

Name: Ofir Degani

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## CURRICULUM VITAE

### 1. Personal Details

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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
2001 - 2005	Technion Institute of Technology (Israel).	Ph.D.	2005
1998 - 2001	Technion Institute of Technology (Israel).	M.Sc.	2001
1993 - 1997	Haifa University (Oranim campus, Israel)	B.Sc. and teaching certification	1997

#### B. Post-Doctoral Studies

Period of Study	Name of Institution, Department, and Host	Degree	Year of Completion
2005 - 2006	Migal - Galilee Research Institute (Israel), Dr. Doron Goldberg	-	2006

### **3. Academic Ranks and Tenure in Institutes of Higher Education**

<b>Dates</b>	<b>Name of Institution and Department</b>	<b>Rank/Position</b>
2019 - Today	Tel-Hai College (Israel)	Senior lecturer and Senior staff member
2017 - Today	Migal - Galilee Research Institute, Molecular Phytopathology, and biological control lab (Israel)	Senior researcher and principal investigator
2015 - 2017	Ohalo College (Israel)	Senior lecturer and Senior staff member
2009 - 2012	Tel-Hai Technology College (Israel)	Lecturer and staff member
2007 - 2017	Migal - Galilee Research Institute, Molecular Phytopathology lab (Israel)	Research group leader
2006 - 2019	Tel-Hai College (Israel)	Lecturer and staff member
2005 - 2006	Migal - Galilee Research Institute (Israel)	Post-doctoral fellow at the laboratory of Dr. Doron Goldberg
2001 - 2015	Ohalo College (Israel)	Lecturer and staff member

### **4. Offices in Academic Administration**

**2021 - 2022** – Chairman of The Committee for the Advancement of Online Laboratory Courses in collaboration with universities in Israel and abroad, in the Faculty of Science in Tel-Hai College (Israel).

**2007 - 2012** – Member of the pre-veterinary program leading committee at Tel-Hai College (Israel).

**2007 - 2008** – Member of the research committees of Ohalo College (Israel).

**2007** – Led the master's degree program preparation at Ohalo College (Israel).

## 5. Scholarly Positions and Activities outside the Institution

### a. **Representation in academic committees**

**2022 - 2026** – Israel's representative in the COST Action Management: CA21134 / Towards zero Pesticide AGRiculture: European Network for Sustainability (ToP-AGRI-Network), European Cooperation in Science & Technology. ([Link](#)).

### b. **Academic Editorial Positions**

#### Editorial Board positions

**2022 - Today** – Editorial Board member, *Agrochemicals*. ([Link](#)).

**2022 - Today** – Associate Editor Board member, *Frontiers in Fungal Biology*, Fungi-Plant Interactions. ([Link](#)).

#### Academic Editing of Special Issue/Topic

**2023 - Today** – Academic Editor, Special Issue: "Roles of Soil and Roots Biotic and Abiotic Conditions in Fungal-Plant Interactions and Plant Performance 3.0," *Journal of Fungi*. ([Link](#)).

**2023 - Today** – Academic Editor, Research Topic: "Plant-friendly microorganisms as a bio-barrier against pathogens," *Frontiers in Fungal Biology*, Fungi-Plant Interactions. ([Link](#)).

**2021 - 2023** – Academic Editor, Special Issue: "Roles of Soil and Roots Biotic and Abiotic Conditions in Fungal-Plant Interactions and Plant Performance 2.0," *Journal of Fungi*. ([Link](#)).

**2021 - 2022** – Academic Editor, Special Issue: "Interactions between Microorganisms in Plant Diseases," *Agriculture*. ([Link](#)).

**2021 - 2022** – Academic Editor, Special Issue: "Roles of Soil and Roots Biotic and Abiotic Conditions in Fungal-Plant Interactions and Plant Performance," *Journal of Fungi*. ([Link](#)).

### c. **Reviewing scientific papers**

All 14 reviews can be found on the Web of Science at:

<https://www.webofscience.com/wos/author/record/F-3978-2014>

- 21/4/2023** – First report of *Magnaporthiopsis maydis* from maize in Republic of Türkiye. *Plant Disease*.
- 24/11/2021** – Cohen, Roni, et al. Charcoal rot (*Macrophomina phaseolina*) across melon diversity: evaluating the interaction between the pathogen, plant age and environmental conditions as a step towards breeding for resistance. *European Journal of Plant Pathology* 163.3 (2022): 601-613.
- 30/12/2020** – Massi, Federico, et al. Fungicide resistance evolution and detection in plant pathogens: *Plasmopara viticola* as a case study. *Microorganisms* 9.1 (2021): 119.
- 11/12/2020** – Ons, Lena, et al. Combining biocontrol agents with chemical fungicides for integrated plant fungal disease control. *Microorganisms* 8.12 (2020): 1930.
- 03/09/2020** – Cavalcante, Allinny Luzia Alves, et al. Characterization of five new *Monosporascus* species: adaptation to environmental factors, pathogenicity to cucurbits and sensitivity to fungicides. *Journal of Fungi* 6.3 (2020): 169.
- 06/08/2020** – Ramírez-Tejero, Jorge A., et al. *Verticillium* wilt resistant and susceptible olive cultivars express a very different basal set of genes in roots. *Plants*, published in *BMC genomics* 22.1 (2021): 1-16.
- 12/06/2020** – Le, Duy P., et al. Co-occurrence of defoliating and non-defoliating pathotypes of *Verticillium dahliae* in field-grown cotton plants in New South Wales, Australia. *Plants* 9.6 (2020): 750.
- 13/05/2020** – Bhaskar Rao, Talluri, et al. A comprehensive gene expression profile of pectin degradation enzymes reveals the molecular events during cell wall degradation and pathogenesis of rice sheath blight pathogen *Rhizoctonia solani* AG1-IA. *Journal of Fungi* 6.2 (2020): 71.
- 20/04/2019** – Cook J.C. *Magnaporthiopsis maydis* (Samra, Sabet & Hing.) Klaubauf, Lebrun & Crous, Late wilt of Corn. United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ); Washington, DC, USA: 2019. New Pest Response Guidelines.
- 31/03/2019** – Ortiz-Bustos, Carmen M., et al. Environmental and irrigation conditions can mask the effect of *Magnaporthiopsis maydis* on growth and productivity of maize. *Plant Pathology* 68.8 (2019): 1555-1564.
- 10/03/2018** – Tej, R., et al. Inhibitory effect of *Lycium europaeum* extracts on phytopathogenic soil-borne fungi and the reduction of late wilt in maize. *European Journal of Plant Pathology* 152 (2018): 249-265.

**13/02/2015** – Wang, Meng, et al. Biological control of southern corn leaf blight by *Trichoderma atroviride* SG3403. *Biocontrol Science and Technology* 25.10 (2015): 1133-1146.

**29/09/2014** – Patel, Samra B. K., et al. *Erysiphe pisi* signal perception in pea is regulated through G $\alpha$  subunit of the heterotrimeric G protein and mediated by jasmonic acid and hydrogen peroxide, *Phytopathology*.

