Name: Yehoram (Yori) Leshem **Date:** (September 24, 2026)

* Highlighted in yellow - new items since July 2025

CURRICULUM VITAE

1. Personal Details

Permanent Home Address: Masik 5, Sde Ilan.

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2. Higher Education

A. Undergraduate and Graduate Studies

Period of Study	Name of Institution and Department	Degree	Year of Approval of Degree
2002- 2007	The Hebrew University, Jerusalem. Department of Plant Sciences.	**Ph.D.**	2008
1999-2001	Ben-Gurion University in the Negev, Beer-Sheva. Department of Life Sciences.	**M.Sc.**	2001
1995-1997	The Faculty of Agriculture, the Hebrew University, Rehovot	**B.Sc.**	1997

B. Post-Doctoral Studies

Period of Study	Name of Institution, Department and Host	Degree	Year of Completion
2008- 2013	University of California - Davis. The Department of Plant Biology. **Host**:	**Ph.D.**	2013

Vaadia-BARD Fellow (during 2008-2010).	Prof. Venkatesan Sundaresan. (2024 Wolf Prize laureate).		

3. Academic Ranks and Tenure in Institutes of Higher Education

Dates	**Name of Institution and Department**	**Rank/Position**
2013– Present	MIGAL – Galilee Research Institute, Department of Plant Sciences, Kiryat-Shmona.	**Principle Investigator** – head of "Plant Development and Adaptation Laboratory" https://www.migal.org.il/en/Yori-Leshem
2022 (January) Present	Tel Hai University of Kiryat Shmona in the Galilee. Department of Biotechnology.	**Senior Lecturer** https://www.telhai.ac.il/en/dr-yehoram-yori-leshem
2021 (October) – 2022	Tel-Hai Academic College. Department of Biotechnology.	**Lecturer**
2014 – 2020	Tel-Hai Academic College. Department of Biotechnology.	**Adjunct Lecturer (Segel Amit)**
2008 - 2013	UC DAVIS, CA, USA. Department of Plant Biology. **Host**: Prof. Venkatesan Sundaresan.	**Postdoctoral research fellow**

4. Offices in Academic Administration

Since 2022 - Member of Tel Hai College committee for students' academic requests.

5. Scholarly Positions and Activities outside the Institution

-Israeli official representative for **COST** (European Cooperation in Science and Technology) **Action CA22144** - Sustainable use of salt-affected lands (SUSTAIN). Formally nominated at 31.07.2023) : https://www.cost.eu/actions/CA22144/.

Active participant at:

28.05.2024. SUSTSIN Management Committee attendance, 2ed meeting, Valencia, Spain.

3.10.2023. SUSTSIN Management Committee attendance, 1st meeting, Brussels, Belgum.

-Peer reviewer:

-Grant reviewer for:

The Israel Science Foundation, the Ministry of Sciences and Technology (MOST) and the Ministry of Agriculture and French National Research Agency (ANR)

*April 2026, Official reviewer for the French National Research Agency (ANR) https://anr.fr/en/

*July-August 2024, Official member in MOST Judging committee, the China-Israel Research Program: https://www.gov.il/he/pages/rfp05022024

-Manuscripts reviewer for the following scientific peer reviewed journals: *Development, Genes*, *HortScience, Physiologia Plantarum, Plant Physiology*, *Plants*, *Protoplasma,*

*August 2026, Judging committee member (M.Sc.), School of Plant Sciences and Food Security, Tel Aviv University.

6. Participation in Scholarly Conferences

a. Active Participation (Academic conferences only)

Date	Name of Conference	Place of Conference	Subject of Lecture	Role
15/10/2026	*The International SPS (Université Paris-Saclay **P**lant **S**ciences network) Symposium 2026	Versailles, France	Increased plant thermal tolerance by	Oral presentation

