (PNAS) Cozzarelli prize for scientific excellence and originality in biomedical sciences.
2006-2008	**B.Sc.** in Biology in the Research Program for Outstanding Students. Tel-Aviv University, Israel *Summa Cum Laude*

CURRENT POSITION(S)

2022–	Senior Lecturer (Assistant Professor), Department of Human Molecular Genetics and Biochemistry, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

PREVIOUS POSITIONS

2016-2022	Postdoctoral Fellow, Joint position, Broad Institute of MIT and Harvard and Harvard Medical School, USA
2012-2014	Teaching Assistant, Department of Cell Biology, Tel Aviv University, Tel Aviv, Israel

FELLOWSHIPS AND AWARDS

2022	The Azrieli Faculty Fellowship
2022	Zuckerman Faculty Scholar
2020	Grillo-Marxuach Family Post-Doctoral Fellowship
2018-2021	The Hope Postdoctoral Fellowship
2018	The American Association for Cancer Research (AACR) Women in Cancer Research Scholar Award
2018	EACR-AACR-ISCR Conference: The Cutting Edge of Contemporary Cancer Research Travel Award
2018	Systems Approaches to Cancer Biology Conference Poster Award
2018	The Rivkin Scientific Scholar Award
2015	The Proceedings of the National Academy of Science (PNAS) Cozzarelli prize for scientific excellence and originality in biomedical sciences
2014	American Society of Microbiology (ASM) graduate student travel award
2014	Society for Molecular Biology and Evolution (SMBE) travel award
2014	Award from the Tel Aviv University graduate school for excellent achievements in teaching and research
2012	Anat Krauskopf Travel Award, Tel Aviv University
2012	Award from the Tel Aviv University graduate school for excellent achievements in teaching and research
2012	The Constantiner Institute for Molecular Genetics Travel Scholarship, Tel Aviv University
2008	Life Science Dean's honor list Award

2008	Pearlson Prize for Academic Achievements, Given in Memory of Captain Elad Grinadir

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2022-	Supervising two postdoctoral researchers (Harvard Medical School and Broad institute), a senior scientist (Tel Aviv University), a PhD student (Tel Aviv University), and two college graduate research associates (Tel Aviv University and The Broad Institute)
2019-2021	Supervising two college graduate research associates (The Broad institute). Both co-authored a paper with me
2015	Supervising an undergraduate student

TEACHING ACTIVITIES

2012 –2014	Teaching assistant, Tools in Bioinformatics, Tel Aviv University Israel

ORGANISATION OF SCIENTIFIC MEETINGS

2022	Non-Genetic Drug Resistance Across the Kingdoms of Life Workshop, Organizer, Israel

INSTITUTIONAL RESPONSIBILITIES

2022-	Faculty member, Medical School, Tel Aviv University, Israel
2022	PhD Committee, Tel Aviv University, Israel

REVIEWING ACTIVITIES

2022-	EACR Review panel member
2022-	Reviewer, Cancer Research Trust New Zealand
2022-	Reviewer, The U.S.-Israel Binational Science Foundation (BSF)
2021-2022	Papers for *Molecular Systems Biology* and *Frontiers in Cell and Developmental Biology*

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2021-	EACR Ambassador Member, European Association for Cancer Research (EACR)
2016-	Member, American Association for Cancer Research (AACR)
2009-2015	Member, Society for Molecular Biology and Evolution (SMBE)
2009-2015	Member, Israeli Society of Microbiology (ISM)

Publications - peer reviewed:

1. Noronha A, Belugali Nataraj N, Sang Lee J, Zhitomirsky B, **Oren Y**, et al. AXL and error-prone DNA replication confer drug resistance and offer strategies to treat EGFR-mutant lung cancer. Cancer Discov. 2022 Jul 27. *In this Article, I performed a computational analysis to detect genes that are associated with the adaptive mutability of cycling persister cells.*

2. **Oren Y**, et al. Cycling cancer persister cells arise from lineages with distinct programs. Nature. 2021 Aug. 103 citations. *In this Article, I developed a new approach to the study and characterize cycling persister cells.* ***Since its publication the Watermelon system was distributed to more than 70 labs worldwide****. I performed both the computational and experimental aspects of this study.*

3. Li CM, Shapiro H, Tsiobikas C, Selfors LM, Chen H, Rosenbluth J, Moore K, Gupta KP, Gray GK, **Oren Y**, et al. Aging-Associated Alterations in Mammary Epithelia and Stroma Revealed by Single-Cell RNA Sequencing. Cell Rep. 2020 Dec 29;33(13):108566. 39 citations. *In this Article, I performed single-cell transcriptional analysis to uncover pathways and cell types associated with aging.*