**05/04/2014** – Lipoxygenase related defense response induced by *Trichoderma viride* against *Aspergillus niger* Van Tieghem, inciting collar rot in Groundnut (*Arachis hypogaea* L.), *Phytoparasitica*.

d. **Membership in scientific societies**

**2008 - Today** (with a few years of non-membership in between) – Israel Phytopathology Society (IPS).

**1999 - Today** (with a few years of non-membership in between) – Israel Society for Microbiology (ISM).

**2010, 2019, 2023** – Israel Scientific Society of Field Crops and Vegetables

**2005, 2011, 2023** – Israel Societies for Experimental Biology - FISEB (ILANIT)

**2022** – Israel Scientific Society of Science and the Environment

**2019** – American Society for Microbiology (ASM).

**2012** – Mediterranean Phytopathological Union

6. **Participation in Scholarly Conferences**

a. **Active Participation**

International Conferences

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
2023	COST 2nd General Assembly and conference	Uppsala, Sweeden	Towards Zero Pesticides Agriculture Network - Management Committee meeting	Management committee member

2023	Crop protection futures in agriculture	Uppsala, Sweden	Crop protection futures in agriculture	Participant
2023	The 12 <sup>th</sup> International Congress of Plant Pathology (ICPP)	Lyon, France	<i>Trichoderma asperellum</i> secreted 6-pentyl-alpha-pyrone protects maize plants from the late wilt pathogen, <i>Magnaportheopsis maydis</i> .	Speaker
			The maize late wilt fungus <i>Magnaportheopsis maydis</i> in Israel consists of aggressive strains that can specialize in disrupting growth or plant health.	Poster presentation
2023	The 16 <sup>th</sup> European Conference on Fungal Genetics (ECFG16)	Innsbruck, Austria	<i>Trichoderma</i> workshop and the general assembly.	Participant
2023	The 10 <sup>th</sup> Israel Societies for Experimental Biology - FISEB (ILANIT)	Eilat, Israel	<i>Trichoderma asperellum</i> secreted 6-pentyl- $\alpha$ -pyrone protects maize plants from the late wilt pathogen, <i>Magnaportheopsis maydis</i> .	Poster presentation
2022	The 2 <sup>nd</sup> International Conference on Plant Science and Biology, Plant Science	Webinar	A green solution to maize late wilt disease.	<b>Invited lecture</b>
2019	12th Annual International Symposium on Agricultural Research	Athens, Greece	The secret life of the maize pathogen, <i>Harpophora maydis</i>	<b>Invited lecture</b>
2018	1 <sup>st</sup> Annual Congress on Plant Science and Biosecurity (ACPB)	Valencia, Spain	Chemical protection using drip irrigation and seed coating against maize late wilt disease in the field	<b>Invited lecture</b>
2018	The 14 <sup>th</sup> European	Haifa, Israel	<i>Trichoderma</i> workshop	workshop co-chair

	Conference on Fungal Genetics (ECFG14)		Chemical protection using drip irrigation and seed coating against maize late wilt disease in the field	Poster presentation
2018	The 11th International Congress of Plant Pathology (ICPP)	Boston, USA	Uncovering host range for the maize pathogen <i>Harpophora maydis</i>	Poster presentation
2017	The 10 <sup>th</sup> Annual International Symposium on Agricultural Research	Athens, Greece	A qPCR-based method for evaluating the efficiency of seed coating against maize Late wilt disease	<b>Invited lecture</b> and Session chair
2011	Israel Societies for Experimental Biology - FISEB (ILANIT)	Eilat, Israel	Diagnosis and control of maize late wilt disease	Poster presentation
2005	Israel Societies for Experimental Biology - FISEB (ILANIT)	Eilat, Israel	G protein and MAPK pathways in the maize pathogen <i>Cochliobolus heterostrophus</i> : signaling for gene expression, development and virulence	Speaker
2005	The US-Israel Binational Agricultural Research and Development Fund (BARD) workshop	California, USA	Signal Transduction and Hydrophobin Gene Expression in the Maize Pathogen <i>Cochliobolus heterostrophus</i>	Poster presentation
2005	XXIII Fungal Genetics Conference	California, USA	Signal Transduction and Hydrophobin Gene Expression in the Maize Pathogen <i>Cochliobolus heterostrophus</i>	Poster presentation

### Israel Conferences

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
2023	The 25 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Discovery of a new antifungal compound, 6-Pentyl- $\alpha$ -Pyrone, against the corn late wilt pathogen.	Session chair and Speaker
2023	Israel Scientific Society of Field Crops and Vegetables annual seminar	Rehovot, Israel	Interactions between <i>Magnaportheopsis maydis</i> and <i>Macrophomina phaseolina</i> , the causes of wilt diseases in maize and cotton.	<b>Invited lecture</b>
2022	The 50 <sup>th</sup> Israel Annual Conference on Science and the Environment	Tel-Aviv, Israel	Pathogenic interactions between <i>Macrophomina phaseolina</i> and <i>Magnaportheopsis maydis</i> in mutually infected cotton sprouts.	Poster presentation
2022	The 24 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Assessment of susceptibility of maize varieties to late wilt disease caused by <i>Magnaportheopsis maydis</i> using remote sensing tools	Session chair and Speaker
2022	the 42 <sup>nd</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	Isolation, Identification, and Control of <i>Fusarium</i> spp., the Causal Agents of Onion Basal Rot in Northeastern Israel	Speaker
2022	Israel Society for Microbiology (ISM) annual meeting	Be'er Sheva, Israel	A green solution to maize late wilt disease	Poster presentation
2022	Functional Mycology Conference	Tel-Hai, Israel	Fungi and the Environment Session	Session chair
2021	Agricultural Science Conference in Israel	Ramat-Gan, Israel	A green solution to maize late wilt disease	Speaker
2020	The 22 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Study of the interactions between <i>Macrophomina phaseolina</i> and <i>Magnaportheopsis maydis</i> , as pathogens in cotton and corn	Speaker



2020	Shamir Research Institute, Conference on land reclamation and conservation	Katzrin, Israel	The interaction between <i>Macrophomina phaseolina</i> and <i>Harpophora maydis</i> as pathogens in corn and cotton	Speaker
2019	The 21 <sup>st</sup> Tel-Hai Research Conference	Tel-Hai, Israel	The interaction between <i>Macrophomina phaseolina</i> and <i>Harpophora maydis</i> as pathogens in corn and cotton	Session chair and Speaker
2019	The 40 <sup>th</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	A new host range for the maize pathogen <i>Harpophora maydis</i>	Speaker
2019	The 10 <sup>th</sup> Annual Conference of Excellence in Education, Israel Ministry of Education	Online meeting	Session - The Courage to be Equal	Session chair
2019	Israel Scientific Society of Field Crops and Vegetables, An annual seminar	Rehovot, Israel	Combining pesticides to prevent late wilt disease in corn in the field	Speaker
2018	The 20 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Seed coating and drip protection against <i>Harpophora maydis</i> in the field	Session chair and Speaker
2018	The 39 <sup>th</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	Seed coating and drip protection against <i>Harpophora maydis</i> in the field	Speaker
2017	The 38 <sup>th</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	A qPCR-based method for detecting and monitoring <i>Harpophora maydis</i> inside the host tissues	Speaker
2017	The 19 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	A qPCR-based method for detection and monitoring <i>Harpophora maydis</i> inside the host tissues	Speaker
2017	The 9 <sup>th</sup> Conference of Excellence in Education	Ramat Gan, Israel	The Division for Gifted and Outstanding Students	Session chair

