



ORCID: 0000-0001-7586-3108
ResearcherID: N-1049-2018
WoS_h-index: 16
Google Scholar h-index: 21

E-mail:
hatice.gulen@istinye.edu.tr
haticegulen3@gmail.com

Hatice Gulen, PhD
Professor of Plant Science at Istinye University

Female; Born in 1967, Adana, Turkey;
Resident in Istanbul

BSc, MSc and PhD degrees in **Horticulture** from Cukurova University, Turkey in 1988, 1992 and 2000 respectively. Field of expertise in **plant genetics and biotechnology, plant physiology**. Full professor since 2011. Served as Department Head, Vice Dean, Dean and Vice Rector. Currently, serving as **Vice Rector in the subject of research & development and academic processes including recruitment at Istinye University**.

Received **TUBITAK-NATO PhD scholar** and studied at **West Virginia University, USA** (1997-1998). Participated training and research programmes at **CIHEAM-Crete (MAICH, 1995)**, at The **Hebrew Univ. of Jerusalem (MASHAW scholar in 2006)**, **West Virginia University, USA (2009)**. Established **Plant Genetics and Biotechnology Research Group** at Bursa Uludag University, Department of Horticulture in 2002 and served as the **leader of the research group** until 2016.

Continued her academic studies at **Istanbul Bilgi University** after 2016. Founded the Plant Biotechnology Research Laboratory in the **Department of Genetics and Bioengineering**. During her tenure as the Head of the Department until 2021, Genetics and Bioengineering Undergraduate Program received the **MÜDEK accreditation**. Served in various administrative boards in the University and organize many events including the 7th Bioengineering Summit in 2020. Started working at **Istinye University** in 2021. Has been involved in **many research projects as PI or as researcher in interdisciplinary projects** related to **green biotechnology** applications. Recently appointed as an **expert external research evaluator** in the **European Commission's Marie Skłodowska-Curie COFUND action USAL4EXCELLENCE (2021-2025)**. Has the "Training of Trainers" certificate authorised by **TPI about patent**. Professor Gülén having certificates in '**Quality Management System**', '**Process Management, Interaction and Improvement Techniques**', and '**MÜDEK Program Accreditation Evaluator**', is a **MÜDEK Program Accreditation Evaluator**. Supervised **five graduate thesis** and has **30+** peer reviewed scientific paper, book chapters. Hatice Gülén **holds 3 national and 1 international patents**.

Patents

TPI (Turkish Patent Institute) Patents

1. Using of Uridine in plant growth and development
TR 2013 02102 B, 2015
2. Using of Cytidine in plant growth and development
TR 2013 02103 B, 2015

3. Use of Pyrimidines in Enhancement of Plant Stress Tolerance
TR 2014 01995 B, 2016

European Patent Office (EPO) & TPI

1. Use of Uridine in Enhancement of Plant Stress Tolerance
EPO # EP 2 967 061 B1, 2017

Research Projects

1. “Development of new cultivars with high frost tolerance and elucidating candidate genes responsible for protein and carbohydrate metabolisms in frost stress of olive”. TUBITAK-1003 (Project # TOVAG- 2150797), (**coordinator**) 2017-2020.
2. “Black Sea region dwarf/semi dwarf cherry rootstock breeding” TUBITAK-1003 (Project # TOVAG- 2150745), (**researcher**) 2016-2019.
3. “Identification of differentially express genes and proteins in strawberry plants under heat stress”. Uludag University, Research Foundation (Project # 2012/50), (**coordinator**) 2012-2016.
4. “Mapping nuclear genes controlling male sterility in carrot using AFLP markers”, TÜBİTAK-1001 (Project No: TOVAG-1110119), (**researcher**) 2011-2016.
5. “Effects of high temperature stress on antioxidant, carbohydrate and protein metabolism of strawberry plants”. TUBITAK-1001 (Project # TOVAG-1080061), (**coordinator**) 2008-2011.
6. “Effects of glycine betain and choline applications on phospholipid metabolism of olive plants under low temperature stress”. Uludag University, Research Foundation (Project # UAP(Z)2010/47), (researcher) 2010-2014.
7. “DNA fingerprinting of some berry cultivars by AFLP and SSR molecular markers”, Uludag University, Research Foundation (Project # Z-2006/57), (researcher) 2006-2009.
8. “Identification of some local and introduced cherry cultivars by AFLP and SSR molecular markers”. Uludağ University, Research Foundation (Project # Z-2006/36), (project coordinator) 2006-2009.
9. “Determination of DNA profiles of some important olive varieties and hybrids and the development of olive genetic map using molecular markers”. TUBITAK-1001 (Project#TOVAG-1050071), (**researcher**) 2005-2008.
10. “Molecular biological characterization of cold hardiness in olive plants (*Olea europaea* L.)”, DPT (Project # 2002/1), (researcher) 2002-2007.
11. “Prediction of graft compatibility of some quince rootstocks with some pear scions using peroxidase isoenzyme analysis”. Uludağ University, Research Foundation (Project # 2001/57), (project coordinator) 2000-2002
12. “In vivo and in vitro propagation of globe artichoke”, Çukurova University, Faculty of Agriculture Foundation (Project # BAP BB-96/11), (researcher)1996.