4. Ludwig LS, Lareau CA, Ulirsch JC, Christian E, Muus C, Li LH, Pelka K, Ge W, **Oren Y**, et al G. Lineage Tracing in Humans Enabled by Mitochondrial Mutations and Single-Cell Genomics. Cell. 2019 Mar 7;176(6):1325-1339.e22. 261 citations. *In this Article, I contributed to the development of a new lineage tracing technique.*

5. #Ben-David U, Siranosian B, Ha G, Tang H, **Oren Y**, et al. Genetic and transcriptional evolution alters cancer cell line drug response. Nature. 2018 Aug;560(7718):325-330. 578 citations. *In this Article, I performed single-cell transcriptional analysis to study the evolutionary trajectories of clonal populations.*

6. McNally A, **Oren Y**, et al. Combined Analysis of Variation in Core, Accessory and Regulatory Genome Regions Provides a Super-Resolution View into the Evolution of Bacterial Populations. PLoS Genet. 2016 Sep;12(9):e1006280. 155 citations. *In this Article, I devised an algorithm the study the evolution of bacterial pathogens.*

7. Huja S, **Oren Y**, et al. Genomic avenue to avian colisepticemia. mBio. 2015 Jan 13;6(1). 56 citations. *In this Article, I devised an algorithm the study the emergence of a highly pathogenic strain.*

8. **Oren Y**, et al. Transfer of noncoding DNA drives regulatory rewiring in bacteria. Proc Natl Acad Sci U S A. 2014 Nov 11;111(45):16112-7. 64 citations. *In this Article, I described a new mechanism underlying the emergence of pathogens from commensal bacteria. For this work, I was awarded the Proceedings of the National Academy of Sciences* ***Cozzarelli prize for scientific excellence and originality in biomedical sciences****. I performed both the computational and experimental aspects of this study.*

9. Huja S, **Oren Y**, et al. Fur is the master regulator of the extraintestinal pathogenic Escherichia coli response to serum. mBio. 2014 Aug 12;5(4). 35 citations. *In this Article, I applied computational approaches to study the regulation of pathogenic bacteria.*

10. Rubinstein ND, Zeevi D, **Oren Y**, et al. The operonic location of auto-transcriptional repressors is highly conserved in bacteria. Mol Biol Evol. 2011 Dec;28(12):3309-18. 7 citations. *In this Article, I applied computation models to identify evolutionary constraints to operonic conservation.*

Additional non-peer reviewed publications (# indicates those without my Ph.D. advisor):

1. #**Oren Y**. Hunting down rare drug-tolerant cycling cells with Watermelon. Nat Rev Cancer. 2022 Aug;22(8):434-435.

2. #**Oren Y**. Standing on the shoulders of microbes: How cancer biologists are expanding their view of hard-to-kill persister cells. Mol Syst Biol. 2022 Jul;18(7):e11168.

Granted patent:

Yaara Oren, Joan Brugge, Aviv Regev. "Expressed barcode libraries and and uses thereof" U.S. 62/728,701 06/2019.

Invited presentations

2023 EACR 2023 Congress, Italy (*Scheduled)*
2023 EMBO Workshop: Systems approaches in cancer, Croatia (*Scheduled)*
2023 Cancer Research School in Cancer Metabolism, Germany (*Scheduled)*
2022 SMBE Evolutionary Rescue Meeting, Germany
2022 EACR Cancer Genomics, England

2022 Future Medicine, Israel
2022 EMBO Workshop: persistent cancer cell, Croatia
2022 Annual meeting of the Israeli Society for Cancer Research, Israel
2022 Human Genome Meeting, Israel
2022 Single Cell Biology - Keystone Symposia, Italy
2022 From Basic Cancer Research to Therapies conference, Israel
2021 EACR-AstraZeneca Conference on Drug Tolerant Persister Cells, virtual
2021 International EGFR-driven lung cancer meeting, virtual
2021 Klarman Cell Observatory Scientific Advisory Board, virtual
2020 The Broad institute Retreat, virtual
2020 Klarman Cell Observatory Retreat, USA
2018 EACR-AACR-ISCR Conference, Israel
2014 The Microbiology Annual Meeting conference, Israel
2014 The Microbiology Annual Meeting conference, Israel
2011 The joint workshop of Tel Aviv and Greifswald University, Israel