2016	The 18 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Plant growth hormones suppress the development of <i>Harpophora maydis</i> , the cause of late wilt in maize	Speaker
2016	Israel Molecular Mycology Meeting (MMM)	Haifa, Israel	A qPCR-based method for detection and monitoring <i>Harpophora maydis</i> inside the host tissues	Speaker
2016	The 37 <sup>th</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	Plant hormones regulate the development of <i>Harpophora maydis</i> , the cause of late wilt in maize	Speaker
2016	Israel Plant ecology	Tel-Hai, Israel	Ambient stresses regulate the development of the maize late wilt-causing agent, <i>Harpophora maydis</i>	Speaker
2015	The 17 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	<i>Cochliobolus heterostrophus</i> G-protein and MAPK signaling pathways control the fludioxonil fungicide activity and resistance	Speaker
2015	Israel Society for Microbiology (ISM), annual meeting	Ramat-Gan, Israel	The agent of late wilt of corn, <i>Harpophora maydis</i> , pathogenesis and control	Poster presentation
2015	the 36 <sup>th</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	<i>Cochliobolus heterostrophus</i> G-protein and MAPK signaling pathways control the fludioxonil fungicide activity and resistance	Speaker
2015	The 8 <sup>th</sup> Conference of Excellence in Education	Ramat-Gan, Israel	Enzymatic hydrolysis of cotton fabrics cuticle components	<b>Invited lecture</b>
2014	The 16 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	The late wilt causal agent, <i>Harpophora maydis</i> , pathogenesis and control	Speaker
2013	The 15 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	The agent of late wilt of corn, <i>Harpophora maydis</i> , pathogenesis and control	Speaker
2013	Israel Society for Microbiology (ISM), annual meeting	Ramat-Gan, Israel	The agent of late wilt of corn, <i>Harpophora maydis</i> , pathogenesis and control	Poster presentation

2011	The 13 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Late wilt of maize: Characterization of the pathogenesis and identifying means of control	Speaker
2010	The 31 <sup>st</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	Late wilt of maize: Characterization of the pathogenesis and identifying means of control	Speaker
2010	Israel Society for Microbiology (ISM), annual meeting	Ramat-Gan, Israel	Late wilt of maize: characterization of the pathogenesis and identifying means of control	Poster presentation
2010	Israel Scientific Society of field crops and vegetables annual seminar	Rehovot, Israel	The late wilt causal agent, <i>Harpophora maydis</i> , pathogenesis and control	Speaker
2009	Israel Society for Microbiology (ISM), annual meeting	Ramat-Gan, Israel	Plants' hormone effect on the development of the maize late wilt agent, <i>Harpophora maydis</i>	Poster presentation
2009	The 30 <sup>th</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	Plants' hormone effect on the development of the maize late wilt agent, <i>Harpophora maydis</i>	Speaker
2008	The 10 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Development of molecular and biological tests for detecting and characterizing late wilt in corn	Speaker
2008	The 29 <sup>th</sup> Congress of the Israeli Phytopathological Society	Beit Dagan, Israel	Hydrophobins genes expression in the maize pathogen <i>Cochliobolus heterostrophus</i>	Speaker
2005	Israel Society for Microbiology (ISM), annual meeting	Ramat-Gan, Israel	Enzymatic hydrolysis of cotton fibers	Poster presentation
2004	Israel Society for Microbiology (ISM), annual meeting	Ramat-Gan, Israel	Enzymatic hydrolysis of cotton fibers	Poster presentation
2001	Israel Society for Microbiology (ISM), annual meeting	Tel-Aviv, Israel	Phytopathogenic Enzymes and Their Potential Use in Scouring of Natural Fibers	Poster presentation

2000	Israel Society for Microbiology (ISM), annual meeting	Tel-Aviv, Israel	Enzymatic hydrolysis of cotton fiber cuticle in textile fabrics	Poster presentation
1999	Israel Society for Microbiology (ISM), annual meeting	Tel-Aviv, Israel	Enzymatic hydrolysis of cotton fiber cuticle in textile fabrics	Poster presentation
1999	Israel Society for Microbiology (ISM), annual meeting	Haifa, Israel	Enzymatic hydrolysis of cotton fiber cuticle in textile fabrics	Speaker

**b. Organization of Conferences or Sessions**

<b>Date</b>	<b>Name of Conference</b>	<b>Place of Conference</b>	<b>Subject of Conference</b>	<b>Role</b>
2023	The 25 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Multidisciplinary Studies in Applied Microbiology	Session Organizing Committee head
2022	The 24 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee head
2022	Functional Mycology Conference	Tel-Hai, Israel	Functional Mycology	Conference Organizing Committee
2020	The 22 <sup>nd</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head
2019	The 21 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head
2018	The 20 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head
2017	The 19 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head

2016	The 18 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head
2015	The 17 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head
2014	The 16 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head
2013	The 15 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head
2011	The 13 <sup>th</sup> Tel-Hai Research Conference	Tel-Hai, Israel	Session - Fungal Diseases in Plants in the Galilee	Session Organizing Committee co-head
2010	The US-Israel Binational Agricultural Research and Development Fund (BARD)	Haifa, Israel	<i>Trichoderma</i> Workshop	Organizing Committee member

## 7. Invited Lectures\ Colloquium Talks

Date	Place of Lecture	Name of Forum	Presentation/Comments
2018	Spanish National Research Council, Institute for Sustainable Agriculture (IAS), Cordoba, Spain	Institutional seminar	Economical and effective treatment against maize late wilt disease in the field

## 8. Research Grants

### a. Grants Awarded

Publications related to research by referral to number in the list of publications

<b>Role in Research</b>	<b>Co-Researcher</b>	<b>Topic</b>	<b>Funded by/ Amount</b>	<b>Year</b>
PI	Mr. Elyahu Margalit	Chemical control of <i>Fusarium</i> spp., the causal agents of onion ( <i>Allium cepa</i> ) basal rot	Israel Plant Council, Ministry of Agriculture  <b>28,000 NIS</b>	2023-2024
PI	Dr. Onn Rabinovitz  Dr. Assaf Chen	Development of an eco-friendly pesticide interface, based on <i>Trichoderma</i> fungi, against the cause of cotton charcoal rot	Israel Council for Cotton Production and Marketing Ltd.  <b>50,000 NIS</b>	2023
PI	-	Support in funding equipment for research purposes	Tel-Hai College, Israel, Science Relations Foundation  <b>8,000 NIS</b>	2023
PI	Dr. Onn Rabinovitz  Mr. Yoav Golan	Biological enrichment of fodder corn seeds against the late wilt disease	Israel's Organization of extensive cultivation.  <b>20,000 NIS</b>	2023
PI	Prof. Giora Rytwo	Developing an Azoxystrobin slow-release clay carrier for eco-friendly control of corn late wilt disease	Migal – Galilee Research Institute  <b>100,000 NIS</b>	2023
PI	Prof. Giora Rytwo	Developing an Azoxystrobin slow-release clay carrier for eco-friendly control of corn late wilt disease	ICA Israel (Jewish Colonization Association)  <b>25,000 \$</b>	2023
PI	Dr. Shaul Naschitz  Prof. Soliman Khatib  Prof. Dov Prusky	The formation process of <i>Alternaria</i> black spot disease in stored persimmons and its prevention through treatments with antioxidants	Tel-Hai College, Israel, Science Relations Foundation  <b>20,000 NIS</b>	2023