	https://2026-saclay-plant-sciences.symposium.inrae.fr/		RabA-mediated plasma membrane trafficking	
05/10/2026	*The Israeli fruit trees society 2nd meeting https://fruittreesisrael.com/conferences#kenes-2	Tel Hai University of Kiryat Shmona	*Pyrus syriaca* as a genetic resource for thermal tolerance in cultivated pears.	Oral presentation
23/02/2026	*ILANIT/FISEB 2026 https://conf.fiseb.org/	Eilat	Extracellular microRNAs: Plants' first line of defense?	Flash talk
15/12/2025	*IECAG 2025 - The 5th International Electronic Conference on Agronomy https://sciforum.net/event/IECAG2025	Internet	Micro-RNA from pear stigma exudates – The next generation of anti-fire blight agents ?	Oral presentation
16/9/2025	*Agricon – Israel Agricultural Sciences Conference. https://agricon.co.il/	Jerusalem	Micro-RNA from pear stigma exudates – The next generation of anti-fire blight agents ?	Oral presentation.
26/6/2025	PBE – Plant Biology Europe 2025 congress. https://pbe2025-budapest.org/	Budapest	Extracellular microRNAs: Plants' first line of defense?	*Oral presentation. (**Featured speaker**). *By zoom, due to AM-CELAVI war.
24/6/2025	5th Annual Congress on Plant Science and Biosecurity. https://acpsb.com/	Prague	Stigma secreted microRNA in pear and its potential	*Oral presentation (**Invited lecture**).

			role in fire blight control	*By zoom, due to AM-CELAVI war.
24/12/2024	The Israeli fruit trees society 1st annual meeting https://fruittreesoc.wordpress.com/	Volcani Center - Israel	Micro-RNA from pear stigma exudates – The next generation of anti-fire blight agents ?	Oral presentation
04/07/2023	PBE – Plant Biology Europe 2023 congress. https://europlantbiology2023.org/	Marseille – France	RabA-mediated plasma membrane trafficking increases plant tolerance to drought and heat	Oral presentation
15/11/2021	2nd Edition of Plant Science: Research & Technology Conference.	International Virtual Conference.	The involvement of RabA2b in water stress tolerance in Arabidopsis	Oral presentation
04/03/2019	21st Galilee Research Conference.	Tel-Hai Academic College, Israel	A little bit on life, death and a lot of salt.	Oral presentation
09/11/2015	CEREIA meeting (Center of Excellence for Research on Environment, Health and Aging).	Wageningen, the Netherlands.	Improving salt tolerance by altering trafficking pathways	Oral presentation

01/12/2013	ISOFRR (the Israeli Society for Oxygen and Free Radicals Research) 29th annual meeting.	Tel-Hai Academic College, Israel	Sub-organelle ROS: possible role in chloroplasts during stomata closure	Oral presentation
16/02/2009	UC MEXUS Reproductive Biology meeting.	Irapuato, Mexico	*glauce* - A tale of a lost nucleus?	Oral presentation
15/02/2007	ISPB annual conference (Israeli Society of Plant Biologists).	Faculty of Agriculture, Rehovot, Israel.	Mediation of abiotic stress responses by vacuolar vesicle trafficking	Oral presentation
04/09/2006	**The Gordon conference** on Salt and Drought Stresses in Plants.	Oxford University, UK	The opposing roles of the vacuolar vesicle trafficking in salt and drought tolerance	Oral presentation **Invited speaker**
01/07/1999	Ministry of Agriculture – SHAHAM annual conference**.**	Beit-Dagan, Israel	The effect of UV absorbing greenhouse plastic sheets on green Bell-Pepper Growth	Oral presentation

b. **Organization of Conferences or Sessions**

Date	**Name of Conference**	**Place of Conference**	**Subject of Conference**	**Role**

12-14/03/2023	25th Galilee Research Conference	Tel Hai Academic College	Galilee research studies.	Conference steering committee member
23-24/03/2022	24th Galilee Research Conference.	Tel Hai Academic College	Galilee research studies.	Conference steering committee member

7. **Invited Lectures** (In academia and research organizations)

