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EDUCATION & PROFESSIONAL EXPERIENCE

Professor, Department of Molecular Biology and Genetics, Izmir Institute of Technology, Turkey, 2010-present
Adjunct Professor, Department of Soil and Crop Sciences, Texas A&M University, USA, 2015-present
Associate Professor, Department of Molecular Biology and Genetics, Izmir Institute of Technology, Turkey, 2004-2010
Assistant Professor, Department of Molecular Biology and Genetics, Izmir Institute of Technology, Turkey, 2001-2004
Postdoctoral Researcher, Department of Plant Breeding, Cornell University, USA, 1997-2001
Postdoctoral Researcher, Plant Science Center, Cornell University, USA, 1995-1997
Ph.D., Department of Plant Breeding, Cornell University, USA, 1995
B.A., Department of Biological Sciences, Mount Holyoke College, USA, 1990

RESEARCH INTERESTS

- Genetic control of agronomic and nutritional traits in plants
- Plant genetic diversity
- Plant tissue culture and genetic engineering and their applications in agriculture

PUBLICATIONS

81. Frary A, Öztürk SC, Balık HI, Balık SK, Kızılcı G, Doğanlar S, FRARY A. 2019. Association mapping of agro-morphological traits in European hazelnut (*Corylus avellana*). *Euphytica* 215:21. doi.org/10.1007/s10681-019-2352-2.
80. Frary A, Öztürk SC, Balık HI, Balık SK, Kızılcı G, Doğanlar S, FRARY A. 2019. Analysis of European hazelnut (*Corylus avellana*) reveals loci for cultivar improvements and the effects of domestication and selection on nut and kernel traits. *Mol Genet Genomics* 294:519-527. doi.org/10.1007/s00438-018-1527-1
79. Öztürk SC, Göktay M, Allmer J, Doğanlar S, FRARY A 2018. Development of simple sequence repeat markers in hazelnut (*Corylus avellana* L.) by next generation sequencing and

discrimination of Turkish hazelnut cultivars. *Pl Mol Biol Rep* 36:800-811. doi.org/10.1007/s11105-018-1120-0

78. Baytar AA, Peynircioğlu C, Sezener V, Başal H, FRARY A, Frary A, Doğanlar S 2018. Identification of stable QTLs for fiber quality and plant structure in Upland cotton (*G. hirsutum* L.) under drought stress. *Indust Crops Prod* 124:776-756. doi: 10.1016/j.indcrop.2018.08.054

77. Taşcıoğlu T, Sadıkoğlu N, Doğanlar S, FRARY A 2018. Molecular genetic diversity in the *Origanum* genus: EST-SSR and SRAP marker analyses of the 22 species in eight sections that naturally occur in Turkey. *Indust Crops Products* 123: 746-761. doi.: 10.1016/j.indcrop.2018.07.027

76. Gürbüz N, Uluişik S, FRARY A, Frary A, Doğanlar S 2018. Health benefits and bioactive compounds of eggplant. *Food Chemistry* 268:602-610. doi.: 10.1016/j.foodchem.2018.06.093

75. Baytar AA, Peynircioğlu C, Sezener V, Basal H, FRARY A, Frary A, Doğanlar S. 2018. Genome wide association mapping of yield components and drought tolerance related traits in cotton. *Mol Breed.* 38:74. doi.: 10.1007/s11032-018-0831-0

74. Öztürk SE, Göktay M, Has C, Babaoğlu M, Allmer J, Doğanlar S, FRARY A. 2018. Transcriptomic analysis of boron hyperaccumulation mechanisms in *Puccinellia distans*. *Chemosphere* 199:390-401. doi: 10.1016/j.chemosphere.2018.02.070

73. Abuzayed M, FRARY A, Doğanlar S. 2018. Genetic diversity of some Palestinian and Turkish olive (*Olea europaea* L.) germplasm determined with SSR markers. *IUG Journal of Natural Studies* 26:10-17.

72. Kok AB, Doganlar S, FRARY A. 2018. Molecular genetic diversity of the selenium hyperaccumulator *Stanleya pinnata*. *Polymorphism*, 1:1-9.