PI	Prof. Giora Rytwo	Developing an Azoxystrobin slow-release clay carrier for eco-friendly control of corn late wilt disease	Tel-Hai College, Israel, Science Relations Foundation <b>20,000 NIS</b>	2022
PI	Dr. Onn Rabinovitz Dr. Assaf Chen	Development of an eco-friendly pesticide interface, based on <i>Trichoderma</i> fungi, against the cause of cotton charcoal rot  Publication: 1	Israel Council for Cotton Production and Marketing Ltd. <b>55,000 NIS</b>	2022
Co-PI	Dr. Shaul Naschitz (PI)	Isolation and identification of apple fruits' fungal pathogens	Israel Plant Council, Fruit Branch, Ministry of Agriculture <b>7,000 NIS</b>	2022
PI	Mr. Shaul Graph Mr. Elyahu Margalit	Isolation and Identification of <i>Fusarium</i> spp., the causal agents of onion ( <i>Allium cepa</i> ) basal rot in northeastern Israel	Israel Plant Council, Ministry of Agriculture <b>17,000 NIS</b>	2022
PI	Dr. Onn Rabinovitz	Combined biological-chemical pesticide to prevent late wilt in corn  Publications: 2, 10	Israel's Organization of extensive cultivation <b>20,000 NIS</b>	2022
PI	Mr. Shaul Graph Mr. Elyahu Margalit	Chemical control of <i>Fusarium</i> spp., the causal agents of onion ( <i>Allium cepa</i> ) basal rot  Publications: 4, 17	Israel Plant Council, Ministry of Agriculture <b>18,000 NIS</b>	2021
PI	Mr. Ran Yifa Dr. Assaf Chen	Cultivars' resistance assay for maize late wilt disease  Publication: 3, 10	CTS Group <b>14,000 NIS</b>	2021

PI	Prof. Soliman Khatib	Purification and identification of <i>Trichoderma asperellum</i> secreted ingredients with antifungal activity against <i>Magnaportheopsis maydis</i> , the maize late-wilt disease causal agent  Publications: 6, 10, 12	Migal – Galilee Research Institute  <b>40,000 NIS</b>	2021
PI	Mr. Shaul Graph Mr. Elyahu Margalit	Chemical control of <i>Fusarium</i> spp., the Causal Agents of Onion ( <i>Allium cepa</i> ) Basal Rot  Publication: 4, 17	Israel Plant Council, Ministry of Agriculture  <b>10,500 NIS</b>	2020
PI	Dr. Hagai Shemesh Dr. Onn Rabinovitz	Eco-friendly control against corn late wilt by strengthening the soil mycorrhizal networks  Publications: 7, 10, 11, 13	Tel-Hai College, Israel, Science Relations Foundation  <b>20,000 NIS</b>	
PI		Biological control of <i>Macrophomina phaseolina</i> , the cotton charcoal rot disease causal agent  Publications: 1, 8, 23	Israel Council for Cotton Production and Marketing Ltd.  <b>20,000 NIS</b>	2020
PI	Prof. Soliman Khatib	Isolation and identification of active ingredient against <i>Magnaportheopsis maydis</i> , the maize Late-wilt disease causal agent  Publications: 6, 10, 12	ICA – Migal accelerator, Israel  <b>100,000 NIS</b>	2020
Co-PI	Dr. Assaf Chen (PI) Dr. Mery Dafny Yelin	Using remote sensing tools for the early detection and prevention of soil-borne diseases in field crops while reducing amounts of pesticides and increasing yield  Publications: 3, 7, 9, 10, 14	Israel Ministry of Agriculture and Rural Development Chief Scientist  <b>450,000 NIS</b> (partial share 82,000 NIS)	2019-2021
PI	Mr. Shaul Graph	Isolation, characterization, and control of <i>Fusarium</i> spp. f. sp. <i>cepae</i> , the cause of the onion basal plate rot in northern Israel  Publications: 17, 22	Israel Plant Council, Ministry of Agriculture  <b>8,000 NIS</b>	2019



PI	Dr. Assaf Chen Dr. Onn Rabinovitz	The presence of <i>Harpophora maydis</i> in fodder maize, its interaction with other endophytes in the plant, and its effect on the nutritional value of the corn silage  Publications: 6, 9, 10,11, 12, 15	Israel's Organization of extensive cultivation  <b>25,000 NIS</b>	2019
PI	Dr. Roni Cohen	Interactions between <i>Magnaportheopsis maydis</i> and <i>Macrophomina phaseolina</i> , the Causes of Wilt Diseases in Maize and Cotton  Publications: 8, 10, 11, 23	Israel Council for Cotton Production and Marketing Ltd.  <b>15,000 NIS</b>	2019
PI	Mr. Shaul Graph	Isolation and Identification of <i>Fusarium</i> spp., the Causal Agents of Onion ( <i>Allium cepa</i> ) Basal Rot in Northeastern Israel  Publication: 22	Israel Plant Council, Ministry of Agriculture  <b>41,000 NIS</b>	2018
Co-PI	Dr. Haim Reuveni (PI) Dr. Soliman Khatib Prof. Jacob Vaya	Characterization of the profile of volatiles from the leaves and flowers of the cannabis plant in response to environmental stress	Migal – Galilee Research Institute  <b>90,000 NIS</b>	2018
Co-PI	Dr. Haim Reuveni (PI) Dr. Chen Katz	Biological control of pests and diseases in cannabis	Migal – Galilee Research Institute  <b>90,000 NIS</b>	2018
PI		Biological control against <i>Harpophora maydis</i> , the maize Late-wilt disease causal agent  Publications: 10, 11, 14, 16	Migal – Galilee Research Institute  <b>140,000 NIS</b>	2018
PI	Dr. Roni Cohen Mr. Shaul Graph	Interactions between <i>Magnaportheopsis maydis</i> and <i>Macrophomina phaseolina</i> , the Causes of Wilt Diseases in Maize and Cotton  Publications: 8, 10, 11, 23	Israel Council for Cotton Production and Marketing Ltd.  <b>17,000 NIS</b>	2018

PI	Dr. Moshe Meron Dr. Assaf Chen Mr. Shaul Graph	Thermal detection and chemical control of the maize late wilt causing agent, <i>Harpophora maydis</i>  Publications: 10,11, 21	Israel's Organization of extensive cultivation  <b>25,000 NIS</b>	2018
PI	Dr. Onn Rabinovitz Mr. Shaul Graph	Improved chemical control against the cause of late wilt in corn  Publications: 10,11, 21, 25	Netafim Ltd. Israel  <b>8,000 NIS</b>	2017
PI		Biological control against <i>Harpophora maydis</i> , the maize Late-wilt disease causal agent  Publications: 10, 11, 14, 16	Migal – Galilee Research Institute  <b>45,000 NIS</b>	2017
PI	Dr. Mery Dafny Yelin Mr. Shaul Graph	Protection and control against <i>Harpophora maydis</i> , the causing agent of maize late wilt  Publications: 2, 10,11, 19, 21, 24, 25, 26, 27,	Israel Ministry of Agriculture and Rural Development Chief Scientist  <b>420,000 NIS</b>	2015-2017
PI		Ambient Stresses influence on the development of the maize late wilt Causing agent, <i>Harpophora maydis</i>  Publications: 11, 25, 32	Israel Northern R&D  <b>20,000 NIS</b>	2014
PI	Mr. Shaul Graph	Involvement of <i>Harpophora maydis</i> in sweet corn wilt disease: characterizing the disease course and developing ways to eradicate it  Publications: 10, 11, 25, 26, 27, 34, 37, 41	Israel Northern R&D  <b>40,000 NIS</b>	2013
PI	Mr. Shaul Graph	<i>Harpophora maydis</i> wilt of corn: Characterization of the disease cycle and development of protection and control  Publications: 10, 11, 25, 26, 27, 34, 37, 41	The Jewish National Fund (Keren Kayemeth LeIsrael)  <b>25,000 NIS</b>	2012