Date	**Place of Lecture**	**Name of Forum**	**Presentation topic**
13/05/2026	*SUSTAIN (COST action #22144): https://sustaincostaction.eu/event-category/webinars/	SUSTAIN 4th Webinar	Islands of Hope – The advantage of going sideway during lethal salinity
6/03/2024	School of Plant Sciences and Food Security, Tel Aviv University.	School's weekly seminar	Mediation of stress responses through plasma membrane trafficking
9/06/2021	Institute for Agriculture and Biotechnology of Drylands – Sde Boker, Ben Gurion University of the Negev	Institutional weekly seminar	RabA2b trafficking is important for water stress tolerance in plants
14/02/2017	The Institute of Experimental Botany, Prague, the Czech Republic.	Institutional weekly seminar	The role of GLUACE in central cell fertilization and pollen tube attraction
25/02/2012	The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture, The Faculty of Agriculture, Food and Environmental Sciences, the Hebrew University of Jerusalem – Rehovot campus	Institutional weekly seminar	How Good is BAHD in Central-Cell Fertilization?
09/01/2011	The Alexander Silberman Institute for Life Sciences – Givat Ram, the Hebrew University of Jerusalem.	Institutional weekly seminar	GLAUCE - the Greek princess, a gateway to fertility.

13/06/2006	Bowley Plant Sciences Center, UC Davis, CA USA.	Departmental weekly seminar	The role of vesicle-SNARE expression in Arabidopsis salt tolerance
5/09/2004	The Alexander Silberman Institute for Life Sciences – Givat Ram, the Hebrew University of Jerusalem	Special seminar - Harel prize lecture.	Salinity induced Reactive Oxygen Species generation, inside or outside? Good or bad?

8. Research Grants

a. Grants Awarded

Role in Research	Co-Researchers	Topic	Funded by/ Amount	Year
*PI	Prof. George Sundin Michigan State University	Examination of the potential involvement of stigma exudate exRNAs in regulating flower pollination and fire blight disease resistance	BARD (Feasibility) Total budget: 180,000 $ PI Share - 90,000 $	2026-2027
*Co-PI	Coordinator: Prof. Ivan Paponov AARHUS University Denmark (8 member consortium)	EVOLVE-Translating Extracellular Vesicle Communication into AI Guided Breeding and Smart Biofertilization	EIC-PATHFINDER CHALLENGES. Total budget: 4,269,000 € PI Share - 240,000 €	2026-2028
*Co-PI	Coordinator: Prof.	Joining Israel Plant Scientist to	VATAT	2026-2030

	Menachem Moshelion – Hebrew U. (10-member consortium)	EMPHASIS - ERIC (European Infrastructure for Plant Phenotyping, ERIC (European Research Infrastructure Consortium)	(International research infrastructure grants) Total budget: 1,363,000 € Total budget was paid to: EMPHASIS ERIC	
PI	Dr. Lior Gur, Shamir Institute.	MicroRNAs as potential regulators of Moldy-Core disease in Apple	Shamir Institute and Tel Hai College Collaborative Research Fund. (Peer reviewed) 40,000 NIS	2025-2026
PI	Dr. Oded Liran, MIGAL.	Development of a remote sensing index to determine the accumulation of Reactive Oxygen Species within the photosynthetic apparatus of plants.	MIGAL grants for futuristic agriculture during climate change. (Peer reviewed) 250,000 NIS (Only 125,000 NIS were used, due to Dr. Liran's resignation in 2023)	2022-2023
PI	Dr. Karen Jacson, MIGAL. Prof. Rafi Stern, Mop Zafon.	Developing a new Healthy/Superfood crop by crossing Graviola (*Anonna muricata*) with Sugar Apple (*Anonna squamosa*).	ICA- יק"א 70,000 NIS.	2018-2019
PI	-	The Syrian Pear (*Pyrus syriaca*) flower exudates A potential resource of anti-Fire-Blight factors.	MIGAL- GAVISH grant. 100,000 NIS.	2017-2018 1 paper (#5)
PI	Prof Ashis Nandy, Jawaharlal Nehru	Interconnection between thermal acquired tolerance and systemic	Israel Science Foundation Grant # 2713/16 (ISF-UGC program).	2017-2021 7 papers

	University New Delhi	acquired resistance in plants	1,110,000 NIS.	(#1,3,5,6,10, 11,12)

b. Submission of Research Proposals – Pending

Role in Research	Co-Researchers	Topic	Funded by	Year
*PI	Prof. Michael Schloter, Technical University of Munich, Germany. Dr. Orah Rein, ARO, Israel.	WILDEFLOW: Wetland-Integrated Living Designs for Enhanced Flow	MOST (Israel-Germany) 240,000 €	2026-2028

