

Shahal Abbo - Curriculum Vitae

1. Personal Details

Date of birth - 3.9.1957, Tel-Aviv, Israel

Identity number - 05423975-1

Nationality - Israeli

Marital status - Married +3

Required military service - 14.11.1976 - 13.5.1980

Permanent address - 46/2 Miriam HaChashmonai't St. Modii'n, Israel

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2. Higher Education

1982 - 1984, Faculty of Agriculture, Hebrew University of Jerusalem, Soil & Water, B.Sc.

1985 - 1986, Faculty of Agriculture, Hebrew University of Jerusalem, Genetics & Breeding, M.Sc. Supervised by Prof M.J. Pinthus and Dr E. Millet.

1988 - 1991, Faculty of Agriculture, Hebrew University of Jerusalem, Genetics & Breeding, Ph.D. Supervised by Prof G. Ladizinsky.

1992 - 1993, JI Centre, Norwich UK, Post-doc, supervisor- Prof G. Moore.

1994 - 1995, Weizmann Institute, Rehovot Israel, Post-doc, supervisor- Prof M. Feldman.

3. Appointments at the Hebrew University

October 1995, Lecturer, Faculty of Agriculture, Field Crops & Genetics.

October 2000, Senior lecturer, Faculty of Agriculture, Field Crops & Genetics.

July 2006, Associate Professor, Faculty of Agriculture, Field Crops & Plant Genetics.

October 2011, Professor, Faculty of Agriculture, Field Crops & Plant Genetics.

4. Additional Functions/Tasks at the Hebrew University

2003 - 2008, 2020 - present, Head - Field Crops & Vegetables study program.

2004 - 2006, 2010 - 2012, Head - Genetics & Breeding study program.

2008 - 2012, Head - Experimental Farm committee, Rehovot campus.

2015 - 2017, Director – RH Smith Institute of Plant Science & Genetics in Agriculture.

5. Service in other Academic and Research Institutions

Member in professional committees for new staff members, Volcani Center, Bet-Dagan.

Joint supervision of MSc and PhD students from Ben-Gurion & Haifa Universities.

Member of PhD committees in Tel-Aviv University, Ben-Gurion University and Haifa University.

6. Other Activities

2001 - present, member in the dryland crops professional committee of the Ministry of Agriculture.

2003 - 2006, member of the scientific board of the Israeli Gene Bank of Agricultural Crops.

1995 - present, active in reviewing grant proposals for: BARD (US-Israel), BSF (US-Israel), GIF, Israel Science Foundation, Israeli Ministry of Agriculture, NSF (USA).

1995 - present, ad-hoc reviewer for the following journals: Israeli J of Plant Science, J of Heredity, Hereditas, Hereditas, Annals of Botany, Chromosoma, Plant Disease, Plant Breeding, Australian J of Agricultural Research, Euphytica, Functional Plant Biology, Theoretical and Applied Genetics, Genetic Resources and Crop Evolution, Genome,

Current Anthropology, Vegetation History and Archaeobotany, Proc Natl Acad Sci USA, PLoSOne.

2006 - 2012, representative of the Ministry for the Protection of the Environment in the national GMO committee.

2007 - present, member in the editorial board of the international journals Plant Breeding, Genetic Resources and Crop Evolution.

Membership in International Societies

Crop Science Society of America

7. Research grants (since 2011)

- * 2011 - 2013 Improving the ability of Israeli wheat to cope with temperature and water instability. Chief Scientist, Ministry of Agriculture, with D Bonfil, M Moshelion, R Wallach, Y Saranga. Total of \$US37,000 for the three years, out of a total of \$US450,000. (Coordinator- Bonfil, PI's- Bonfil, Moshelion & Wallach, co-PI's Saranga & Abbo).
- * 2012 - 2014 Winter chickpea; towards a new winter pulse for the semiarid Pacific Northwest and wider adaptation in the Mediterranean basin. BARD with H.-B. Zhang of Texas A&M, C. Coyne of the USDA-ARS in Pullman WA, and A. Sherman and D. Shtienberg of Volcani Center. Total of \$US74,000 for the 3 years out of \$US280,000. (PI's- Abbo & Zhang, co-PI's- Sherman, Shtienberg & Coyne).
- * 2012-2014 Genetic and physiological characterization of wild pea as a tool for conservation policy planning and as a resource for future legume improvement. Chief Scientist, Ministry of Agriculture, with A. Sherman, Y. Saranga. Total of \$US65,000 for the three years, out of a total of \$US134,000.
- * 2016-2019 United States – Israel Binational Science Foundation (BSF), The physiological and genetic architecture of adaptation to water stress in wild *Pisum fulvum*, S. Abbo (PI), C.J. Coyne and Y. Saranga, (Total for Israeli side \$US230,000).
- * 2019-2021 Further physiological characterization of wild *Pisum fulvum* populations as a tool for developing new breeding stocks. Chief Scientist, Ministry of Agriculture, with A. Sherman, R. Ophir, Y. Saranga. Total of \$US65,000 for the three years, out of a total of \$US134,000.
- * 2018-2020 Israel Science Foundation (ISF), Revisiting species relation in the genus *Pisum*, S. Abbo (PI), R. Ophir, Volcani Center (co-PI), (Total of \$US230,000).
- * 2021-2026 Israel Science Foundation (ISF), The riddle of bitter vetch (*Vicia ervilia* Willd.), a neglected Near Eastern crop, S. Abbo (PI), Z. Kerem, Hebrew University (co-PI), (Total of \$US420,000).

