CURRICULUM VITAE

1. Personal Details

Cellular Phone: 052-4255673

Electronic Address: yaelh@migal.org.il, yaelcha@telhai.ac.il

2. Higher Education

A. Undergraduate and Graduate Studies

Period of Study	Name of Institution and Department	Degree	Year of Approval of Degree
2002-2007	Technion, Israel Institute of Technology, Faculty of Biology and Migal Galilee Research Institute	PhD	2007
1999-2001	Technion, Israel Institute of Technology, Faculty of Biology and Migal Galilee Research Institute	M.Sc	2001

Post-Doctoral Studies

Period of Study	Name of Institution, Department and Host	Degree	Year of Completion
2008-2011	Technion, Israel Institute of Technology, Faculty of Biology. Under the supervision of Sigal Savaldi-Goldstein		2011

3. Academic Ranks and Tenure in Institutes of Higher Education

Dates	Name of Institution and Department	Rank/Position
2017- now	Tel-Hai College, Faculty of Sciences and Technology, Department of Biotechnology	Senior Lecturer
2013-2017	Tel-Hai College, Faculty of Sciences and Technology, Department of Biotechnology	Lecturer

2011- now	Migal, Galilee Research Institute. Plant molecular biology and metabolism.	Research Fellow in the laboratory of Rachel Amir
2008-2011	Technion, Israel Institute of Technology, Faculty of Biology.	Post-Doctoral Studies, under the supervision of Sigal Savaldi-Goldstein

4. Participation in Scholarly Conferences

Active Participation- Lectures

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
2022	Plant MetaboPeople	Agamon hula	High levels of methionine in Arabidopsis seeds result in a higher influx of nutrients from the leaves toward the seeds	Lecturer
2020	Galil research conference	Tel-Hai	Also, the parasite has an agenda- Insights from Broomrape metabolic profile	Lecturer

Active Participation- Posters

Date	Name of Conference	Place of Conference	Subject of Poster
2023	3nd EPI-CATCH Conference	Sofia, Bulgaria-- virtual	The link between methionine level and hyper-methylation of the DNA
2023	The 10th Congress of the Federation of the Israeli Society of Experimental Biology (FISEB)	Eilat, Israel	High levels of methionine in Arabidopsis seeds result in a higher influx of nutrients from the leaves toward the developing seeds
2022	International plant Sulphur conference	Western University, London- virtual	High levels of methionine in Arabidopsis seeds result in a higher influx of nutrients from the leaves toward the seeds
2022	2nd EPI-CATCH Conference	Chania, Crete, Greece	The link between methionine level and hyper-methylation of the DNA
2020	S-Bio, Plant and Human Sulfur Biology and Glucosinolates	Sevilla, Spain- virtual	Preliminary evidence for the ability of glutathione to induce CGS breakdown and lower methionine levels

2020	The 9th Congress of the Federation of the Israeli Society of Experimental Biology (FISEB)	Eilat, Israel	The effect of three hosts on the metabolic profiles of *Cuscuta campestris*.
2019	XVI Solanaceae Conference	Jerusalem, Israel	Primary metabolic profiling of Broomrape (*Phelipanche aegyptiaca*)
2019	Israeli Society of Plant Sciences	Albert Katz International School for Desert Studies, Israel	Primary metabolic profiling of Broomrape (*Phelipanche aegyptiaca*)
2018	12TH IPMB-international plant molecular biology	Montpellier, France	Transgenic tobacco plants having a higher level of methionine are more sensitive to oxidative stress
2017	Plant and Human Sulfur Biology Conference	Balatonfüred, Hungary	Transgenic tobacco plants having a higher level of methionine are more sensitive to oxidative stress
2015	The Israeli Society of Plant Sciences	Weizmann Institute, Rechovot, Israel	Evidence of metabolic competition between methionine and glutathione biosynthetic pathway
2014	The 7th Congress of the Federation of the Israeli Society of Experimental Biology (FISEB)	Eilat, Israel	The metabolic profiles of plants expressing the *O*-acetylserine thiol lyase that grown under normal and stress conditions
2013	The 9th International Conference of the Metabolomics Society	Glasgow, Scotland	Tobacco seeds expressing a mutated form of Arabidopsis cystathionine γ-synthase exhibit higher level of methionine and altered levels of several metabolites
2012	Plant Biology Congress jointly organized by FESPB and EPSO	Freiburg, Germany	The role of cysteine partitioning into glutathione and methionine under normal and stress conditions
2011	The 6th Congress of the Federation of the Israeli Society of Experimental Biology	Eilat, Israel	Spatial regulation of Root meristem size: The brassinosteroids point of view
2010	20th International Conference on plant growth substances (IPGSA)	Tarragona, Spain	Spatial regulation of Root meristem size: The brassinosteroids point of view
2009	20th International Conference on Arabidopsis Research	Edinburgh, Scotland	Tissue identity shapes growth response to brassinosteroids
2008	Federation of the Israeli Society of Experimental Biology	Eilat, Israel	Overexpression of mutated forms of aspartate kinase and cystathionine g-synthase in