PI	Dr. Tsafrir Weinberg  Mr. Shaul Graph  Dr. Onn Rabinovitz	Eradicating the late wilt disease in corn  Publications: 10, 11, 25, 26, 27, 34, 37, 41	Israel Plant Council, Ministry of Agriculture  <b>25,000 NIS</b>	2011
PI	Mr. Shaul Graph	<i>Harpophora maydis</i> wilt of corn: Characterization of the disease cycle and development of protection and control  Publications: 10, 11, 25, 26, 27, 34, 37, 41	Israel Plant Council, Ministry of Agriculture  <b>15,000 NIS</b>	2011
PI	Dr. Efraim Zuckerman  Mr. Shaul Graph	<i>Harpophora maydis</i> wilt of corn: Characterization of the disease cycle and development of protection and control  Publications: 10, 11, 25, 26, 27, 34, 37, 41	Israel Plant Council, Ministry of Agriculture  <b>35,000 NIS</b>	2010
PI	Prof. Benjamin A Horwitz  Dr. Doron Goldberg  Dr. Efraim Zuckerman  Mr. Shaul Graph	<i>Harpophora maydis</i> wilt of corn: Characterization of the disease cycle and development of protection and control  Publications: 10, 11, 25, 26, 27, 34, 37, 41	Israel Plant Council, Ministry of Agriculture  <b>35,000 NIS</b>	2009
PI	Prof. Benjamin A Horwitz, Dr. Doron Goldberg, and Mr. Shaul Graph	Involvement of the fungus <i>Harpophora maydis</i> in causing late wilt disease in sweet corn: characterizing the course of the disease and finding ways to control it  Publications: 10, 11, 25, 26, 27, 34, 37, 41	The Jewish National Fund (Keren Kayemeth LeIsrael)  <b>50,000 NIS</b>	2008
PI		Diagnosis and control of maize late wilt disease  Publications: 10, 11, 25, 26, 27, 34, 37, 41	Israel Northern R&D  <b>25,000 NIS</b>	2007

PI		(1) Understanding fungicide activity and resistance regulation through fungal signaling pathways. (2) Involvement of <i>Harpophora maydis</i> in causing late wilt disease in corn – diagnosis and control  Publications: 10, 11, 25, 26, 27, 34, 37, 41	Ohalo academic college  <b>27,000 NIS</b>	2206-2012
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**b. Submission of Research Proposals – Pending**

<b>Role in Research</b>	<b>Co-Researchers</b>	<b>Topic</b>	<b>Funded by</b>	<b>Year</b>
PI	Prof. Giora Rytwo	Developing an Azoxystrobin slow-release clay carrier for eco-friendly control of corn late wilt disease	ICA Israel (Jewish Colonization Association)  <b>25,000 \$</b>	2024

**c. Submission of Research Proposals – Not Funded (5 years)**

<b>Role in Research</b>	<b>Co-Researchers</b>	<b>Topic</b>	<b>Funded by</b>	<b>Year</b>	<b>Score</b>
Co-PI	Gold, Scott E (PI)	Chemical Crosstalk Controlling the Maize Seed Fungal Pathobiome	BARD	2023	4
PI	Dr. Onn Rabinovitz	Strengthening the corn seeds' microbiome to prevent late wilt diseases	ICA – Migal accelerator, Israel	2023	n.a.
PI	Prof. Giora Rytwo Dr. Onn Rabinovitz	Development of an Azoxystrobin slow-release carrier to control the maize late wilt causal agent	Israel Ministry of Agriculture and Rural Development Chief Scientist	2023	n.a.

PI	Dr. Shaul Naschitz  Prof. Soliman Khatib  Prof. Dov Prusky	The formation process of <i>Alternaria</i> black spot disease in stored persimmons and its prevention through treatments with antioxidants	Israel Ministry of Agriculture and Rural Development Chief Scientist	2023	n.a.
Co-PI	Dr. Elhanan Tzipilevich (PI)	Development of a Bacillus species-based biological control interface against corn diseases	Israel Ministry of Agriculture and Rural Development Chief Scientist	2023	n.a.
PI	Dr. Onn Rabinovitz  Mr. Lior Avraham	Combined biological-chemical pest control for the prevention of late wilt disease in corn	Israel Plant Council, Ministry of Agriculture	2023	n.a.
PI	Prof. Giora Rytwo  Dr. Onn Rabinovitz	Development of an Azoxystrobin slow-release carrier to control the maize late-wilt causal agent	Israel Ministry of Agriculture and Rural Development Chief Scientist	2022	n.a.
PI	Dr. Shaul Naschitz  Prof. Soliman Khatib  Prof. Dov Prusky	The formation process of <i>Alternaria</i> black spot disease in stored persimmons and its prevention through treatments with antioxidants	Israel Ministry of Agriculture and Rural Development Chief Scientist	2022	n.a.
PI	Prof. Giora Rytwo  Dr. Onn Rabinovitz	Developing an Azoxystrobin slow-release clay carrier for eco-friendly control of corn late wilt and cotton charcoal rot diseases	Israel Ministry of Science and Technology	2022	n.a.
PI	Dr. Onn Rabinovitz	Combined biological-chemical pesticide to prevent late wilt in corn	Israel Plant Council, Ministry of Agriculture	2022	n.a.

PI	Prof. Soliman Khatib	Purification, identification, and the first application of <i>Trichoderma</i> sp. (P1) secreted ingredients with antifungal activity against <i>Magnaportheopsis maydis</i> , the maize late-wilt disease causal agent	Tomorrow's Crop Protection Challenge, ADAMA, and GrowingIL	2021	n.a.
PI	Dr. Onn Rabinovitz	Develop eco-friendly control interphase against the late wilt disease in corn by strengthening the soil mycorrhizal networks	Israel's Organization of extensive cultivation	2021	n.a.
PI	Dr. Onn Rabinovitz	Develop eco-friendly control interphase against the late wilt disease in corn by strengthening the soil mycorrhizal networks	Nekudat-Hen	2021	n.a.
PI	Dr. Onn Rabinovitz	Interactions between <i>Magnaportheopsis maydis</i> and <i>Fusarium spp.</i> , the causes of wilt and rot diseases in maize	Israel's Organization of extensive cultivation	2020	n.a.
PI	Dr. Onn Rabinovitz	Interactions between <i>Magnaportheopsis maydis</i> and <i>Fusarium spp.</i> , the causes of wilt and rot diseases in maize	Nekudat-Hen	2020	n.a.
PI	Dr. Onn Rabinovitz	The interactions between <i>Harpophora maydis</i> , <i>Macrophomina phaseolina</i> , and <i>Fusarium verticillioides/proliferatum</i> , their involvement in maize diseases in the Hula Valley in northern Israel, and the first evaluation of maize endophytic fungi to control them	Israel Ministry of Agriculture and Rural Development Chief Scientist	2019	n.a.
PI	Mr. Shaul Graph	Strengthening corn resistance to late wilt disease through plant hormones and changes in irrigation regimes	Israel Plant Council, Ministry of Agriculture	2019	n.a.

PI	Dr. Onn Rabinovitz	Inducing plant resistance against <i>Harpophora maydis</i> , the cause of the late wilt disease in maize, and study the pathogen population in Israel	Israel Ministry of Agriculture and Rural Development Chief Scientist	2019	n.a.
PI	Dr. Onn Rabinovitz	Strengthening corn resistance to late wilt disease through plant hormones and changes in irrigation regimes	Migal – Galilee Research Institute	2019	n.a.
PI	Dr. Onn Rabinovitz	The effect of the soil's mycorrhizal mycelium on late wilt disease in corn	Tel-Hai College, Israel, Science Relations Foundation	2019	n.a.

## 9. Scholarships, Awards and Prizes

2015, 2018 - 2022 – **Excellence in Research Acknowledgment.** Tel-Hai College (Israel).

2016 – 2019, 2021 - 2022 – **Staff member Excellency Acknowledgment.** Tel-Hai College (Israel).