c. Submission of Research Proposals – Not Funded

Role in Research	Co-Researchers	Topic	Funded by	Year
PI	Prof. Vitaly Citovsky State University of New York, Stony Brook	* The role of small Rab GTPases in plasmodesmata during biotic and environmental stimuli.	BSF	2025-2027
PI	Dr. Or Shapira Mop Zafon	* Phloem sap small RNAs as potential novel bioregulators of Greening and Stubborn diseases in Citrus.	Collaborative research between Tel Hai and Mop Zafon	2026-2027
Co-PI	Dr. Iris Zohar, Tel Hai College. Prof. Adnane Beniaich, Mohammed VI Polytechnic University, Morocco Prof. Gurpal Toor University of Maryland. USA.	Cultivating Resilience: Olives as a Model for Mediterranean Agriculture Under Climate Stress	MERC (MIDDLE EAST REGIONAL COOPERATION PROGRAM) (*Program canceled by the Trump administration)	2025-2028

PI	-	Development of climate resilient rootstock by crossing wild and cultivated pears	JCA – יק"א 120,000 NIS.	2025
PI	-	The role of RabA small GTPases at the Plasmodesmata and Hechtian Strands during water stress	ISF 1,570,000 NIS.	2024
PI	Prof. George Sundin Michigan State University	Examination of the potential involvement of stigma exudate exRNAs in regulating flower pollination and fire blight disease resistance	BARD 300,000 $	2024
Co-PI	Dr. Iris Zohar, Tel Hai College. Prof. Gurpal Toor University of Maryland.	Heatwaves and Phosphorus: Understanding phosphorus in soils to improve crop and soil health	BARD	2024
PI	-Prof. Ivan Paponov, Aarhus University, Denmark. -Prof. Michael Schloter, Technical University Munich, Germany	Extracellular Vesicles – a tool to improve food security and quality crops by reduce allergen loads under climate change scenarios.	NOVONORDISK https://novonordiskfonden.dk/grant/global-science-summit-programme-2024/	2024
PI	Prof. George Sundin Michigan State University	Extracellular RNAs in plants - The potential involvement of stigma exudate microRNAs in intraspecies and cross kingdom interactions.	BSF – The U.S.-Israel Binational Science Foundation	2024
PI	-	The role of RabA small GTPases in Plasmodesmata mediated transport during a-biotic stresses	ISF - Israel Science Foundation	2024

Co-PI	Dr. Navot Galpaz - PI Dr. Amir Raz – Co-PI	Development of salinity tolerant banana cultivars through gene editing	MIGAL's program for "coping with climate change."	2024
Co-PI	International European consortium	Resilient Ecosystems Versus Desertification Through Sustainable Water and land Management	HORIZON EUROPE HORIZON-MISS-2023-SOIL-01-04	2023
PI	Dr. Dipak Gayen, Central University of Rajasthan.	Modifying chromatin assembly by CRISPR-Cas9 genome editing to improve salt and drought tolerance in rice.	The Ministry of Innovation, Science and Technology – (India-Israel Program)	2023
PI	Dr. Navot Galpaz (MOP Zafon). Dr. Amir Raz - MIGAL	improving elite banana cultivars tolerance to heat and salt stresses using Genomic editing	MIGAL inner grant, the call for "Climate change solutions".	2023
PI	Prof. Venkatesan Sundaresan, UC Davis.	The investigation of the presence of microRNAs in root exudates and their modulation by abiotic stresses	UC Davis - Israel Collaborations in Research 2023-2025	2023

9. Scholarships, Awards and Prizes

2004. The "Harel" Prize for outstanding PhD students in the Plant and Environmental Sciences Department at the Hebrew University of Jerusalem.

2008-2010. Vaadia- BARD Postdoctoral Fellowship. Award # FI-392-07 (32,000 $).