			tobacco leaves resulted in the high accumulation of methionine.
2008	Federation of the Israeli Society of Experimental Biology	Eilat, Israel	Effect of lysine on methionine metabolism
2005	Federation of the Israeli Society of Experimental Biology	Eilat, Israel	A form of cystathionine gamma synthase with a 90-bp deletion within the N-terminal region causes methionine overproduction
2002	Federation of the Israeli Society of Experimental Biology	Eilat, Israel	Deletion of 30 amino acids at the N-terminal region of the cystathionine gamma-synthase enzyme causes methionine overproduction
2001	Plant Science meeting	Faculty of Agriculture, Rechovot, Israel	Arabidopsis cystathionine □-synthase mRNA contains two stem-loop structures in its 5'-methionine-dependent regulatory region
1999	The second symposium of the Joan and Jaime Constantiner for Plant Genomics.	Magaan, Israel	Lysine metabolism regulated by light in tobacco plants.

5. Research Grants

a. Grants Awarded

Role in Research	Co-Researchers	Topic	Funded by/ Amount	Year	Articles
PI	Sigal Savaldi Goldstein (Technion) (PI)	Enhancing S-based compound levels in crops	GFI/ 68,000	2023-2025	
PI	Loai Basheer (PI)	Examining the nutritional value of the parasitic plant Cistanche tubulosa	Tel-Hai/ 20,000	2022	#3
Co-PI	Rachel Amir (PI), Joseph Hershenhorn, Evgenia Dor	Producing broomrape-resistant tomato plants - Ministry of Agriculture Rural Development	Nitzan / 250,000	2015-2016	#2, #10, #18,#19
Co-PI	Rachel Amir (PI), Gadi Miller (PI)	Role of glutathione and reactive oxygen species	Bar-Ilan University	2012-2013	#25, #26

		(ROS) metabolism in seeds-germination and heat-stress tolerance	- Migal Collaboration/ $70,000		

6. Scholarships, Awards and Prizes

2003-2006 Levi Eshkol Fellowship for Doctoral and Postdoctoral Students, Ministry of Innovation, Science and Technology.

7. Teaching

a. Courses Taught in Recent Years

Year	Name of Course	Type of Course Lecture/Seminar/Workshop/ High Learn Course/ Introduction Course (Mandatory)	Degree	Number of Students
2008-now	Cell Biology	Lecture	B.Sc	140
2011-now	Plant Hormones	Lecture	B.Sc	40
2011-2024	Laboratory in Plant Anatomy	Lecture/Lab	B.Sc	40
2011-now	Laboratory in Botany	Lecture/Lab	B.Sc	120
2014-2016	Laboratory in molecular genetics	Teaching assistant	B.Sc	50

b. Supervision of Graduate Students

Name of Student	Title of Thesis	Degree	Date of Completion /in Progress	Co-Supervisor
Hezi refaeli	Examining the relationship between high methionine levels in Arabidopsis and changes in DNA methylation	M.Sc.	In progress	Rachel Amir
Michal Dafni	Examining the relationship between high methionine levels in Arabidopsis and changes in DNA methylation	M.Sc.	2023	Rachel Amir