2021 – **Certificate of appreciation for publishing the most articles in the Faculty of Science.** Tel-Hai College (Israel). Accompanied by a financial grant of 3,000 NIS.

## 10. Teaching

### a. Courses Taught in Recent Years

Year	Name of Course	Type of Course	Degree	Number of Students
2008 - Today	Experimental Design, Tel-Hai College (Israel)	Lecture + lab	B.Sc.	Ca. 80/year
2008 - Today	Biochemistry Lab, Tel-Hai College (Israel)	lab	B.Sc.	Ca. 90/year
2008 - Today	Practice in Computational Biochemistry, Tel-Hai College (Israel)	Exercise	B.Sc.	Ca. 80/year

2013 - 2017	Scientific Excursions, Ohalo College (Israel)	Field study	B.Ed.	Ca. 40/year
2012-2017	Botany, Ohalo College (Israel)	Lecture + lab	B.Ed.	Ca. 40/year
2012-2016	Molecular Biology, Ohalo College (Israel)	Lecture + lab	B.Ed.	Ca. 40/year
2012-2016	Evolution, Ohalo College (Israel)	Lecture	B.Ed.	Ca. 40/year
2001-2017	Plant Physiology, Ohalo College (Israel)	Lecture + lab	B.Ed.	Ca. 40/year
2001-2017	Life of Plants, Ohalo College (Israel)	Lecture + lab	B.Ed.	Ca. 40/year

**b. Supervision of Graduate Students**

Publications related to research by referral to number in the list of publications

<b>Name of Student</b>	<b>Title of Thesis</b>	<b>Degree</b>	<b>Date of Completion / in Progress</b>	<b>Students' Achievements</b>
Dr. Ofra Dahar	Involvement of laccases in the maize pathogen <i>Harpophora maydis</i> - host interactions	Post-Dr.	2018	Publication: 20

<b>Name of Student</b>	<b>Title of Thesis</b>	<b>Degree</b>	<b>Date of Completion / In Progress</b>	<b>Co-supervisor</b>	<b>Students' Achievements</b>
Eden Atdegi	The Microflora of Maize and Cotton Grains as a Biological Barrier against Israel's corn late wilt and cotton charcoal rot diseases	M.Sc.	In progress		



Ariel Hadad	Developing an Azoxystrobin slow-release clay carrier for eco-friendly control of corn late wilt and cotton charcoal rot diseases	M.Sc.	In progress		
Asaf Gordani	Combined biological-chemical treatment for eco-friendly control of corn late wilt and cotton charcoal rot diseases in Israel	M.Sc.	In progress		Publications: 1, 2, 6
Tamir Sonnenberg	Vines resistant mechanism towards foliage diseases: <i>Powdery mildew</i> and <i>Downy mildew</i>	M.Sc.	In progress	Dr. Meir Shlissel, Dr. Mery Dafny Yelin, Dr. Tirtza Zahavi  Tel-Hai College (Israel)	
Galia Shufman	Intra-species interaction and inter-relation with <i>Fusarium verticillioides</i> in the maize pathogen <i>Magnaportheopsis maydis</i> in causing the maize wilt diseases	M.Sc.	2022		Publication: 5
Marlen Bahouth	The maize late wilt disease agent, <i>Magnaportheopsis maydis</i> , geographic distribution, and aggressiveness in Israel	M.Sc. final project, track without a thesis	2022		Publication: 5
Ben Kalman	Involvement of <i>Fusarium oxysporum</i> f. sp. <i>cepae</i> in onion rot: Characterization of the disease cycle, diagnosis, and control	M.Sc.	2020	Prof. Rafael Perl-Treves  Faculty of Life Sciences, Bar-Ilan University	Publications: 17, 22

Shlomit Dor	Inducing resistance and control against <i>Harpophora maydis</i> , the cause of the late wilt disease in maize	M.Sc.	2019	Dr. Doron Goldberg  Tel-Hai College (Israel)	Publications: 9, 13, 15, 16, 19, 21, 23, 24, 25  <b>Awarded by the Israel Phytopathology Society (IPS, 2019)</b>
Daniel Movshowitz	Chemical protection against <i>Harpophora maydis</i> , the causing agent of maize late wilt	M.Sc.	2018	Dr. Doron Goldberg  Tel-Hai College (Israel)	Publications: 25, 26, 27
Yuval Goldblat	Host physiology and environmental stress involved in the development and pathogenesis of <i>Harpophora maydis</i> and the application of seed dressing to control late wilt	M.Sc.	2015	Dr. Doron Goldberg  Tel-Hai College (Israel)	Publications: 20, 26, 27, 30, 32
Shani Cohen	Environmental conditions regulate the development of the maize late wilt-causal agent, <i>Harpophora maydis</i>	M.Sc. final project, track without a thesis	2014		
Gilad Cernica		M.Sc.	2012	Dr. Doron Goldberg  Tel-Hai College (Israel)	Publication: 37
Ran Drori	Involvement of <i>Harpophora maydis</i> in wilt of sweet corn: Characterization of the disease cycle and development of protection and control <i>maydis</i> - host interactions	M.Sc.	2009	Dr. Maggie Levy  The Robert H. Smith Faculty of Agricultural, Food and Environment at the Hebrew University of Jerusalem (Israel)	Publications: 30, 41  <b>Awarded by the Israel Phytopathology Society (IPS, 2009)</b>

## **11. Professional Experience**

1. **2022 - Today** – Leading the graduates' students program at the Tel-Hai Center of Science and Knowledge for Gifted and Excellent Children at Tel-Hai Academic College, Israel Ministry of Education, Division for Gifted and Outstanding Students (Israel).
2. **2014 - 2017** – Head of the North Israel Group of Centers for Gifted and Talented Children, Israel Ministry of Education, Division for Gifted and Outstanding Students (Israel).
3. **2008 - 2021** – Director of the Tel-Hai Center of Science and Knowledge for Gifted and Excellent Children at Tel-Hai Academic College, Israel Ministry of Education, Division for Gifted and Outstanding Students (Israel).

## **PUBLICATIONS**

### **A. Ph.D. Dissertation**

**G protein and MAPK pathways in the maize pathogen *Cochliobolus heterostrophus*: signaling for gene expression, development, and virulence.** (2005) Technion Institute of Technology (Israel), under the supervision of Prof. Benjamin Horwitz. English, 172 pages. Publications: 3, 5, 7, 8, 9, 11, 12, 14

### **B. Articles in Refereed Journals**

#### **Published**

1. **Degani, O.**<sup>a</sup>, P. Becher, and Gordani, A. Real-time PCR early detection of *Trichoderma* treatments efficiency against cotton charcoal rot disease. *Journal of Natural Pesticide Research* (2023), 4, 100027. ([Free full-text link](#)).  
IF (n/a), Citations number<sup>d</sup> (0), Journal Rank and Quartile (n/a) - New Journal.
2. Gordani A., Hijazi B., Dimant E., and **Degani, O.**<sup>a</sup>. Integrated biological and chemical control against the maize late wilt agent *Magnaportheopsis maydis*. *Soil Systems* (2023), 7(1), 1. ([Free full-text link](#)).  
CiteScore 2021 (4.9), five years-IF (n/a), Citations number<sup>d</sup> (0), Journal Rank and Quartile: Soil Science (34/145), Earth-Surface Processes (36/155).
3. **Degani, O.**<sup>a</sup>, Yifa R., Chen, A., Gordani A., and Becher P. Cultivars resistance assay for maize late wilt disease. *Biology* (2022), 11(12), 1854. ([Free full-text link](#)).