8. Teaching at the Hebrew University

a) Supervision of Master's and doctoral degree students (joint supervisors indicated)

M.Sc. students

Judith Lichtenzveig (with Y Mizrahi) 1994 -1996.

Oded Babai (with O Yarden) 1996-1999.

Ran Hovav 1998 - 1999.

Israel Shai 1997 - 2000.

Gal Tavori (with U Kafafi) 1997 - 2001.

Talia Tzuk (with R Reifen) 1999 - 2001.
 Eliana Rabinowitch (with E Putievsky) 1997 - 2002.
 Zvi Peleg (with Y Saranga) 2000 - 2002.
 Ofer Goren 2000 - 2004.
 Roi Ben-David 2000 - 2005.
 Tal Melamed (with A Sherman) 2004 - 2006.
 Hadas Shafran (with A Sherman) 2005 - 2008.
 Inbar Zezak (with A Gopher) 2006 - 2008.
 Alon Shabtai (with Zvi Peleg) 2006 – 2012.
 Yael Zehavi (with A Gopher) 2008 - 2009.
 Maayan Golani (with D Shtienberg) 2008 - 2010.
 Lovemore Nkhata (with R Reifen) 2008 - 2009.
 Roi Pelech (with A Sherman) 2007 – 2012.
 Erez Rahamim (with Y Saranga) 2009 - 2017.
 Yoav Golan (with D Bonfil) 2010 – 2013.
 Erez Naim (with Y Saranga) 2013 - 2017.
 Arie Corzun (with Roi Ben-David) 2017-2018.
 Orian Zilberman (with Roi Ben-David) 2017-2020.
 Alona Rivlin (with Y Saranga) 2017- 2020.
 Smadar Tzuri (with Y Saranga) 2018 – 2021.

Ph.D. students

Judith Lichtenzveig (with D Shtienberg) 1998 - 2005.
 Neomi Tel-Zur (with Y Mizrahi) 1998 - 2001.
 Igor Kolotilin (with I Levine) 2004 - 2008.
 Omer Frenkel (with A Sherman) 2004 - 2008.
 Ruth van Oss-Pinhasi (with A Sherman) 2008 - 2014.
 Hadas Shafran (with A Sherman) 2008 - 2017.
 Srinivas Kunta (with Ran Hovav) 2017 - present
 Timo Hellwig (with R Ophir) 2018 – present.
 Sivan Frankin (with Roi Ben-David) 2018 – present.
 Asaf Avneri (with Ran Lati) 2018-present

b) Post-doctoral Fellows and Visitors

Hilal Ozkilinc - A PhD student from Gaziantep University, Turkey, 2009.

c) Courses taught in the Hebrew University

Grain Crops Production **71321** - B.Sc.
 The Genetics of Physiological Adaptation **73532** - M.Sc.
 Stress Response of Crop Plants **71113** (with Y Saranga) - M.Sc.
 Basic Cytogenetics **71944** - M.Sc.
 Identification, Collection and Utilization of Plant Genetic Resources **71164** - M.Sc.
 Animal & Plant Evolution under Domestication **71181** (with Gila Kahila Bar-Gal) - M.Sc.

List of publications

1. Doctoral Dissertation

Genetic and anatomic analyses of hybrid embryo abortion in the genus *Lens* L.
Supervised by Prof. G. Ladizinsky. PhD degree awarded on 27.1.1992.

2. Books

- 1) Ladizinsky G, **Abbo S** (2015) *The Search for Wild Relatives of Cool Season Legumes*. SpringerBriefs in Plant Science. Springer, pp. 103.
ISBN 978-3-319-14504-4, DOI 10.1007/978-3-319-14505-1
- 2) Gopher A, Lev-Yadun S, **Abbo S** (2021) *Breaking Ground: Plant Domestication in the Neolithic Levant: The "Core-Area One-Event" Model*. Emery and Claire Yass Publications in Archaeology, The Institute of Archaeology, Tel Aviv University, Occasional publications No. 5. pp. 226.
ISBN 978-965-266-064-0
- 3) **Abbo S**, Gopher A (2021) *Plant Domestication and the Origins of Agriculture in the Near East*. Cambridge University Press. In press.

2.1 Hebrew Books

(1) גופר א, **עבו ש** (2016) ביות הצמחים וראשית החקלאות במזרח הקרוב. רסלינג, תל אביב. 346 עמ'.

3. Books edited

None.

4. Chapters in collections

- 1) Ladizinsky G, **Abbo S** (1996) Genetic diversity in the genus *Lens*. In: Pickersgill B, Lock JM (eds.) *Advances in Legume Systematics 8: Legumes of Economic Importance*, pp. 53-64. Royal Botanic Gardens, Kew.
- 2) Vega JM, **Abbo S**, Feldman M, Levy AA (1997) Chromosome painting in wheat. *Chromosomes Today* 12: 319-332.
- 3) **Abbo S**, Redden RJ, Yadav SS (2007) Utilization of wild relatives. In: Yadav SS, Redden R, Chen W, Sharma B (eds.) *Chickpea Breeding & Genetics*, pp. 338-354. CAB International.
- 4) McNeil D, Ahmad F, **Abbo S**, Bahl PN (2007) Genetics and cytogenetics. In: Yadav SS, Redden R, Chen W, Sharma B (eds.) *Chickpea Breeding & Genetics*, pp. 321-337. CAB International.