Jonatan Yeroshlmi	Examination of factors affecting the flux of the Shikimate pathway and its derivatives in the roots and fruit peel of Pomegranate (Punica granatum L.)	M.Sc.	2022	Rachel Amir
Naserin Rabach	Elucidation the effect of higher methionine levels on the hyper methylation in Arabidopsis	M.Sc.	2021	Rachel Amir
Shachar Devir	The role cystathionine γ-synthase in seeds during oxidative stress	M.Sc.	2020	Rachel Amir
Odelia Shitrit	The role methionine-γ-lyase during stresses in Arabidopsis plants	M.Sc.	2020	Rachel Amir
Ohad Hanan	The effect of different hosts on the metabolic profile of Egyptian broomrape and a comparison between key enzymes that belong to the shikimate pathway from tomato and broomrape	M.Sc.	2019	Rachel Amir
Noam Nativ	Examination of Egyptian broomrape endogenous metabolite regulation and nitrogen assimilatory pathway	M.Sc.	2017	Rachel Amir
Aviv Gay	The effect of plants with high levels of methionine, threonine, and aromatic amino acids on the parasitic plant Egyptian broomrape	M.Sc.	2016	Rachel Amir
Raeida Renawii	Tobacco plants expressing the bacterial AroG gene	M.Sc. without thesis	2013	Rachel Amir

8. Miscellaneous

A. Supervision of Undergraduate students

2002-2025 Supervision of scientific research projects as part of the first degree (Undergraduate student). The students spent 2-4 months in our research laboratory doing a research project summarized as a research report.

Evaluation of undergraduate research projects

2012-2024 Evaluation of undergraduate research projects at Tel Hai College.

Reviewer of M.Sc. thesis

2014-2024 Evaluation of M.Sc. thesis at Tel Hai College.

B. Evaluation of research proposal

2025 ISF - Israel Science Foundation

2024 BARD - The US-Israel Agricultural Research & Development Fund, Research

2020 BSF- U.S.-Israel Binational Science Foundation

2018 Ministry of Agriculture

2019 Ministry of Agriculture

C. Evaluation of papers in scientific journals

2024 Horticulture Research

2023 Frontiers in Plant Science, Plant Cell & Environment

2022 Plant Physiology, Plant Journal

2021 Current Opinion in Plant Biology, Amino Acids, Planta, Plant Molecular Biology

2020 Plant Physiology, Biomolecules, Frontiers in Plant Science, Physiologia Plantarum

2019 BMC Plant Biology, The Plant Journal, Plant Physiology, Planta

2018 Journal of Plant Physiology, Journal of Experimental Botany

2015 Plant Science, Nucleic acid research, Plant cell reports, Plant science

2014 International Journal of Molecular Sciences, Plant and cell Physiology, Plos One

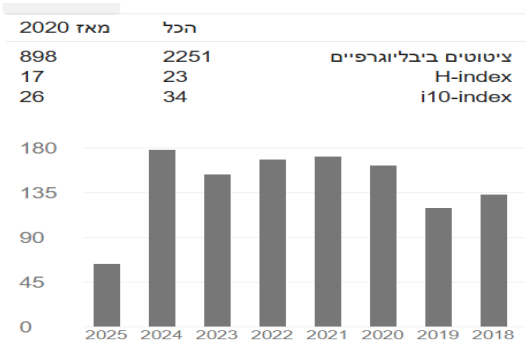
2013 Amino Acids, Plant Biotechnology Journal

F. In Tel-Hai:

2022 Participation in the forum for the establishment of the Faculty of Education and Teaching

2024- 2025 Participation in the forum for planning changes in the Science building