71. Öztürk SC, Balik HI, Balik SK, Kizilci G, Duyar O, Doğanlar S, FRARY A. 2017. Molecular genetic diversity of the Turkish national hazelnut collection and selection of a core set. *Tree Genet Genomes* 13:113. doi: 10.1007/s11295-017-1195-z

70. Göl Ş, Göktay M, Allmer J, Doğanlar S, FRARY A. 2017. Newly developed SSR markers reveal genetic diversity and geographical clustering in spinach (*Spinacia oleracea*). *Molecular Genet Genomics* 292:847-855. doi: 10.1007/s00438-017-1314-4

69. Selale H, Dağlı F, Mutlu N, Doğanlar S, FRARY A. 2017. Cry1Ac-mediated resistance to tomato leaf miner (*Tuta absoluta*) in tomato. *Plant Cell Tissue Org Cult* 131:65-73. doi: 10.1007/s11240-017-1262-z

68. Gol S, Doganlar S, FRARY A. 2017. Relationship between geographical origin, seed size and genetic diversity in faba bean (*Vicia faba* L.) as revealed by SSR markers. *Mol Genet Genomics* 292:991-999. doi: 10.1007/s00438-017-1326-0

67. Abuzayed M, Göktay M, Allmer J, Doğanlar S, FRARY A 2017. Development of genomic simple sequence repeat markers in faba bean by next generation sequencing. *Plant Mol Biol Rep* 35: 61-71. doi: 10.1007/s11105-016-1003-1.
66. Uncu AT, Uncu AO, FRARY A, Doganlar S. 2017. Barcode DNA length polymorphisms vs fatty acid profiling for adulteration detection in olive oil. *Food Chem* 221:1026-1033. doi: 10.1016/j.foodchem.2016.11.059
65. Ozturk SC, Ozturk SE, Celik I, Stampar F, Veberic R, Doganlar S, Solar A, FRARY A. 2017. Molecular genetic diversity and association mapping of nut and kernel traits in Slovenian hazelnut (*Corylus avellana*) germplasm. *Tree Genet Genomes* 13:16. doi: 10.1007/s11295-016-1098-4.
64. Celik I, Gurbuz N, Uncu AT, FRARY A, Doganlar S. 2017. Genome-wide SNP discovery and QTL mapping for fruit quality traits in inbred backcross lines (IBLs) of *Solanum pimpinellifolium* using genotyping by sequencing. *BMC Genomics* 18:1. doi: 10.1186/s12864-016-3406-7
63. Baytar AA, Erdogan O, FRARY A, Frary A, Doganlar S. 2017. Molecular diversity and identification of alleles for Verticillium wilt resistance in elite cotton (*Gossypium hirsutum* L.) germplasm. *Euphytica* 213:31. doi: 10.1007/s10681-016-1787-y
62. Abuzayed M, El-Dabba N, FRARY A, Doganlar S. 2017. GDdom: An online tool for calculation of dominant marker gene diversity. *Biochem Genet* 55:155-157. doi: 10.1007/s10528-016-9779-0
61. Frary A, Doganlar S, FRARY A. 2016. Synteny among Solanaceae genomes. In: M. Causse, J Giovannoni, (eds.), *The Tomato Genome, Compendium of Plant Genomes*, Berlin, Springer, pp. 217-243. doi.org/10.1007/978-3-662-53389-5_12.
60. Uncu AO, FRARY A, Karlovsky P, Doganlar S. 2016. High-throughput single nucleotide polymorphism (SNP) identification and mapping in the sesame (*Sesamum indicum* L.) genome with genotyping by sequencing (GBS) analysis. *Mol Breed* 36:173. doi: 10.1007/s11032-016-0604-6.
59. Celik I, Sogut MA, Ozkaynak E, Doganlar S, FRARY A. 2016. Physical mapping of NBS-coding resistance genes to the Me-gene cluster on chromosome P9 reveals markers tightly linked to the N gene for root-knot nematode resistance in pepper. *Mol Breed* 36:137. doi: 10.1007/s11032-016-0560-1
58. Celik I, Bodur S, FRARY A, Doganlar S. 2016. Genome-wide SNP discovery and genetic linkage map construction in sunflower (*Helianthus annuus* L.) using a genotyping by sequencing (GBS) approach. *Mol Breed* 36:133. doi: 10.1007/s11032-016-0558-8
57. Gol S, Doganlar S, FRARY A. 2016. Genetic diversity and population structure of faba bean (*Vicia faba*) from Turkey. *HortScience* 51:980-983. doi: 10.21273/HORTSCI11022-16