- 5) **Abbo S**, Can C, Lev-Yadun S, Ozaslan M (2008) Traditional farming systems of south eastern Turkey: the imperative of *in situ* conservation of wild annual *Cicer* species. In: Maxted N, Ford-Lloyd BV, Kell SP, Iriando JM, Dulloo ME, Turok J (eds.) *Crop Wild Relative Conservation and Use*, pp. 243-248. CAB International.
- 6) **Abbo S**, Mallikarjuna N (2008) Distant hybridization in food legumes. In: Kharkwal MC (ed.) *Food Legumes for Nutritional Security and Sustainable Agriculture*, Vol. 1: 174-179. Proceedings of the Fourth International Food Legumes Research Conference, 18-22 October 2005, New Delhi. Indian Society of Genetics and Plant Breeding.
- 7) **Abbo S**, Lev-Yadun S Gopher A (2014) Plant domestication in the Near East. In: *Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures*. DOI 10.1007/978-94-007-3934-5_10006-1. Springer.
- 8) Gopher A, Lev-Yadun S, **Abbo S** (2017) Domesticating plants in the Near East. In: Enzel Y, Bar-Yosef O (eds.) *Quaternary of the Levant. Environments, Climate Change and Humans*. pp. 737-742. Cambridge University Press.

Review articles in refereed journals

- 1R) Lev-Yadun S, Gopher A, **Abbo S** (2000) The cradle of agriculture. Science 288: 1602-1603.
- 2R) Kumar J, **Abbo S** (2001) Genetics of flowering time in chickpea and its bearing on productivity in semiarid environments. Advances in Agronomy 72: 107-138.
- 3R) Gopher A, **Abbo S**, Lev-Yadun S (2001) The “When”, the “Where” and the “Why” of the Neolithic revolution in the Levant. Documenta Praehistorica XXVIII: 49-62.
- 4R) **Abbo S**, Lev-Yadun S, Ladizinsky G (2001) Tracing the wild genetic stocks of crop plants. Genome 44: 309-310.
- 5R) **Abbo S**, Shtienberg D, Lichtenzweig J, Lev-Yadun S, Gopher A (2003) Chickpea, summer cropping, and a new model for pulse domestication in the ancient Near East. The Quarterly Review of Biology 78: 435-448.
- 6R) **Abbo S**, Berger J, Turner NC (2003) Evolution of cultivated chickpea: four bottlenecks limit diversity and constrain adaptation. Functional Plant Biology 30: 1081-1087.
- 7R) **Abbo S**, Gopher A, Peleg Z, Saranga Y, Fahima T, Salamini F, Lev-Yadun S (2006) The ripples of "The Big (agricultural) Bang": the spread of early wheat cultivation. Genome 49: 861-863.
- 8R) **Abbo S**, Frenkel O, Sherman A, Shtienberg D (2007) The sympatric Ascochyta pathosystems of Near Eastern legumes, a key for better understanding of pathogen biology. European Journal of Plant Pathology 119: 111-118.

- 9R) **Abbo S**, Saranga Y, Peleg Z, Lev-Yadun S, Kerem Z, Gopher A (2009) Reconsidering domestication of legumes versus cereals in the ancient Near East. The Quarterly Review of Biology 84: 29-50.
- 10R) **Abbo S**, Lev-Yadun S, Gopher A (2010) Yield stability: an agronomic perspective on the origin of Near Eastern agriculture. Vegetation History and Archaeobotany 19: 143-150.
- 11R) **Abbo S**, Lev-Yadun S, Gopher A (2010) Agricultural origins: centers and noncenters; a Near Eastern reappraisal. Critical Reviews in Plant Sciences 29: 317-328.
- 12R) **Abbo S**, Lev-Yadun S, Gopher A (2011) The origin of Near Eastern plant domestication: Homage to Claude Levi-Strauss and “La Pensée Sauvage”. Genetic Resources and Crop Evolution 58: 175-179.
- 13R) **Abbo S**, Lev-Yadun S, Gopher A (2012) Plant domestication and crop evolution in the Near East; on events and processes. Critical Reviews in Plant Sciences 31: 241-257.
- 14R) Heun M, **Abbo S**, Lev-Yadun S, Gopher A (2012) A critical review of the protracted domestication model for Near-Eastern founder crops: linear regression, long distance gene flow, archaeological and archaeobotanical evidence. Journal of Experimental Botany 63: 4333-4341.
- 15R) **Abbo S**, Lev-Yadun S, Heun M, Gopher A (2013) On the ‘lost’ crops of the Neolithic Near East. Journal of Experimental Botany 64: 815-822.
- 16R) Gopher A, Lev-Yadun S, **Abbo S** (2013) A response to “Arguments against the Core Area hypothesis” for plant domestication. Tel Aviv 40: 187-196.
- 17R) **Abbo S**, Pinhasi van-Oss R, Gopher A, Saranga Y, Ofner I, Peleg Z (2014). Plant domestication versus crop evolution: A conceptual framework for cereals and grain legumes. Trends in Plant Science 19: 351-360.
- 18R) **Abbo S**, Gopher A, Lev-Yadun S (2015) Fruit Domestication in the Near East. Plant Breeding Reviews 39: 325-377.
- 19R) Bar-El Dadon S, **Abbo S**, Reif R (2017) Leveraging traditional crops for better nutrition and health – the case of chickpea. Trends in Food Science & Technology 64: 39-47.
- 20R) **Abbo S**, Gopher A (2017) Near Eastern plant domestication: A history of thought. Trends in Plant Science 22: 491-511.
- 21R) **Abbo S**, Gopher A (2020) Plant domestication in the Neolithic Near East: The humans-plants liaison. Quaternary Science Reviews 242: 106412
- 22R) **Abbo S**, Peleg Z, Lev-Yadun S, Gopher A (2021) Does the proportion of shattering vs. non-shattering cereal remains in archeobotanical assemblages reflect Near Eastern Neolithic arable fields? Review of Palaeobotany and Palynology 284: 104339