PUBLICATIONS



A. M. Sc. Dissertation

Methionine metabolism in plants: the N-terminal region of cystathionine gamma synthase from Arabidopsis plays an important regulatory in methionine metabolism (2001), 63 pages, Hebrew, Technion, Israel Institute of Technology, Faculty of Biology. Prof. Amir Rachel and Prof. Schuster Gadi.
Publication: no. #35, #36, #37

B. Ph.D. Dissertation

Methionine metabolism in Plants: Regulation of methionine metabolism in plants by the N-terminal region of cystathionine γ-synthase (2007), 110 pages, English, Technion, Israel Institute of Technology, Faculty of Biology. Prof. Amir Rachel and Prof. Schuster Gadi.
Publication: no. #32, #33, #34

C. Articles in Refereed Journals

Published

1. **Hacham Y**., Kaplan A., Gal M., Amir R. (2025) Sulfur metabolism under stress: oxidized glutathione inhibits methionine biosynthesis by destabilizing the enzyme cystathionine γ-synthase. *JIPB- Journal of Integrative Plant Biology*. 67 (1), 87 - 100. I.F. 11.4, Plant Science (Q1), SJR 3.03
2. Dor E., Guy A., Amir R., **Hacham Y**. (2024) Primary metabolic profiling of four broomrapes belonging to Orobanche and Phelipanche species. *Weed Science*, 72 (6), 714 - 722. I.F. 2.5, Agronomy and Crop Science (Q1), SJR 0.61
3. Basheer L, Niv D, Cohen A, Gutman R, **Hacham Y**, Amir R. (2024) Egyptian Broomrape (*Phelipanche aegyptiaca*): from foe to friend? Evidence for high nutritional value and suitability for food consumption. *Future Foods*, 10. 100413 1 – 10. I.F. 7.2, Food Science (Q1), SJR 4.891. Number of cites 2
4. Namdar D, Mulder P.P.J, Ben-Simchon E, **Hacham Y**, Basheer L, Cohen O, Sternberg M, Shelef O. (2024) New Analytical Approach to Quinolizidine Alkaloids and Their Assumed Biosynthesis Pathways in Lupin Seeds. *Toxins*, 16, 163 1 – 18. I.F. 5.075, Chemical and health and safety (Q1), SJR 0.882, Number of cites 5
5. Gruzdev N, **Hacham Y,** Haviv H, Stern I, Gabay M, Bloch I, Amir R, Gal M, Yadid I. (2023) Conversion of methionine biosynthesis in E. coli from trans- to direct-sulfurylation enhances extracellular methionine levels. *Microbial Cell Factories* 22: 151, 1 -12. I.F. 4.3, (Q1), SJR 1.048, Number of cites 15
6. **Hacham Y**, Shitrit O, Nisimi O, Friebach M, Amir R. (2023) Elucidating the Importance of the Catabolic Enzyme, Methionine-gamma-Lyase, in Stresses

during Arabidopsis Seed Development and Germination. *Frontiers in Plant Science*. 6: 14: 1143021, 1 - 15. I.F. 6.627, Plant Science (Q1), SJR 1.359, Number of cites 1