Book Chapter

Gulen H., Turhan E. and Eris A. 2016. Molecular and physiological responses of strawberry plants to abiotic stress. Strawberry: Growth, Development and Diseases (A.M. Husaini and D. Neri, Eds.), CAB International, ISBN-13: 978-1780646633, p. 288-311.

Editorship

Eris A., Lang G.A., **Gulen H.**, Ipek A. 2008. Proceedings of the Fifth International Cherry Symposium. Acta Horticulturae 795 Vol I-II., ISBN: 978 90 6605 551 3, ISHS, Belgium.

Selected Publications

1. Yucel, N., **Gulen, H.**, Cakir Hatir, P., 2022. Molecularly imprinted polymer nanoparticles for the recognition of ellagic acid. J. Appl. Polym. Sci. 2022;e52952.
2. Kesici, M., Ipek, A., Ersoy, F., Ergin, S., **Gulen H.** 2020. Genotype-Dependent Gene Expression in Strawberry (*Fragaria x ananassa*) Plants Under High Temperature Stress. Biochem Genet, 58(6): 848-866.
3. **Gulen, H.**, Kesici, M., Cetinkaya, C. and Ergin, S. 2018. Proline and antioxidant enzyme activities in some strawberry cultivars under drought and recovery. Not. Bot. Horti. Agrobi., 46(2): 570-578.
4. Ergin,S., **Gülen,H.**, Kesici,M., Turhan,E., İpek, A., Köksal, N. 2016. Effects of high temperature stress on enzymatic and nonenzymatic antioxidants and proteins in strawberry plants. Turk. J. Agric. For. 40: 908-917.
5. İpek, A., Yılmaz, K., Sıkıcı, P., Aktepe Tangu, N., Öz, A. T., Bayraktar, M., İpek, M., **Gülen, H.** 2016. SNP discovery by GBS in olive and the construction of a high-density genetic linkage map. Biochem. Genet. 54: 313-325.
6. Sahan, Y., Cansev, A., **Gulen, H.** 2013. Effect of processing techniques on antioxidative enzyme activities, antioxidant capacity, phenolic compounds, and fatty acids of table olives. Food Sci. Biotech., 22: 613-620.
7. Kesici, M., **Gulen H.**, Ergin, S., Turhan, E., Ipek, A., Koksals, N. 2013. Heat-stress tolerance of some strawberry (*Fragaria x ananassa*) cultivars. Not. Bot. Horti. Agrobi., 41(1): 238-243.
8. Ipek, A., Barut, E., **Gulen, H.**, Ipek, M. 2012. Assessment of inter-and intra-cultivar variations in olive using SSR markers. Sci. Agric. 69(5): 327-335.
9. Cansev, A., **Gulen, H.**, Celik, G., Eris, A. 2012. Alterations in total phenolic content and antioxidant capacity in response to low temperatures in olive (*Olea europaea* L. “Gemlik”). Plant Archives, 12(1): 489-494.
10. Ergin, S., Kesici, M., **Gülen, H.** 2012. Changes in H₂O₂ and peroxidase activities in strawberry plants under heat stress. J. Agric.Fac.HR.U. 16 (1): 25-35.
- 10.Köksal, N., **Gulen, H.**, Eris, A. 2011. Dormancy in tulip (*Tulipa gesneriana* L.) bulbs and freesia (*Freesia refracta* Klatt.) corms: Changes in soluble proteins and APX activity. J. Food Agr. Environ. 9(2): 535-539.
- 11.Cansev, A., **Gulen, H.**, Eris, A. 2011. The activities of catalase and ascorbate peroxidase in olive (*Olea europaea* L. “Gemlik”) under low temperature stress. Hort. Environ. Biotech. 52(2): 113-120.
- 12.Zaimoglu, Z., Köksal, N., Basci, N., Kesici, M., **Gulen, H.**, Budak, F. 2011. Antioxidative enzyme activities in *Brassica juncea* L. and *Brassica oleracea* L. plants under chromium stress. J. Food Agr. Environ. 9(1): 676-679.
- 13.Ipek, A., **Gulen, H.**, Akcay, M.E., Ipek, M., Ergin, S., Eris, A. 2011. Determination of self-incompatibility groups of sweet cherry genotypes from Turkey. Gen. Mol. Res. 10(1): 253-260.
- 14.Oz, A. T., **Gulen, H.**, Eris, A. 2010. The effect of harvest maturity stage on ACC synthase activity and total proteins profile in kiwifruits during normal and controlled atmosphere storages. Int. J. Agr. Biol. 12: 828-832.