IF (5.168)<sup>b</sup>, five years-IF (n/a), Citations number<sup>d</sup> (1), Journal Rank and Quartile: Biology (Q1).

4. **Degani, O.**<sup>a</sup>, Elhanan D., Gordani, A., Graph S., and Margalit E. Prevention and control of *Fusarium* spp. *cepae*, The Causal Agent of Onion (*Allium cepa*) Basal Rot. *Horticulturae* (2022), 8 (11), 1071. ([Free full-text link](#)). **Editor's choice.**

IF (2.923)<sup>b</sup>, five years-IF (3.582), Citations number<sup>d</sup> (0), Journal Rank and Quartile: Horticulture (Q1).

5. Shofman G., Bahouth M. and **Degani, O.**<sup>a</sup> Aggressive strains of the late wilt fungus of corn exist in Israel in mixed populations and can specialize in disrupting growth or plant health. *Fungal Biology* (2022), 126(11-12), 793-808. ([Free full-text link](#))

IF (2.910)<sup>b</sup>, five years-IF (3.435), Citations number<sup>d</sup> (2), Journal Rank and Quartile: Mycology (20/29).

6. **Degani, O.**<sup>a</sup> and Gordani, A. New Antifungal Compound, 6-Pentyl- $\alpha$ -Pyrone, against the Maize Late Wilt Pathogen, *Magnaportheopsis maydis*. *Agronomy* (2022), 12 (10), 2339. ([Free full-text link](#)).

IF (3.949)<sup>b</sup>, five years-IF (4.117), Citations number<sup>d</sup> (4), Journal Rank and Quartile: Agronomy (Q1); Plant Sciences (Q1).

7. **Degani, O.**<sup>a</sup>, Gordani, A.; Becher, P., Chen, A. Rabinovitz, O. Crop Rotation and Minimal Tillage Selectively Affect Maize Growth Promotion under Late Wilt Disease Stress. *Journal of Fungi* (2022), 8(6): 586. ([Free full-text link](#)).

IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (4), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).

8. **Degani, O.**<sup>a</sup>, Becher P., Gordani A. Pathogenic interactions between *Macrophomina phaseolina* and *Magnaportheopsis maydis* in mutually infected cotton sprouts. *Agriculture* (2022), 12 (2), 255. ([Free full-text link](#)).

IF (3.408)<sup>b</sup>, five years-IF (3.459), Citations number<sup>d</sup> (5), Journal Rank and Quartile: Agronomy (Q1).

9. **Degani, O.**<sup>a</sup>, Chen, A., Dor, S. Orlov-Levin, V., Jacob M., Shoshani G. and Rabinovitz O. Remote evaluation of maize cultivars susceptibility to late wilt disease caused by *Magnaportheopsis maydis*. *Journal of Plant Pathology* (2022) 104, 509–525. ([Free full-text link](#)). **Editor's choice.**

IF (2.643)<sup>b</sup>, five years-IF (2.257), Citations number<sup>d</sup> (6), Journal Rank and Quartile: Plant Sciences (Q3).

10. **Degani, O.** Control Strategies to Cope with Late Wilt of Maize. *Pathogens* (2022), 11, 13. ([Free full-text link](#)).

IF (4.531)<sup>b</sup>, five years-IF (4.580), Citations number<sup>d</sup> (8), Journal Rank and Quartile: Microbiology (Q2).

11. **Degani O.** A Review: Late Wilt of Maize—The Pathogen, the Disease, Current Status and Future Perspective. *Journal of Fungi* (2021), 7 (11), 989. ([Free full-text link](#)).  
IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (13), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).
12. **Degani, O.**<sup>a</sup>, Khatib, S., Becher, P., Gordani, A., Harris, R. *Trichoderma asperellum* Secreted 6-Pentyl- $\alpha$ -Pyrone to Control *Magnaporthiopsis maydis*, the Maize Late Wilt Disease Agent. *Biology* (2021), 10 (9), 897. ([Free full-text link](#)).  
IF (5.168)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (16), Journal Rank and Quartile: Biology (Q1).
13. **Degani, O.**<sup>a</sup>, Gordani A., Becher P. and Dor, S. Crop Cycle and Soil Cultivation Role in the Outbreak of Late Wilt Disease of Maize, caused by *Magnaporthiopsis maydis*. *Journal of Fungi* (2021), 7 (9), 706. ([Free full-text link](#)).  
IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (6), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).
14. **Degani, O.**<sup>a</sup>, Rabinovitz O., Becher P., Gordani A., Chen A. *Trichoderma longibrachiatum* and *Trichoderma asperellum* Confer Growth Promotion and Protection against Late Wilt Disease in the Field. *Journal of Fungi* (2021), 7 (6), 444. ([Free full-text link](#)).  
IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (26), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).
15. **Degani, O.**<sup>a</sup>, Regev, D., and Dor, S. The Microflora of Maize Grains as a Biological Barrier against the Late Wilt Causal Agent, *Magnaporthiopsis maydis*. *Agronomy* (2021), 11 (5), 965. ([Free full-text link](#)). **Editor's choice**.  
IF (3.949)<sup>b</sup>, five years-IF (4.117), Citations number<sup>d</sup> (17), Journal Rank and Quartile: Agronomy (Q1); Plant Sciences (Q1).
16. **Degani, O.**<sup>a</sup> and Dor S. *Trichoderma* Biological Control to Protect Sensitive Maize Hybrids against Late Wilt Disease in the Field. *Journal of Fungi* (2021), 7 (4), 315. ([Free full-text link](#)).  
IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (33), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).
17. **Degani, O.**<sup>a</sup> and Kalman, B. Assessment of Commercial Fungicides against Onion (*Allium cepa*) Basal Rot Disease Caused by *Fusarium oxysporum* f. sp. *cepae* and *Fusarium acutatum*. *Journal of Fungi* (2021), 7 (3), 235. ([Free full-text link](#)).  
IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (7), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).

18. **Degani O.** Synergism between Cutinase and Pectinase in the Hydrolysis of Cotton Fibers' Cuticle. *Catalysts* (2021), 11 (1), 84. ([Free full-text link](#)).  
IF (4.501)<sup>b</sup>, five years-IF (4.641), Citations number<sup>d</sup> (7), Journal Rank and Quartile: Chemistry, Physical (Q2).
19. **Degani O.**<sup>a</sup>, Regev D., Dor S., and, Rabinowitz O. Soil bioassay for detecting *Magnaportheopsis maydis* infestation using a hyper susceptible maize hybrid. *Journal of Fungi* (2020), 6 (3), 107. ([Free full-text link](#)).  
IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (16), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).
20. **Degani, O.**<sup>a</sup>, Goldblat, Y. Potential role of laccases in the relationship of the maize late wilt causal agent, *Magnaportheopsis maydis*, and its host. *Journal of Fungi* (2020), 6 (2), 63. ([Free full-text link](#)).  
IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (6), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).
21. **Degani, O.**<sup>a</sup>, Dor, S., Chen, A., Orlov-Levin, V., Stolov-Yosef, A., Regev, D., Rabinovitz, O. Molecular tracking and remote sensing to evaluate new chemical treatments against the maize late wilt disease causal agent, *Magnaportheopsis maydis*. *Journal of Fungi* (2020), 6 (2), 54. ([Free full-text link](#)).  
IF (5.724)<sup>b</sup>, five years-IF (6.413), Citations number<sup>d</sup> (21), Journal Rank and Quartile: Microbiology (Q2); Mycology (Q1).
22. Kalman, B., Abraham, D., Graph, S., Perl-Treves, R., Meller Harel, Y., **Degani, O.**<sup>a</sup> Isolation and Identification of *Fusarium* spp., the causal agents of onion (*Allium cepa*) basal rot in northeastern Israel. *Biology* (2020), 9 (4), 69. ([Free full-text link](#)). **Editor's choice**.  
IF (5.168)<sup>b</sup>, five years-IF (n/a), Citations number<sup>d</sup> (35), Journal Rank and Quartile: Biology (Q1).
23. **Degani, O.**<sup>a</sup>, Dor, S., Abraham, D., Cohen, R. Interactions between *Magnaportheopsis maydis* and *Macrophomina phaseolina*, the causes of wilt diseases in maize and cotton. *Microorganisms* (2020), 8 (2), 249. ([Free full-text link](#)).  
IF (4.926)<sup>b</sup>, five years-IF (5.143), Citations number<sup>d</sup> (33), Journal Rank and Quartile: Microbiology (Q2).
24. Dor S. and **Degani O.**<sup>a</sup> Uncovering the host range for maize pathogen *Magnaportheopsis maydis*. *Plants* (2019), 8 (8), 259. ([Free full-text link](#)).  
IF (4.658)<sup>b</sup>, five years-IF (4.827), Citations number<sup>d</sup> (21), Journal Rank and Quartile: Plant Sciences (Q1).
25. **Degani O.**<sup>a</sup>, Dor S., Movshovitz D. and Rabinovitz O. Methods for Studying *Magnaportheopsis maydis*, the Maize Late Wilt Causal Agent. *Agronomy* (2019), 9 (4), 181. ([Free full-text link](#)).