Letters to editors and technical comments

- L1) **Abbo S**, Rubin B (2000) Transgenic crops: A cautionary tale. Science 287: 1927-1928.
- L2) Lev-Yadun S, **Abbo S**, Doebley J (2002) A letter to the Editor: Wheat, rye, and barley on the cob? Nature Biotechnology 20: 337-338.
- L3) Lev-Yadun S, Gopher A, **Abbo S** (2006) How and when was wild wheat domesticated? Science 313: 296.
- L4) Lev-Yadun S, Ne'eman G, **Abbo S**, Flaishman MA (2006) Comment on "Early domesticated fig in the Jordan Valley". Science 314: 1681.

5. Articles in refereed journals

- 1) **Abbo S**, Millet E, Pinthus MJ (1987) Genetically controlled differences in the effects of chlormequat on tetraploid wheat (*Triticum turgidum*). Plant Growth Regulation 5: 235-239.
- 2) **Abbo S**, Ladizinsky G (1991) Anatomical aspects of hybrid embryo abortion in the genus *Lens* L. Botanical Gazette 152: 316-320.
- 3) **Abbo S**, Ladizinsky G, Weeden NF (1992) Genetic analysis and linkage study of seed weight in lentil. Euphytica 58: 259-266.
- 4) Ladizinsky G, **Abbo S**, Demmissie A (1992) Genetical characterization of *Lens ervoides* from Ethiopia. Genetic Resources and Crop Evolution 39: 51-54.
- 5) Moore G, **Abbo S**, Cheung W, Foote T, Gale M, Koebner R, Leitch A, Leitch I, Money T, Stancombe P, Yano M, Flavell R (1992) Key features of cereal genome organization as revealed by the use of cytosine methylation-sensitive restriction endonucleases. Genomics 15: 472-482.
- 6) Ladizinsky G, **Abbo S** (1993) Cryptic speciation in *Lens culinaris*. Genetic Resources and Crop Evolution 40: 1-5.
- 7) **Abbo S**, Miller TE, King IP (1993) Primer-induced *in situ* hybridization to plant chromosomes. Genome 36: 815-817.
- 8) Ladizinsky G, **Abbo S** (1993) Wild lentil of Central Asia. FAO/IBPGR Plant Genetic Resources Newsletter 93: 5-8.
- 9) **Abbo S**, Dunford RP, Miller TE, Reader SM, King IP (1993) Primer-mediated *in situ* detection of the B-hordein gene cluster on barley chromosome 1H. Proceedings of the National Academy of Sciences USA 90: 11821-11824.
- 10) **Abbo S**, Ladizinsky G (1994) Genetical aspects of hybrid embryo abortion in the genus *Lens* L. Heredity 72: 193-200.

- 11) Reader SM, **Abbo S**, Purdie KA, King IP, Miller TE (1994) Direct labeling of plant chromosomes by rapid *in situ* hybridization. Trends in Genetics 10: 265-266.
- 12) **Abbo S**, Miller TE, Reader SM, Dunford RP, King IP (1994) Detection of ribosomal DNA sites in lentil and chickpea by fluorescent *in-situ* hybridization. Genome 37: 713-716.
- 13) Vega JM, **Abbo S**, Feldman M, Levy AA (1994) Chromosome painting in plants: *In situ* hybridization with DNA probe from a specific microdissected chromosome arm of common wheat. Proceedings of the National Academy of Sciences USA 91: 12041-12045.
- 14) Cheung WY, Money TE, **Abbo S**, Devos KM, Gale MD, Moore G (1994) A family of related sequences associated with (TTTAGGG)*n* repeats are located in the interstitial regions of wheat chromosomes. Molecular and General Genetics 245: 349-354.
- 15) **Abbo S**, Dunford RP, Miller TE, Reader SM, Foote T, Flavell RB, Moore G (1995) Organization of retro-elements and stem-loop repeat families in the genomes and nuclei of cereals. Chromosome Research 3: 5-15.
- 16) Miller TE, Reader SM, Purdie KA, **Abbo S**, King IP (1995) Fluorescent *in situ* hybridization as an aid to introducing alien genetic variation into wheat. Euphytica 85: 275-279.
- 17) Lev-Yadun S, Beharav A, **Abbo S** (1996) Evidence for polygenic control of fibre differentiation in spring wheat and its relationship with the GA-insensitivity locus *Rht1*. Australian Journal of Plant Physiology 23: 185-189.
- 18) Subramaniam K, **Abbo S**, Ueng PP (1996) Isolation of two differentially expressed wheat ACC synthase cDNAs and the characterization of one of their genes with root-predominant expression. Plant Molecular Biology 31: 1009-1020.
- 19) Yang T, Segal G, **Abbo S**, Feldman M, Fromm H (1996) Characterization of the calmodulin gene family in wheat: structure, chromosomal location and evolutionary aspects. Molecular and General Genetics 252: 684-694.
- 20) Liu B, Segal G, Vega JM, Feldman M, **Abbo S** (1997) Isolation and characterization of chromosome-specific DNA sequences from a chromosome-arm genomic library of common wheat. Plant Journal 11: 959-965.
- 21) Liu CJ, King IP, Pittaway TS, **Abbo S**, Reader SM, Miller TE, Gale MD (1997) Physical and genetical mapping of rDNA sites in *Pennisetum* (pearl millet). Heredity 78: 529-531.
- 22) Segal G, Liu B, Vega JM, **Abbo S**, Radova M, Feldman M (1997) Identification of a chromosome-specific probe that maps within the *Ph1* deletion in common and durum wheat. Theoretical and Applied Genetics 94: 968-970.