2011. UC-Davis PSA (PostDocs Association) Travel Award.

10. Teaching

a. **Courses Taught in Recent Years**

Year	Name of Course	Type of Course	Degree	Number of Students
2027, 2025, 2023, 2021, 2019, 2017	Plant Developmental Biology	Lecture	M.Sc.	17 (~14-20)
2026 (and every year since 2015)	Plant Abiotic Stress Responses	Lecture (Mandatory)	B.Sc.	38 (~30-40)
2026 (and every year since 2014)	Plant Biology for Nutritionists	Introduction Course (Mandatory)	B.Sc.	54 (~50-70)
2026 (and every year since 2017)	Advanced Seminar in Biotechnology	Seminar	B.Sc.	18 (~18-22)
2026 (and every year since 2022)	First Seminar in Biotechnology	Seminar	B.Sc.	18 (~18-22)

b. **Supervision of Graduate Students**

Name of Student	Title of Thesis	Degree	Date of Completion	Students' Achievements
*Yonatan Ram	Plant root derived extracellular vesicles: a novel tool towards sustainable agriculture	Post-Dr	2026 (Started)	-
Ambar Gupta	Development of a remote sensing index to determine the accumulation of Reactive Oxygen Species within the photosynthetic apparatus of plants.	Post-Dr Co-supervisor Dr. Oded Liran, MIGAL	2022	-
Vivek Ambastha	The role of Rab small GTPases in plant abiotic stress responses	Post-Dr	2021 (Since 2016)	-7 papers: (#1,3,5,6,10,11, 12)

				-3 Oral presentations at MIGAL annual conference.
*Hadi Azaizeh	The species effect on fruit and inflorescence volatile profile in *Pyrus*	M.Sc. Co-supervisor Dr. Zipora Tietle, ARO.	2026/7 (Starting)	
*Amit Gerty	Characterization of abiotic stress resilience in southern *Pyrus syriaca* populations.	M.Sc.	2026 (Started)	
Maria Deeb	*Pyrus syriaca* (wild pear) as a resource for novel abiotic stress responsive genes	M.Sc.	2026 (Ongoing, second year)	1st place. Poster presentation. Tel Hai Faculty of Sciences Conference.
Mordechai Cemel	Molecular taxonomy and genetic signatures of various Acari. (Education track)	M.Sc. Co-supervisor Dr. Adi Kliot, ARO.	2025	-
Opal Bechar	Alterations in the cuticle's composition and structure in Arabidopsis thaliana plants overexpressing RabA2b	M.Sc. Co-supervisor Porf. Rafi Stern, MIGAL.	2023	-1 Oral presentation -1 paper (#2)
Rona Biber	The involvement of *RabA2b* gene in auxin-related morphogenetic developmental processes in *Arabidopsis thaliana* roots	M.Sc. Co-supervisor Prof. Rafi Stern, MIGAL.	2023	-
Dafna Tidhar	Cellular and physiological characterization of RabA2b overexpressing *Arabidopsis thaliana* plants during abiotic stresses	M.Sc. Co-supervisor Porf. Rafi Stern, MIGAL.	2021	2 papers (#3,6) 1 paper (in preparation)

Dekel Avraham	The involvement of Rab 11 proteins in plants responses to heat stress.	M.Sc. Co-supervisor Dr. Alon Margalit, Tel Hai College.	2019	1 paper (in preparation)

c. **Supervision of Undergraduate Students**.

Name of Student	Title of project	Degree	Date of Completion
Shoval Amor	Novel insights into plant fertilization by sperm cells proteomics	3rd year lab project.	2024
Maya Tsfadia	Changes in the cuticle structure and metabolic profile in Arabidopsis plants overexpressing RabA2b.	3rd year lab project.	2024
Nimrod Meitav	The involvement of ABA in regulation of vesicle trafficking genes during abiotic stresses	3rd year lab project.	2019
Anat Vishilzki-Cohen	The effect of RabA2b overexpression on plant salt tolerance.	Ort-Brauda intern	2018
Rani Siban	The effect of knockout in small HSP on Arabidopsis plants heat sensitivity.	3rd year lab project.	2017
Samara Da'abus	Knockout in HSP20 did not affect Arabidopsis plants heat tolerance.	Galilium High school student https://galilium.eastgalil.org.il/	2017

11. Miscellaneous

Community contribution - Science and Community Outreach activities:

1) 2026 **Parkinson's association in Israel** (Hermonim club) – Volunteer Lecture. (*Cancelled due to **Epic Fury** war).