IF (3.949)<sup>b</sup>, five years-IF (4.117), Citations number<sup>d</sup> (32), Journal Rank and Quartile: Agronomy (Q1); Plant Sciences (Q1).

26. **Degani O.**<sup>a</sup>, Movshowitz D., Dor S., Meerson A., Goldblat Y., and Rabinovitz O. Evaluating Azoxystrobin seed coating against maize late wilt disease using a sensitive qPCR-based method. *Plant Disease* (2019), 103 (2) 238-248. ([Free full-text Link](#)).

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2. **Degani O.** Late Wilt of Maize—The Pathogen, the Disease, Current Status, and Future Perspective. In "Plant-Pathogen Interaction" [Dr(s) Praveen Kumar Verma, Sonal Mishra, Vikas Srivastava & Shakti Mehrotra (Eds). Springer Nature Publishers. Switzerland. (2023) in press. 24 pages.
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### **L. Articles under review or in preparation**

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2. Dimant E., and **Degani O.**<sup>a</sup>, Molecular Real-Time PCR Monitoring of Onion *Fusarium* Basal Rot chemical control, 2023, *Journal of Fungi*, under review.
3. **Degani O.**<sup>a</sup>, Gordani A., Dimant E., Chen A. and Rabinovitz O. The Cotton Charcoal Rot Causal Agent, *Macrophomina phaseolina*, Biological and Chemical Control. *Frontiers in Fungal Biology*, in preparation

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### **M. Academic Achievements**

**Research of maize late wilt disease.** Late wilt disease is the most severe threat to the maize industry in Israel and is gradually spreading worldwide. In his research over the past decade, Dr. Degani's team was the first to characterize the pathogen *Magnaportheopsis maydis* and the disease in Israel. He developed molecular tests (based on PCR and real-time PCR) to detect the pathogen in host plant tissues and research methods to diagnose the aggressiveness of the isolates and evaluate control approaches. His group discovered that plant hormones could regulate the development of the pathogen. In 2012-2020 Dr. Degani's research group, with the assistance of commercial firms, growers' organizations, and farmers, conducted a series of complex field experiments throughout a full growing period. This research led to a historically significant breakthrough. For the first time, 60 years after the late wilt disease discovery, Degani's research group presented a solution for protecting susceptible maize cultivars in highly infected areas. It was based on changing the traditional growing and irrigation methods and sophisticated integration of chemical control on a schedule adapted to key points in the development of the disease. In addition, the financial feasibility of the method was improved, and the use of active-ingredients combinations with different action mechanisms to prevent fungicide resistance was shown effective. Aerial monitoring, based on RGB and thermal photography, and a high-resolution green and red vegetation index (GRVI) enabled sensitive monitoring of the effectiveness of the treatments.

In the past years, Dr. Degani's research group proved for the first time that the *M. maydis* pathogen could establish in secondary hosts, such as cotton, watermelon, and green foxtail, which help it survive. They developed a biological, environment-friendly method for controlling the disease and a biological assay to identify soil contamination. In 2021, Degani's research group published a series of articles that proved the effectiveness of eco-friendly control methods, including avoiding aggressive soil processing and using crop rotation to reduce the damage of late wilt disease. The use of remote sensing methods to monitor and evaluate the treatments' efficiency was established and expanded to include early disease detection and evaluation of the tolerance degree of maize cultivars to the disease. Finally, fungal and bacteria endophytes were isolated

from maize seeds. Some of which had antagonistic activity against *M. maydis*. The active ingredient 6-Pentyl- $\alpha$ -Pyrone, which has strong antifungal activity against the pathogen, was isolated from one of these, *Trichoderma asperellum*. This compound may protect maize plants against other phytopathogens. Nowadays, Dr. Degani's team is developing a combined Biological-chemical interphase to control maize late wilt, which maintains stable and high efficiency while drastically reducing the chemicals' impact on the environment and their health risk.

**Research of cotton charcoal rot disease.** The soil fungus *Macrophomina phaseolina*, the causal agent of charcoal rot disease, is considered the main risk in cotton fields in Israel and worldwide. The pathogen is found in areas where crop rotation with corn (also infected with the *M. maydis* pathogen) is practiced. A series of experiments accompanied by Real-Time PCR-based detection in corn and cotton, in potted sprouts, and under field conditions over two full growing seasons demonstrated that the two pathogens have antagonistic relations. In the late stages of the growing season, their shared presence causes a significant reduction of each pathogen in its primary host: *M. maydis* in corn and *M. phaseolina* in cotton. It also emerged that *M. maydis* has an endophytic lifestyle in cotton but is liable to erupt as an aggressive pathogen in certain conditions. New findings from Dr. Decani's team prove the *Trichoderma* bio-friendly based approach's efficiency in controlling charcoal rot disease.

**Research of onions basal rot disease.** The disease caused by fungi species of the *Fusarium* genus has been an increasing threat in recent years in Israel and an ongoing challenge to onion growers worldwide. In recent years Dr. Degani's laboratory identified the pathogens involved based on colony morphology, microscopic characteristics, and amplification and sequencing of specific DNA segments. Phylogenetic analysis showed that *Fusarium solni* is the most common species in both populations studied in northeastern Israel. While in yellow onions of the Orlando cv. grown in the Galilee, this species was found with two other species, *F. oxysporum* f. sp. *cepae* and *F. acutatum*; the Golan Heights *Fusarium* population is divided between onion cultivars. Pathogenic tests conducted with seeds and detached onion bulbs proved that each of the 5 *Fusarium* species involved could cause disease symptoms but at different levels. Finally, effective chemical agents were established for disease control.

### **Plans for Future Research**

Dr. Degani's team's research is currently being significantly developed and focused on the following:

- Developing a combined biological-chemical interface against maize late wilt, cotton charcoal rot, and onions basal rot diseases.
- Study the interaction between pathogens involved in maize, cotton, and onion field crops' diseases.
- Use friendly endophytic microorganisms and/or their secreted components for field crops' environment-friendly protection interface.
- Develop and implement a green control method based on a clay carrier for slow release of Azoxystrobin against the cause of late wilt disease in maize.