- 23) Feldman M, Liu B, Segal G, **Abbo S**, Levy AA, Vega JM (1997) Rapid elimination of low copy non coding DNA sequences in polyploid wheat: a possible mechanism for differentiation of homoeologous chromosomes. Genetics 147: 1381-1387.
- 24) Segal G, Shimony Y, Huang L, **Abbo S** (1998) Chromosome assignment and polymorphism of a wheat cDNA encoding protein disulfide isomerase. Wheat Information Service 86: 25-30.
- 25) Liu B, Vega JM, Segal G, **Abbo S**, Radova M, Feldman M (1998) Rapid genomic changes in newly synthesized amphiploids of *Triticum* and *Aegilops*. I. Changes in low copy sequences. Genome 41: 272-277.
- 26) Or E, Hovav R, **Abbo S** (1999) A major gene for flowering time in chickpea. Crop Science 39: 315-322.
- 27) Lev-Yadun S, Beharav A, Di-nur R, **Abbo S** (1999) Gibberellic acid (GA) increases fibre cell differentiation and secondary cell-wall deposition in spring wheat (*Triticum aestivum* L.) culms. Plant Growth Regulation 27: 161-165.
- 28) Lev-Yadun S, **Abbo S** (1999) Traditional utilization of A'kub (*Gundelia tournefortii*, Asteraceae) in Israel and the Palestinian Authority area. Economic Botany 53: 217-223.
- 29) Tel-Zur N, **Abbo S**, Myslabodski D, Mizrahi Y (1999) Modified CTAB procedure for DNA isolation from epiphytic cacti of the genera *Hylocereus* and *Selenicereus* (Cactaceae). Plant Molecular Biology Reporter 17: 249-254.
- 30) Subramaniam K, Liu B, Ye Z, **Abbo S**, Ueng PP (1999) Isolation of a gene coding for a putative sterol C-24 methyltransferase in wheat. Wheat Information Service 89: 17-22.
- 31) Lichtenzweig J, **Abbo S**, Nerd A, Tel-Zur N, Mizrahi Y (2000) Cytology and mating systems in climbing cacti *Hylocereus* and *Selenicereus* (Cactaceae). American Journal of Botany 87: 1058-1065.
- 32) **Abbo S**, Grusak M, Tzuk T, Reifen R (2000) The relationship between seed size and calcium concentration in chickpea (*Cicer arietinum* L.) seed. Plant Breeding 119: 427-431.
- 33) Gorbunova V, Avivi-Ragolski N, Shalev G, Kovalchuk I, **Abbo S**, Hohn B, Levy AA (2000) A new hyper recombinogenic mutant of *Nicotiana tabacum*. Plant Journal 24: 601-611.
- 34) Lichtenzweig J, Shtienberg D, Zhang HB, Bonfil DJ, **Abbo S** (2002) Biometric analyses of the inheritance of resistance to *Dydymella rabiei* in chickpea. Phytopathology 92: 417-423.
- 35) **Abbo S**, Lev-Yadun S, Galwey N (2002) Vernalization response of wild chickpea. New Phytologist 154: 695-701.
- 36) Lichtenzweig J, Winter P, **Abbo S**, Shtienberg D, Kaiser WJ, Kahl G (2002) Towards the first linkage map of the *Didymella rabiei* genome. Phytoparasitica 30: 467-472.