7. Girija A, **Hacham Y**, Dvir S, Panda S, Lieberman-Lazarovich M, Amir R. (2023) Cystathionine g-synthase expression alters metabolic and DNA methylation profiles in Arabidopsis leaves and seeds. *Plant Physiology* 31; 193(1): 595-610. I.F.8.005, Plant Science (Q1), SJR 2.331, Number of cites 4
8. Kumar K., **Hacham Y**., Amir R. (2022) The effect of 10 hosts on the primary metabolic profile of the parasitic plant, Phelipanche aegyptiaca. *Metabolites* 12(12), 1195, 1- 15. I.F. 4.932, Biochemistry (Q2), SJR 0.956, Number of cites 2
9. Bloch I, Haviv H, Rapoport I, Cohen E, Shelly Ben Shushan R, Dotan N, Sher I, **Hacham Y**, Amir R, Gal M (2021) Discovery and characterization of small molecule inhibitors of cystathionine gamma-synthase with in planta activity. *Plant Biotechnology Journal* 19(9): 1785-1797. I.F. 13.263, Biotechnology (Q1), SJR 2.699, Number of cites 5
10. Oliva M, Guy A, Galili G, Dor E, Schweitzar R, Amir R, **Hacham Y.** (2021) Enhanced production of aromatic amino acids in tobacco plants leads to increased phenylpropanoid metabolites and tolerance to stresses. *Frontiers in Plant Science*. 11 (604349) 1 - 17. I.F. 6.627, Plant Science (Q1), SJR 1.359, Number of cites 48
11. Girija A, Shotan D, **Hacham Y**, Amir R. (2020) The level of methionine residues in storage proteins is the main limiting factor of protein-bound-methionine accumulation in Arabidopsis seeds. *Frontiers in Plant Science* 11: 1136, 1 -15. I.F. 6.627, Plant Science (Q1), SJR 1.359, Number of cites 10
12. Cohen A, **Hacham Y**, Welfe Y, Amir R. (2020) Evidence for a significant role for glutathione reductase in sulfur assimilation pathway. *Plant Journal 102*: 246-261. I.F.7.091, Plant Science (Q1), SJR 2.101, Number of cites 25
13. Habashi R**, Hacham Y**, Dhakarey R, Matityahu I, Holland D, Tian L, Amir R. (2019) Elucidating the role of shikimate dehydrogenase in controlling the production of anthocyanins and hydrolysable tannins in the outer pomegranate peels. *BMC Plant Biology* 19: 476, 1 - 15. I.F. 5.26, Plant Science (Q1), SJR 1.117, Number of cites 31
14. Matityahu I, Godo I, **Hacham Y**, Amir R. (2019) The level of threonine in tobacco seeds is limited by substrate availability, while the level of methionine is limited also by the activity of cystathionine γ-synthase. *Plant Science* 283: 195-205. I.F.5.363, Number of cites 5
15. Amir R, Cohen H, **Hacham Y** (2019) Revisiting the attempts to fortify methionine contents in plant seeds. *Journal of Experimental Botany*. 70: 4105 - 4114. I.F.8.331, Plant Science (Q1), SJR 1.913, Number of cites 34
16. Yu Y, Hou W**, Hacham Y,** Sun S, Wu C, Matityahu I, Song S, Amir R, Han T. (2018) Constitutive expression of feedback-insensitive cystathionine gamma-

synthase increases methionine levels in soybean leaves and seeds. *Journal of Integrative Agriculture* 17: 54-62 I.F.4.384, Plant Science (Q1), SJR 0.751, Number of cites 15

17. Cohen H, **Hacham Y**, Panizel I, Rogachev I, Aharoni A, Amir R. (2017) Repression of cystathionine γ-synthase in Arabidopsis seeds recruits the S-methylmethionine cycle. *Plant Physiology* 174: 1322-1333. I.F.8.005 Plant Science (Q1), SJR 2.331, Number of cites 20

18. Dor E, Galili S, Snirnov E, **Hacham Y,** Amir R, Hershenhorn J. (2017) The effects of herbicides targeting aromatic and branched chain amino acid biosynthesis support the presence of functional pathways in broomrape. *Frontiers in Plant Science* 8: 707, 1 - 15. I.F. 6.627, Plant Science (Q1), SJR 1.359, Number of cites 18

19. Nativ N*, **Hacham Y***,* Hershenhorn J, Dor E, Amir R. (2017) Metabolic investigation of Phelipanche aegyptiaca reveals significant changes during developmental stages and in its different organs. *Frontiers in Plant Science* 8: 491 1 - 13. *Equal contribution. I.F. 6.627, Plant Science (Q1), SJR 1.359, Number of cites 19

20. Cohen H, Salmon A, Tietel Z, **Hacham Y**, Amir R. (2017) The relative contribution of genes operating in the Smethylmethionine cycle to methionine metabolism in Arabidopsis seeds. *Plant Cell Reports* 36: 731-743. I.F. 4.964, Plant Science (Q1), SJR 1.034, Number of cites 28