56. Celik I, Camci H, Kose A, Celikoglu Kosar F, Doganlar S, FRARY A. 2016. Molecular genetic diversity and association mapping of morphine content and agronomic traits in Turkish opium poppy (*Papaver somniferum*) germplasm. *Mol Breed* 36:46. doi: 10.1007/s11032-016-0469-8
55. Gurbuz N, Karabey F, TK Ozturk, Kilinc A, FRARY A, Doganlar S. 2015. Glycoalkaloid isolation from *Solanum linnaeanum* berries. *Fruits* 70:371-375. doi: 10.1051/fruits/2015037
54. Bar C, Doganlar S, FRARY A. 2015. Genetic relationships among Eurasian *Puccinellia distans* genotypes. *Biochem Systematics Ecol* 62:20-24. doi: 10.1016/j.bse.2015.07.031
53. Uncu AT, Uncu AD, FRARY A, Doganlar S. 2015. Authentication of botanical origin in herbal teas by plastid noncoding DNA length polymorphisms. *J Agric Food Chem* 63:5920-5929. doi: 10.1021/acs.jafc.5b01255
52. Uncu AT, Celik I, Devran Z, Ozkaynak E, FRARY A, Frary A, Doganlar S. 2015. Development of a SNP-based CAPS assay for the Me1 gene conferring resistance to root knot nematodes in pepper. *Euphytica* 206:393-399. doi: 10.1007/s10681-015-1489-x
51. Uncu AD, Uncu AT, Celik I, Doganlar S, FRARY A. 2015. A primer to molecular phylogenetic analyses in plants. *Crit Rev Plant Sci* 34:454-468. doi: 10.1080/07352689.2015.1047712
50. Uncu AD, Gultekin V, Allmer J, FRARY A, Doganlar S. 2015. Genomic simple sequence markers reveal patterns of genetic relatedness and diversity in sesame. *Plant Genome* 8:1-12. doi:10.3835/plantgenome2014.11.0087.
49. Uncu A, FRARY A, Doganlar S. 2015. Cultivar origin and admixture detection in Turkish olive oils by SNP-based CAPS assays. *J Agric Food Chem* 63:2284-2295. doi: 10.1021/acs.jafc.5b00090
48. FRARY A, Tekin P, Celik I, Furat S, Uzun B, Doganlar S. 2015. Morphological and molecular diversity in Turkish sesame germplasm and selection of a core set for inclusion in the national collection. *Crop Sci* 55:702-711. doi: 10.2135/cropsci2014.01.0048
47. Top O, Bar C, Okmen B, Ozer DY, Ruscuklu D, Tamer N, FRARY A, Doganlar S. 2014. Exploration of three *Solanum* species for improvement of antioxidant traits in tomato. *HortSci* 49:1003-1009. doi.org/10.21273/HORTSCI.49.8.1003
46. Doganlar S, Frary A, Daunay MC, Huvenaars K, Mank R, FRARY A. 2014. High resolution map of eggplant (*Solanum melongena*) reveals extensive chromosome rearrangement in domesticated members of the Solanaceae. *Euphytica* 198:231-241. doi.org/10.1007/s10681-014-1096-2
45. Frary A, FRARY A, Daunay MC, Huvenaars K, Mank R, Doganlar S. 2014. QTL hotspots in eggplant (*Solanum melongena*) detected with a high resolution map and CIM analysis. *Euphytica* 197:211-228. doi.org/10.1007/s10681-013-1060-6

44. Celik I, Gultekin V, Allmer, J, Doganlar S, FRARY A. 2014. Development of genomic simple sequence repeat markers in opium poppy by next generation sequencing. *Mol Breed* 34:323-334. doi.org/10.1007/s11032-014-0036-0
43. Uncu AO, Doganlar S, FRARY A. 2013. Biotechnology for enhanced nutritional quality in plants. *Crit Rev Plant Sci* 32:321-343. doi.org/10.1080/07352689.2013.781453.
42. Selale H, Celik I, Gultekin V, Allmer J, Doganlar S, FRARY A. 2013. Development of EST-SSR markers for diversity and breeding studies in opium poppy. *Plant Breed* 132:344-351. doi.org/10.1111/pbr.12059
41. FRARY A, Sigva HO, Tan A, Taskin T, Inal A, Mutlu S, Haytaoglu M, Doganlar S. 2013. Molecular genetic diversity in the Turkish national melon collection and selection of a preliminary core set. *J Amer Soc Hort Sci* 138:50-56. doi.org/10.21273/JASHS.138.1.50
40. Lebeau A, Gouy M, Daunay MC, Wicker E, Chiroleu F, Prior P, FRARY A, Dintinger J. 2013. Genetic mapping of a major dominant gene for resistance to *Ralstonia solanacearum* in eggplant. *Theor Appl Genet* 126:143-158. doi.org/10.1007/s00122-012-1969-5
39. Selale H, Sigva HO, Celik I, Doganlar S, FRARY A. 2012. Water-soluble antioxidant potential of melon lines grown in Turkey. *Inter J Food Prop*, 15:145-156. doi.org/10.1080/10942911003754700
38. Frary A, FRARY A. 2012. Physiology of metabolites. In: *Peppers: Botany, Production and Uses*, chapter 13, ed. V. Russo, CABI Publishers, pp. 176-188.
37. Isik N, Doganlar S, FRARY A. 2011. Genetic diversity of Turkish olive varieties assessed by simple sequence repeat and sequence-related polymorphism markers. *Crop Sci* 51:1646-1654. doi:10.2135/cropsci2010.11.0625
36. FRARY A, Keles D, Pinar S, Gol D, Doganlar S. 2011. Salt tolerance in *Lycopersicon pennellii* introgression lines: QTL related to physiological responses. *Biologia Plantarum*, 55:461-468. doi.org/10.1007/s10535-011-0111-x
35. Uluturk ZI, FRARY A, Doganlar S. 2011. Determination of genetic diversity in watermelon germplasm. *Aust J Crop Sci* 5:1832-1836.
34. Tumbilen Y, FRARY A, Daunay MC, Doganlar S. 2011. Application of EST-SSRs to examine genetic diversity in eggplant and its close relatives. *Turk J Biol*, 35:125-136. doi:10.3906/biy-0906-57
33. Tumbilen Y, FRARY A, Doganlar S. 2011. Genetic diversity in Turkish eggplant (*Solanum melongena*) varieties as determined by morphological and molecular analyses. *Inter Res J Biotech*, 2:16-25.
32. Okmen B, Sigva HO, Gurbuz N, Ulger M, FRARY A, Doganlar S. 2011. Quantitative trait loci (QTL) analysis for antioxidant and agronomically important traits in tomato (*Lycopersicon esculentum*). *Turk J Agric Forest*, 35:501-514. doi:10.3906/tar-1008-1207
31. Lebeau A, Daunay MC, FRARY A, Palloix A, Wang JF, Dintinger J, Chiroleu F, Wicker E, Prior P. 2011. Bacterial wilt resistance in tomato, pepper, and eggplant: genetic resources respond to diverse strains in the *Ralstonia solanacearum* species complex. *Phytopathology* 101:154-165. doi.org/10.1094/PHYTO-02-10-0048