- 37) Berger J, **Abbo S**, Turner NC (2003) Ecogeography of annual wild *Cicer* species: the poor state of the world collection. Crop Science 43: 1076-1090.
- 38) Tel-Zur N, **Abbo S**, Bar-Zvi D, Mizrahi Y (2003) Chromosome doubling in vine cacti hybrids. Journal of Heredity 94: 329-333.
- 39) Hovav R, Upadhyaya KC, Beharav A, **Abbo S** (2003) Major flowering time gene and polygenes effects on chickpea grain weight. Plant Breeding 122: 539-541.
- 40) Tel-Zur N, **Abbo S**, Bar-Zvi D, Mizrahi Y (2004) Genetic affinities within and between vine cacti from the genera *Hylocereus* and *Selenicereus* as determined by RAPD analysis. Scientia Horticulturae 100: 279-289.
- 41) Tel-Zur N, **Abbo S**, Bar-Zvi D, Mizrahi Y (2004) Close genetic relationships among vine cacti of the genera *Hylocereus* and *Selenicereus* (Cactaceae). Annals of Botany 94: 527-534.
- 42) Tavori G, **Abbo S**, Kafkafi U, Schnug E (2004) Influence of nitrate- and sodium chloride on concentration and internal distribution of mineral elements in broad beans (*Vicia faba* L.) and chickpeas (*Cicer arietinum* L.). Landbauforschung Volkenrode (FAL-Agricultural Research) 54: 189-197.
- 43) Tel-Zur N, **Abbo S**, Mizrahi Y (2005) Cytogenetics of semi-fertile triploids and 3x aneuploid intergeneric vine cacti hybrids. Journal of Heredity 96: 124-131.
- 44) Peleg Z, Fahima T, **Abbo S**, Krugman T, Nevo E, Saranga Y (2005) Genetic diversity for drought resistance in wild emmer wheat and its ecogeographic associations. Plant Cell & Environment 28: 176-191.
- 45) Lichtenzweig J, Scheuring C, Dodge J, **Abbo S**, Zhang HB (2005) Construction of BAC and BIBAC libraries and their applications for generation of SSR markers for genome analysis of chickpea, *Cicer arietinum* L. Theoretical and Applied Genetics 110: 492-510.
- 46) **Abbo S**, Molina C, Jungmann R, Grusak MA, Berkovitch Z, Reifen Ruth, Kahl G, Winter P, Reifen R (2005) QTL governing carotenoid concentration and weight in seeds of chickpea (*Cicer arietinum* L.). Theoretical and Applied Genetics 111: 185-195.
- 47) **Abbo S**, Lev-Yadun S, Rubin B, Gopher A (2005) On the origin of Near Eastern founder crops and the "dump-heap hypothesis". Genetic Resources and Crop Evolution 52: 491-495.
- 48) Lichtenzweig J, Gamliel E, Frenkel O, Michaelido S, **Abbo S**, Sherman A, Shtienberg D (2005) Distribution of mating types and diversity in virulence of *Didymella rabiei* in Israel. European Journal of Plant Pathology 113: 15-24.
- 49) Ben-David R, **Abbo S** (2005) Phenological variation among Israeli populations of *Cicer judaicum* Boiss. Australian Journal of Agricultural Research 56: 1219-1225.

- 50) Ben-David R, Can C, Lev-Yadun S, **Abbo S** (2006) Ecogeography and demography of *Cicer judaicum*, a wild annual relative of domesticated chickpea. Crop Science 46: 1360-1370.
- 51) Bonfil DJ, Lichtenzweig J, Shai I, Lerner A, Tam S, **Abbo S** (2006) Associations between earliness, Ascochyta response and grain yield in chickpea. Australian Journal of Agricultural Research 57: 465-470.
- 52) Lichtenzweig J, Bonfil DJ, Zhang HB, Shtienberg D, **Abbo S** (2006) Mapping quantitative trait loci affecting time to flowering and response to Ascochyta blight in chickpea. Theoretical and Applied Genetics 113: 1357-1369.
- 53) Turner NC, **Abbo S**, Berger JD, Chaturvedi SK, French RJ, Ludwig C, Mannur DM, Singh SJ, Yadava HS (2007) Osmotic adjustment in chickpea (*Cicer arietinum* L.) has low heritability and results in no yield benefit under terminal drought. Journal of Experimental Botany 58: 187-194.
- 54) Kerem Z, Gopher A, Lev-Yadun S, Weinberg P, **Abbo S** (2007) Chickpea domestication in the Neolithic Levant through the nutritional perspective. Journal of Archaeological Science 34: 1289-1293.
- 55) Frenkel O, Shtienberg D, **Abbo S**, Sherman A (2007) The sympatric Ascochyta complex of wild *Cicer judaicum* and domesticated chickpea. Plant Pathology 56: 464-471.
- 56) Bonfil DJ, Goren O, Mufradi I, Lichtenzweig J, **Abbo S** (2007) Development of early flowering kabuli chickpea with regular and simple leaves. Plant Breeding 126: 125-129.
- 57) Peleg Z, Saranga Y, Krugman T, **Abbo S**, Nevo E, Fahima T (2008) Allelic diversity associated with aridity gradient in wild emmer wheat populations. Plant Cell & Environment 31: 39-49.
- 58) **Abbo S**, Zezak I, Schwartz E, Lev-Yadun S, Gopher A (2008) Experimental harvest of wild pea in Israel: implications for the origin of Near Eastern farming. Journal of Archaeological Science 35: 922-929.
- 59) Peleg Z, Saranga Y, **Abbo S**, Krugman T, Fahima T (2008) Genetic structure of wild emmer wheat populations as reflected by transcribed vs. anonymous SSR markers. Genome 51: 187-195.
- 60) Frenkel O, Sherman A, **Abbo S**, Shtienberg D (2008) Differential aggressiveness among *Didymella rabiei* isolates originated from domesticated chickpea and sympatric wild *Cicer judaicum*. Phytopathology 98: 600-608.
- 61) **Abbo S**, Zezak I, Schwartz E, Lev-Yadun S, Kerem Z, Gopher A (2008) Wild lentil and chickpea harvest in Israel: bearing on the origins of Near Eastern farming. Journal of Archaeological Science 35: 3172-3177.
- 62) Turner NC, Furbank RT, Berger JD, Gremigni P, **Abbo S**, Leport L (2009) Seed size is associated with sucrose synthase activity in developing cotyledons of chickpea. Crop Science 49: 621-627.