21. Shilo T, Rubin B, Plakhine D, Gal S, Amir R, **Hacham Y,** Wolf S, Eizenberg H. (2017) Secondary Effects of Glyphosate Action in Phelipanche aegyptiaca: Inhibition of Solute Transport from the Host Plant to the Parasite. *Frontiers in Plant Science* 8: 255, 1 - 16. I.F. 6.627, Plant Science (Q1), SJR 1.359, Number of cites 4

22. **Hacham Y**, Matityahu I, Amir R. (2017) Transgenic tobacco plants having a higher level of methionine are more sensitive to oxidative stress. *Physiologia Plantarum* 160: 242-252. I.F. 5.081, Plant Science (Q1), SJR 1.104, Number of cites 21

23. **Hacham Y**, Hershenhorn J, Dor E, Amir R. (2016) Primary metabolic profiling of Egyptian broomrape (*Phelipanche aegyptiaca*) compared to its host tomato roots. *Journal of Plant Physiol*ogy 205: 11-19. I.F. 3.686, Plant Science (Q1), SJR 0.852, Number of cites 26

24. Vragović K, Sela A, Friedlander-Shani L, Fridman Y, **Hacham Y**, Holland N, Bartom E, Mockler TC, Savaldi-Goldstein S. (2015) Translatome analyses capture of opposing tissue-specific brassinosteroid signals orchestrating root meristem differentiation. *Proceedings of the National Academy of Sciences (PNAS)* 112(3): 923-928. I.F.13.45, Multidisciplinary (Q1), SJR 4.184, Number of cites 127

25. Chen C, Letnik I, **Hacham Y,** Dobrev P, Ben Daniel B-H, Vanková R, Amir R, Miller G. (2014) Ascorbate peroxidase 6 protects Arabidopsis thaliana desiccating and germinating seeds from stress and mediates crosstalk between ROS, ABA and auxin. *Plant Physiology* 166: 370-383. I.F.8.005 Plant Science (Q1), SJR 2.331 Number of cites 149
26. **Hacham Y**, Koussevitzky S, Kirma M, Amir R. (2014) Glutathione application affects the transcript profile of genes in Arabidopsis seedling. *Journal of Plant Physiology*. 171(15): 1444-51 I.F. 3.686, Number of cites 6
27. Matityahu I, Godo I, **Hacham Y**, Amir R. (2013 Tobacco seeds expressing feedback-insensitive cystathionine gamma-synthase exhibit elevated content of methionine and altered primary metabolic profile. *BMC Plant Biology* 13: 206-220. I.F. 5.26, Plant Science (Q1), SJR 1.117, Number of cites 45
28. **Hacham Y**, Matityahu I, Amir R. (2013) Light and sucrose up-regulate the expression level of Arabidopsis cystathionine γ-synthase, the key enzyme of methionine biosynthesis pathway. *Amino Acids* 45: 1179-90. I.F. 3.844, Biochemistry (Q2), SJR 0.676, Number of cites 19
29. Song S, Hou W, Godo I, Wu C, Yu Y, Matityahu I, **Hacham Y,** Sun S, Han. T, Amir R. (2013) Soybean seeds expressing feedback-insensitive cystathionine γ-synthase exhibit a higher content of methionine. *Journal of Experimental Botany* 64: 1917-1926. I.F.8.331, Plant Science (Q1), SJR 1.913, Number of cites 114
30. **Hacham Y**, Sela A, Friedlander L, Savaldi-Goldstein S. (2012) BRI1 activity in the root meristem involves post-transcriptional regulation of PIN auxin efflux carriers. *Plant signaling & behavior* 7(1): 1-3. I.F.2.734, Number of cites 49
31. **Hacham Y**, Holland N, Butterfield C, Ubeda-Tomas S, Bennett M, Chory J, Savaldi-Goldstein S. (2011) Brassinosteroid perception in the epidermis controls root meristem size. *Development*, 138, 839-848. I.F.6.862 Developmental Biology (Q1), SJR 6.535, Number of cites 382
32. **Hacham Y,** Matityahu I, Schuster G, Amir R. (2008) Overexpression of mutated forms of aspartate kinase and cystathionine γ-synthase in tobacco leaves resulted in the high accumulation of methionine and threonine. *Plant Journal* 54: 260-71. I.F.7.091, Plant Science (Q1), SJR 2.101, Number of cites 77
33. **Hacham Y**, Song L, Schuster G, Amir R. Lysine enhances methionine content by modulating the expression of *S*-adenosylmethionine synthase. (2007) *Plant Journal* 51: 850-861. I.F.7.091, Plant Science (Q1), SJR 2.101, Number of cites 42
34. **Hacham Y**, Schuster G, Amir R. (2006) An *in vivo* internal deletion in the n-terminus of cystathionine γ-synthase in arabidopsis results with decreased modulation of expression by methionine. *Plant Journal* 45: 955-967. I.F.7.091, Plant Science (Q1), SJR 2.101, Number of cites 57