2) 2022 **Yom-Hamada activities** https://www.migal.org.il/en/science-day2022
3) 2019-2020 **Leil Hamada'anim activities** https://www.gov.il/he/departments/news/most_news202001126
4) 2014-2020 **Etz-Hadaat learning group**, Jewish studies teacher, Kibbutz Iftah.
5) 2016-2017 **GALILIUM**: High school students project mentor: https://www.facebook.com/Galilium/ Samara Da'abus, Masa'ada High School. Subject: The role of small HSP in Arabidopsis responses to heat shock
6) 2015 - **Bashaar** (Academic Community for Israeli Society) correspondent: http://www.bashaar.org.il/
7) 2014 - **Zemach Hasade** - Popular sciences contributor: http://www.wildflowers.co.il/english/

PUBLICATIONS

A. Ph.D. Dissertation

The involvement of vesicle trafficking in plant responses to abiotic stresses. (English, 87pages). The Hebrew University of Jerusalem. Supervised by Prof. Alex Levine.

Approved: 12/05/2008

C. Articles in Refereed Journals

[Impact Factor : journal ranking **:** number of citations].

[Journal ranking - **Q1** occupies the top 25% of journals in the list, based on SJR citation index; **Q2** occupies the 25-50% group; **Q3** the 50-75% group, **Q4** occupies the low 75-100%. [C] indicates corresponding author]

Published

1. *2026. Vivek Ambastha, Yuval Nevo and **Yehoram Leshem**. How pertinent is the RIN for validating RNA quality isolated from cell-free biological fluids? *Frontiers in RNA Research 4:1793780.* https://doi.org/10.3389/frnar.2026.1793780

2. *2026. Opal Bechar, Sanaa Musa, Boris Fichtman, Ifat Matityhu and **Yehoram Leshem**. Chemical and Ultrastructural Changes in the Cuticle Observed in RabA2b Overexpressing Plants. *Plants*, 15(3),408 [4.7 : Q1 : citations- 0]. https://doi.org/10.3390/plants15030408

3. *2025. Vivek Ambastha, Dafna Tidhar, Ifat Matityhu and **Yehoram Leshem**. Novel insights into RabA2b intracellular localization suggest a role in plasmodesmatal function. *Frontiers in Plant Sciences*, 16:1605468. [5.9 : Q1 : citations- 0]. https://doi.org/10.3389/fpls.2025.1605468
4. *2025. Ivan A. Paponov, Stefanie Schulz, Michael Schloter, Ana Conesa and **Yehoram Leshem**. Extracellular vesicles in the rhizosphere: targets to improve nutrient use efficiency of crops? *Frontiers in Plant Sciences*, 16:1681793. [5.9 : Q1 : citations- 4]. https://doi.org/10.3389/fpls.2025.1681793
5. 2023. Ambastha V, Nevo Y, Matityahu I, Honys D and **Leshem Y** [C]**.** Discovery of microRNAs in *Pyrus* stigma exudates opens new research avenues in Horticulture. *PNAS Nexus* 2, 1–4. [4.8 : Q1 : citations- 2]. https://doi.org/10.1093/pnasnexus/pgad332
6. 2021. Ambastha V, Matityahu I, Dafna Tidhar and **Leshem Y** [C]. RabA2b Overexpression Alters the Plasma-Membrane Proteome and Improves Drought Tolerance in Arabidopsis. *Frontiers in Plant Science* 12:738694 [5.9 : Q1 : citations- 19]. https://doi.org/10.3389/fpls.2021.738694
7. 2021. Li G, Li Z, Yang Z, **Leshem Y**, Shen Y, and Men S. Mitochondrial Heat Shock Cognate Protein 70 Contributes to Auxin-mediated Embryo Development. *Plant Physiology*. 186(2):1101-1121. [8.2 : Q1 : citations- 21]. https://doi.org/10.1093/plphys/kiab138
8. 2021. Vanti GL, **Leshem Y** and Masaphy S. Resistance response enhancement and reduction of Botrytis cinerea infection in strawberry fruit by *Morchella conica* mycelial extract. *Postharvest Biology and Technology, 175:111470.* [7.3 : Q1 : citations- 45]. https://doi.org/10.1016/j.postharvbio.2021.111470
9. 2021. Tadmor Y, Raz A, Reikin-Barak S, Ambastha V, Shemesh E, **Leshem Y**, Crane O, Stern R, Goldway M, Tchernov D and Liran O. (2021). "Metamitron, a Photosynthetic Electron Transport Chain Inhibitor, Modulates the Photoprotective Mechanism of Apple Trees". *Plants* 10:2803. [4.7 : Q1 : citations- 14]. https://doi.org/10.3390/plants10122803
10. 2020. Ambastha V and **Leshem Y** [C]. Cyclin B1;1 activity is observed in lateral roots but not in the primary root during lethal salinity. *Plant Signaling & Behavior,* 15:8 e1776026 (cover page). [4.1 : Q1 : citations- 6]. https://doi.org/10.1080/15592324.2020.1776026