- 63) Peleg Z, Fahima T, Krugman T, **Abbo S**, Yakir D, Korol A, Saranga Y (2009) Genomic dissection of drought resistance in durum wheat × wild emmer wheat RIL population. Plant Cell & Environment 32: 758-779.
- 64) Ben-David R, **Abbo S**, Berger JD (2010) Stress gradients select for ecotype formation in *Cicer judaicum* Boiss., a wild relative of domesticated chickpea. Genetic Resources and Crop Evolution 57: 193-202.
- 65) Frenkel O, Peever TL, Chilvers MI, Özkilinc H, Can C, **Abbo S**, Shtienberg D, Sherman A (2010) Ecological genetic divergence of the fungal pathogen *Didymella rabiei* on sympatric wild and domesticated *Cicer* spp. (chickpea). Applied and Environmental Microbiology 76: 30-39.
- 66) Özkilinc H, Frenkel O, **Abbo S**, Eshed R, Sherman A, Ophir R, Shtienberg D, Can CC (2010) A comparative study of Turkish and Israeli populations of *Didymella rabiei*, the ascochyta blight pathogen of chickpea. Plant Pathology 59: 492-503.
- 67) **Abbo S**, Bonfil DJ, Kerem Z, Berkovitch Z, Reifen R (2010) Towards enhancing lutein concentration in chickpea, cultivar and management effects. Plant Breeding 129: 407-411.
- 68) Zhang X, Scheuring CF, Zhang MP, Dong JJ, Zhang Y, Huang JJ, Lee M-K, **Abbo S**, Sherman A, Shtienberg D, Chen W, Muehlbauer F, Zhang H-B (2010) A BAC/BIBAC-based physical map of chickpea, *Cicer arietinum* L. BMC Genomics 11: 501.
- 69) **Abbo S**, Mesghenna YT, van Oss H (2011) Interspecific hybridization in wild *Cicer* sp. Plant Breeding 130: 150-155.
- 70) **Abbo S**, Rachamim E, Zehavi Y, Zezak I, Lev-Yadun S, Gopher A (2011) Experimental growing of wild pea in Israel and its bearing on Near Eastern plant domestication. Annals of Botany 107: 1399-1404.
- 71) Özkilinc H, Frenkel O, Shtienberg D, **Abbo S**, Sherman A, Kahraman A, Can C (2011) Aggressiveness of eight *Didymella rabiei* isolates from domesticated and wild chickpea native to Turkey and Israel, a case study. European Journal of Plant pathology 131: 529-537.
- 72) Peleg Z, Fahima T, Korol AB, **Abbo S**, Saranga Y (2011) Genetic analysis of wheat domestication and evolution under domestication. Journal of Experimental Botany 62: 5051-5061.
- 73) **Abbo S**, Zezal I, Zehavi Y, Schwartz E, Lev-Yadun S, Gopher A (2013) Six seasons of wild pea harvest in Israel: bearing on Near Eastern plant domestication. Journal of Archaeological Science 40: 2095-2100.
- 74) **Abbo S**, Goren O, Saranga Y, Langensiepen M, Bonfil JD (2013) Leaf shape × sowing density interaction affects chickpea grain yield. Plant Breeding 132: 200-204.