15. **Gulen, H.**, Ipek, A., Ergin, S., Akcay, M.E., Eris, A. 2010. Assessment of genetic relationship among 29 introduced and 49 local sweet cherry accessions in Turkey using AFLP and SSR markers. *J. Hort. Sci. Biotech.* 85(5): 427-431.
16. Ipek, A., Barut, E., **Gulen, H.**, Ipek, M. 2010. Genetic diversity among some currants (*Ribes* spp.) cultivars as assessed by AFLP markers. *Pak. J. Bot.* 42: 1009-1012.
17. Ipek, A., Barut, E., **Gulen, H.**, Oz A.T., Tangu N.A., Ipek, M. 2009. SSR analysis demonstrates that olive production in the southern Marmara region in Turkey uses a single genotype. *Gen. Mol. Res.* 8(4): 1264-1272.
18. Ipek, A., Barut, E., **Gulen, H.**, Ipek, M. 2009. Genetic diversity among some blackberry cultivars and their relationship with Boysenberry assessed by AFLP markers. *Afric. J. Biotech.* 8: 4830-4834.
19. Barut, E., Ipek, A., **Gulen, H.** 2009. Distribution of olive (*Olea europaea* L.) genotypes in the southern Marmara region of Turkey. *Pak. J. Bot.* 41: 1077-1080.
20. **Gulen, H.**, Cansev, A., Eris, A. 2009. Cold-hardiness of olive (*Olea europaea* L.) cultivars in cold-acclimated and non-acclimated stages: Seasonal alteration of soluble sugars and phospholipids. *J. Agr. Sci.* 147: 459-467.
21. Cansev, A., **Gulen, H.**, Eris, A. 2009. Cold-hardiness of olive (*Olea europaea* L.) cultivars in cold-acclimated and non-acclimated stages: Seasonal alteration of antioxidative enzymes and dehydrin-like proteins. *J. Agr. Sci.* 147: 51-61.
22. **Gülen, H.**, Çetinkaya, C., Kadioğlu, M., Kesici, M., Cansev, A., Eriş, A. 2008. Peroxidase activity and lipid peroxidation in strawberry (*Fragaria X ananassa*) plants under low temperature. *J. Biol. Environ. Sci.* 2(6): 95-100.
23. Turhan, E., **Gulen, H.**, Eris, A. 2008. The activity of antioxidative enzymes in three strawberry cultivars related to salt stress tolerance. *Acta Physiol. Plant.*, 30:201-208.
24. Eris, A., **Gulen, H.**, Barut, E., Cansev, A. 2007. Annual patterns of total soluble sugars and proteins related to cold-hardiness in olive (*Olea europaea* L.'Gemlik'). *J. Hort. Sci. Biotech.* 82: 597-604.
25. **Gulen, H.**, Turhan, E., Eris, A. 2006. Changes in peroxidase activity and soluble proteins in strawberry varieties under salt-stress. *Acta Physiol. Plant.*, 28(2): 109- 116.
26. **Gülen, H.**, Çelik, M., Polat, M., Eriş, A. 2005. Cambial isoperoxidases related to graft compatibility in pear-quince graft combinations. *T. J. Agr. Forest.*, 29 (1): 83- 89.
27. **Gulen, H.**, Küden, A., Postman, J., Arora, R. 2005. Total protein and SDS- PAGE in pear scions grafted on quince A and pear seedling rootstocks. *T. J. Agr. Forest.*, 29 (1): 91-96.
28. **Gulen, H.**, Erbil, Y., Eris, A. 2004. Improved rooting of Gisela-5 softwood cuttings following banding and application of IBA. *HortScience*, 39(6): 1403-1405.
29. **Gulen, H.**, Eris, A. 2004. Effect of heat stress on peroxidase activity and protein content in strawberry plants. *Plant Sci.*, 166(3): 739-744.
30. **Gulen, H.**, Eris, A. 2003. Some physiological changes in strawberry (*Fragaria x ananassa* cv. Camarosa) plants under heat stress. *J. Hort. Sci. Biotech.*, 78 (6): 894-898.
31. **Gulen, H.**, Arora, R., Kuden, A., Krebs, S.L., Postman, J. 2002. Peroxidase isozyme profiles in compatible and incompatible pear/quince graft combinations. *J. Amer. Soc. Hort. Sci.*, 127(2):152-157.