11. 2020. Ambastha V and **Leshem Y** [C]. Differential cell persistence is observed in the Arabidopsis female gametophyte during heat stress. *Plant Reproduction,* 33:111–116. [2.6 : Q1 : citations- 9]. https://doi.org/10.1007/s00497-020-00390-0
12. 2020. Ambastha V, Friedman Y and **Leshem Y** [C]. Laterals take it better – Emerging and young lateral roots survive lethal salinity longer than the primary root in Arabidopsis**.** *Scientific Reports, 10:3291.* [4.9 : Q1 : citations- 40]. https://doi.org/10.1038/s41598-020-60163-7
13. 2013. **Leshem Y** and Levine A. Zooming into sub-organellar localization of reactive oxygen species in guard cell chloroplasts during abscisic acid and methyl-jasmonate treatments**.** *Plant Signaling and Behavior,* 8:10. e25689-1-e25689-4 (Cover page). [4.1 : Q1 : citations- 17]. https://doi.org/10.4161/psb.25689
14. 2013. **Leshem Y**, Johnson C and Sundaresan V. Pollen tube entry into the synergid cell of Arabidopsis is observed at a site-distinct from the filiform apparatus. *Plant Reproduction*, 26:93–99. [2.6 : Q1 : citations- 52]. https://doi.org/10.1007/s00497-013-0211-1
15. 2012. **Leshem Y**, Johnson C, Wuest S, Song X, Ngo Q, Grossniklaus U and Sundaresan V. Molecular Characterization of the *glauce* Mutant: a Central Cell-Specific Function Is Required for Double Fertilization in *Arabidopsis*. *The Plant Cell*, 24:3264-3277. [13.5 : Q1 : citations- 49]. https://doi.org/10.1105/tpc.112.096420
16. 2011. Kaye Y, Golani Y, Singer Y, **Leshem Y**, Cohen G, Ercetin M, Gillaspy G and Levine A. Polyphosphate 5-phosphatase7 regulates production of reactive oxygen species and salt tolerance in Arabidopsis. *Plant Physiology*, 157**:**229-241. [8.2 : Q1 : citations- 107]. https://doi.org/10.1104/pp.111.176883
17. 2011. **Leshem Y**, Kesar T and Shmida A. Female- biased nectar production in the protandrous, hermaphroditic shrub *Salvia hierosolymitana* (Lamiaceae). *Australian Journal of Botany*, 59:18–25. [1.3 : Q2 : citations- 8]. https://www.publish.csiro.au/bt/BT10176
18. 2010. **Leshem Y,** Golani Y, Kaye Y and Levine A. Reduced expression of the v-SNAREs AtVAMP71/AtVAMP7C gene family in Arabidopsis reduces drought tolerance by suppression of abscisic acid-

dependent stomatal closure. *Journal of Experimental Botany*, 61:2615-2622. [6.5 : Q1 : citations- 95]. https://doi.org/10.1093/jxb/erq099