35. **Hacham Y**, Gofna U, Amir R. (2003) *In vivo* analysis of various substrates utilized by cystathionine γ-synthase and *O*-acetylhomoserine sulfhydrylase in methionine biosynthesis. *Molecular Biology and Evolution* 20: 1513-1520. I.F.8.8, Molecular Biology (Q1), SJR 5.341, Number of cites 66
36. Amir R, **Hacham Y**, Galili G. (2002) Cystathionine γ-synthase and threonine synthase operate in concert to regulate carbon flow towards methionine in plants, *Trends in Plant Science* 7: 153-156. I.F.22.012, Plant Science (Q1), SJR 3.483, Number of cites 152
37. **Hacham Y**, Avraham T, Amir R. (2002) The N-terminal Region of *Arabidopsis* cystathionine γ-synthase plays an important regulatory role in methionine metabolism. *Plant Physiology* 128: 454-462. I.F.8.005 Plant Science (Q1), SJR 2.331, Number of cites 166

D. Articles or Chapters in Scientific Books

Published

1. Cohen H, **Hacham Y,** Matityahu I, Amir R. Elucidating the effects of higher expression level of cystationione γ-synthase on methionine contents in transgenic Arabidopsis, soybean and tobacco seeds. Sulfur Metabolism in Higher Plants - Fundamental. Environmental and Agricultural Aspects. (2017) Eds. De Kok, L.J., Haneklaus, S.H., Hawkesford, M.J. and Schnug, E. Springer, The Netherlands.
2. Amir R, **Hacham Y**. Methionine Metabolism in Plants: Current Understanding of the Factors Regulating its Metabolism. Methionine: Biosynthesis, Chemical Structure and Toxicity. (2013) Nova Science Publishers, Inc. Hauppauge, NY pp. 61-87.
3. Amir R, **Hacham Y**, Matityahu I, Schuster G. Higher levels of lysine, threonine or cysteine affect the level of methionine in higher plant. Sulfur metabolism in plants, regulatory aspects significant of sulfur in the food chain agriculture and environment. (2009) Backhuys Publishers, Liden, pp. 9-20.
4. **Hacham Y**, Amir R. Methionine metabolism in plants: Sulfur: A Missing Link Between Soils, Crops, and Nutrition (2008) ASA-CSSA-SSSA Madison, WI, USA, pp. 251-279.

My current research topics:

1. Investigating the impact of elevated methionine levels on DNA and histone methylation, and subsequent effects on plant gene expression and metabolism.

2. Elucidating the link between methionine availability and DNA methylation in *E. coli*. The study will examine its effects on gene expression and bacterial physiology, including bacterial size, growth rates, and cell-cycle time.

3. Examining the link between brassinosteroid signaling and the levels of sulfur-containing amino acids and other sulfur-derived metabolites in soybean seed