- 75) Tzarfati R, Saranga Y, Barak V, Gopher A, Korol AB, **Abbo S** (2013) Threshing efficiency as an incentive for rapid domestication of emmer wheat. Annals of Botany 112: 829-837.
- 76) **Abbo S**, Lev-Yadun S, Gopher A (2014) The 'Human Mind' as a common denominator in plant domestication. Journal of Experimental Botany 65: 1917-1920.
- 77) Tzarfati R, Barak V, Krugman T, Fahima T, **Abbo S**, Saranga Y, Korol AB (2014) Novel quantitative trait loci underlying major domestication traits in tetraploid wheat. Molecular Breeding 34: 1613-1628.
- 78) Peleg Z, Shabtay A, **Abbo S** (2015) Allelic diversity between and within three wild annual *Cicer* species. Genetic Resources and Crop Evolution 62: 177-188.
- 79) **Abbo A**, Zezak I, Lev-Yadun S, Shamir O, Friedman T, Gopher A (2015) Harvesting wild flax in the Galilee, Israel and extracting fibers - bearing on Near Eastern plant domestication. Israel Journal of Plant Sciences 62: 52-64.
- 80) Bonfil DJ, **Abbo S**, Svoray T (2015) Sowing date and wheat quality as determined by gluten index. Crop Science 55: 2294-2306.
- 81) van Oss R, **Abbo S**, Eshed R, Sherman A, Coyne CJ, Vandemark GJ, Zhang H-B, Peleg Z (2015) Genetic relationship in *Cicer* sp. expose evidence for gene flow between the cultigen and its wild progenitor. PLoS One 10(10): e0139789.
- 82) Zou H, Tzarfati R, Hübner S, Krugman T, Fahima T, **Abbo S**, Saranga Y, Korol AB (2015) Transcriptome profiling of wheat glumes in wild emmer, hulled landraces and modern cultivars (2015) BMC Genomics 16:777. doi 10.1186/s12864-015-1996-0
- 82) Pinhasi van-Oss R, Sherman A, Zhang H-B, Vandemark G, Coyne C, **Abbo S** (2016) Vernalization response of domesticated × wild chickpea progeny is subject to strong genotype by environment interaction. Plant Breeding 135: 102-110.
- 83) Golani M, **Abbo S**, Sherman A, Frenkel O, Shtienberg D (2016) The temperature response and aggressiveness of *Peyronallaea pinodes* isolates originating from wild and domesticated *Pisum* sp. in Israel. Phytopathology 106: 824-832.
- 84) Golani M, Frenkel O, Bornstein M, Shulhani R, **Abbo S**, Shtienberg D (2016) Prevalence, development and significance of ascochyta blight caused by *Peyronallaea pinodes* in *Pisum elatius* populations growing in natural ecosystems. Phytopathology 106: 833-841.
- 85) Naim-Feil E, Toren M, Aubert G, Rubinstein M, Rosen A, Eshed R, Sherman A, Ophir R, Saranga Y, **Abbo S** (2017) Drought response and genetic diversity in *Pisum fulvum*, a wild relative of domesticated pea. Crop Science 57: 1145-1159.
- 86) van-Oss-P R, Gopher A, Kerem Z, Peleg Z, Lev-Yadun S, Sherman A, Hong-Bin Z, Vandemark G, Coyne CJ, Reany O, **Abbo S** (2018) Independent selection for seed free tryptophan content and vernalization response in chickpea. Plant Breeding 137: 290-300.

- 87) Mugabe D, Coyne CJ, Piaskowski J, Zheng P, Ma Y, Landry E, McGee R, Main D, Vandemark G, Zhang H-B, **Abbo S** (2019) Quantitative trait loci for cold tolerance in chickpea. Crop Science 59: 573-582.
- 88) Curzon AY, Chandrasekhar K, Nashef YK, **Abbo S**, Bonfil DJ, Reifen R, Bar-el S, Avneri A, Ben-David R (2019) Distinguishing between bread wheat and spelt grains using molecular markers and spectroscopy. Journal of Agricultural and Food Chemistry 67: 3837–3841.
- 89) Frankin S, Kunta S, **Abbo S**, Sela H, Goldberg BZ, Bonfil DJ, Levy AA, Avivi-Ragolsky N, Nashef K, Roychowdhury R, Faraj T, Lifshitz D, Mayzlish-Gati E, Ben-David R (2020) The Israeli–Palestinian wheat landraces collection: restoration and characterization of lost genetic diversity. Journal of the Science of Food and Agriculture 100: 4083-4092.
- 90) Hellwig T, Flor A, Saranga Y, Coyne CJ, Main D, Sherman A, Ophir R, **Abbo S** (2020) Environmental and genetic determinants of amphicarpy in *Pisum fulvum*, a wild relative of domesticated pea. Plant Science 298: 110566
- 91) Hellwig T, **Abbo S**, Sherman A, Coyne C, Saranga Y, Lev-Yadun S, Main D, Zheng P, Ophir R (2020) Limited divergent adaptation despite a substantial environmental cline in wild pea. Molecular Ecology 29:4322–4336.
- 92) Curzon AY, Kottakota C, Nashef K, **Abbo S**, Bonfil DJ, Reifen R, Bar-El S, Rabinovich O, Avneri A, Ben-David R (2021) Assessing adaptive requirements and breeding potential of spelt under Mediterranean environment. Scientific Reports 11: 7208
- 93) Hellwig T, **Abbo S**, Sherman A, Ophir R (2021) Prospects for the natural distribution of crop wild-relatives with limited adaptability: The case of the wild pea *Pisum fulvum*. Plant Science 310: 110957
- 94) **Abbo S**, Lev-Yadun S, Gopher A (2021) Harvest techniques: Hand-pulling and its potential impact on the archaeobotanical record vis a vis Near Eastern plant domestication. Agronomy 11: 1215
- 95) Frankin S, Roychowdhury R, Nashef K, **Abbo S**, Bonfil DJ, Ben-David R (2021) In-field comparative study of landraces vs. modern wheat genotypes under a Mediterranean climate. Plants 10: 2612.
- 96) Hellwig T, **Abbo S**, Ophir R (2021) Drivers of genetic differentiation and recent evolutionary history of an Eurasian wild pea. Journal of Biogeography 49: 794-808.
- 97) Hellwig T, **Abbo S**, Ophir R (2022) Phylogeny and disparate selection signatures suggest two genetically independent domestication events of pea (*Pisum* L.). The Plant Journal. 110: 419-439.
- 98) Kunta S, Chu Y, Levy Y, Harel A, Abbo S, Ozias-Akins P, Hovav R (2022) Identification of a major locus for flowering pattern sheds light on plant architecture diversification in cultivated peanut. Theoretical and Applied Genetics, in press.