19. 2007. **Leshem Y,** Seri L and Levine A. Induction of phosphatidylinositol 3-kinase- mediated endocytosis by salt stress leads to intracellular production of reactive oxygen species and salt tolerance. *The Plant Journal*, 51:185-197. [6.2 : Q1 : citations- 384]. https://doi.org/10.1111/j.1365-313X.2007.03134.x
20. 2007. **Leshem Y** and Levine A. Intracellular ROS – what does it do there ? *Plant Signaling and Behavior*, 2:155-156. [4.1 : Q1 : citations- 11]. https://doi.org/10.4161/psb.2.3.3685
21. 2006. **Leshem Y**, Melamed-Book N, Cagnac O, Ronen G, Nishri Y, Solomon M, Cohen G and Levine A. Suppression of *Arabidopsis* vesicle- SNARE expression inhibited fusion of H_2O_2-containing vesicles with tonoplast and increased salt tolerance. *Proceedings of the National Academy of Sciences of the United States of America* - *PNAS* 103:18008-18013. [9.5 : Q1 : citations- 302]. https://doi.org/10.1073/pnas.0604421103
22. 2004. Mazel A, **Leshem Y**, Tiwari BS and Levine A. Induction of salt and osmotic stress tolerance by over expression of an intracellular vesicle trafficking protein AtRab7. *Plant Physiology* 134:118-128. [8.2 : Q1 : citations- 385]. https://doi.org/10.1104/pp.103.025379
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24. 1997. Leshem Ya'acov, Haramaty E, Iluz D, Malik Z, Soffer Y Roirman L and **Leshem Yehoram**. Effect of stress nitric oxide (NO) Interaction between chlorophyll fluorescence, galactolipid fluidity and lipoxygennase activity. *Plant Physiology and Biochemistry* 35:573-579. [6.2 : Q1 : citations- 93]. https://agris.fao.org/agris-search/search.do?recordID=FR1997004355

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G. Entries in Encyclopedias

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I. Other Publications

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2) 2021. Ambastha V and **Leshem Y**. Low Chilling Requirement apple cultivars as a potential genomic resource for improving heat stress tolerance during global warming. *Agricultural Research & Technology* 26:3
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L. Summary of my Activities and Future Plans

The deteriorating growth conditions caused by global climate change negatively affects many plant species, including staple crops, imposing a major threat for global food production. Therefore, studying how plants respond to environmental stress is of utmost importance.

My main interests are the study of the ways plants cope with drought, salinity and heat stress. We are interested in the cellular aspects of these responses, in particular the involvement of the vesicular trafficking machinery and plasma membrane trafficking in mediating stress tolerance. We have shown how manipulations of Rab7 and RabA (Rab11) small GTPases as well as other trafficking members such as VAMP7 SNAREs docking proteins, increase plant resistance to these stress-causing conditions. We are also interested in cell death processes and how exactly autophagy mediated programmed cell death is regulated during extreme conditions of heat, salinity and drought.

In addition, we study sexual reproduction processes such as stigma-pollen and pollen tube-ovule interactions. We study the ways these interactions, which are critical for proper seed set and fruit development, are affected by abiotic stress.

The cellular responses to stress are studied through advanced microscopy techniques. In parallel, we use other experimental approaches such as transcriptomics, functional genetics and whole organism physiology.

We carry out our research in the model organism *Arabidopsis thaliana* as well as its closest relative from the *Brassicaceae* family - *Camelina sativa*. We also perform outdoor research and study other plant species such as *Malus domestica* (apple) and *Pyrus communis* (pear), which are important regional crops.

My interest in PM trafficking led me recently to study secretion processes in plants and the novel discovery of extracellular microRNAs and extracellular vesicles (EV) in secreted exudates. The identified microRNAs are potentially involved in cross kingdom interactions and biocontrol of various pathogenic microorganisms. These findings laid the basis for two competitive grant proposals that were submitted last year and were recently approved for funding by BARD and EIC-Pathfinder Challenges. These grants will allow me to study the plant cell's exterior which is largely unexplored, and shed light in coming years on the role of EVs and ex-miRs in intra- and cross-kingdom communications.

During the "Iron swords" war (since October 2023) my lab was evacuated to alternative sites (Katzarin, Technion and Rosh-Pina), and my lab activity was significantly hampered and research progress was slowed significantly. Nevertheless, the academic transformation of MIGAL and Tel Hai College into a new university combined with my recent BARD and EIC awarded grants is already allowing the recovery and regrowth of my lab research activities.

In summary, the research conducted in my lab will potentially reveal novel tools that will improve plants resistance to environmental conditions and assist in increasing global food security.

Papers in preparation:

*Dafna Tidhar, Dekel Avraham, Adi Naani, Vivek Ambastha, Ifat Matityahu and **Yehoram Leshem**. Increased plant thermal tolerance by RabA-mediated plasma membrane trafficking.
To be submitted during 2026 to: *Plant Stress*.

*George Sundin, Vivek Ambastha, Yuval Nevo and **Yehoram Leshem**. Micro-RNA from pear stigma exudates – The next generation of anti-fire blight agents?
To be submitted during 2026 to: *Molecular Horticulture*.