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29. Doganlar O, Doganlar M, FRARY A. 2010. Preliminary phylogeny of the thrips parasitoids of Turkey based on some morphological scales and 28SD2 rDNA with description of a new species. Turk J Zool 34:279-289. doi:10.3906/zoo-0906-29
28. Doganlar O, Doganlar, M, FRARY A. 2010. The current status of thrips parasitoids Ceranisus (Hymenoptera: Eulophidae) species in Turkey based on morphology and 28SD2 rDNA. Turk J Entomology 34:89-104.
27. Okmen B, Sigva HO, Mutlu S, Doganlar S, Yemenicioğlu A, FRARY A. 2009. Total antioxidant activity and total phenolic contents in different Turkish eggplant (*Solanum melongena* L.) cultivars. Inter J of Food Prop 12:616-624. doi.org/10.1080/10942910801992942
26. Celebi-Toprak F, Barutcu E, FRARY A, Doganlar S. 2009. Identification of Potato Y Potyvirus (PVY) resistance in wild and cultivated tomato. Turk J Agric For 33:11-17. doi:10.3906/tar-0804-17
25. Eanes RC, Tek N, Kirsoy O, FRARY A, Doganlar S, Almeida AE. 2008. Development of practical HPLC methods for the separation and determination of eggplant steroidal glycoalkaloids and their aglycones. J Liquid Chroma & Related Technol 31:984-1000. doi.org/10.1080/10826070801924741
24. FRARY A, Keceli MA, Okmen B, Sigva HO, Yemenicioğlu A, Doganlar S. 2008. Water soluble antioxidant potential of Turkish pepper cultivars. Hortscience 43:631-636. doi.org/10.21273/HORTSCI.43.3.631
23. FRARY A, Daunay MC, Doganlar S. 2007. Eggplant. In: Genome Mapping and Molecular Breeding in Plants: Vegetables, ed. C. Kole, Springer.
22. FRARY A, Xu Y, Liu J, Mitchell S, Tedeschi E, Tanksley SD. 2005. Development of a set of PCR-based anchor markers encompassing the tomato genome and evaluation of their usefulness for genetics and breeding experiments. Theor Appl Genet 111:291-312. doi.org/10.1007/s00122-005-2023-7
21. FRARY A, Van Eck J. 2005. Organogenesis from transformed tomato explants. In: L. Pena (ed.), Transgenic Plants: Methods and Protocols (Methods in Molecular Biology Series), pp. 141-150, Humana Press.
20. FRARY A, Fulton TM, Zamir D, Tanksley SD. 2004. Advanced backcross QTL analysis of a *Lycopersicon esculentum* x *L. pennellii* cross and identification of possible orthologs in the Solanaceae. Theor Appl Genet 108:485-96. doi.org/10.1007/s001220051384
19. Yates HE, FRARY A, Doganlar S, Frampton A, Eannetta N, Uhlig J, Tanksley SD. 2004. Comparative fine mapping of fruit quality QTLs on chromosome 4 introgressions derived from two wild tomato species. Euphytica 135:283-296. doi.org/10.1023/B:EUPH.0000013314.04488.87

18. FRARY A, Doganlar S, Daunay CM, Tanksley SD. 2003. QTL analysis of morphological traits in eggplant and its implications for conservation of gene function during evolution of Solanaceous species. *Theor Appl Genet* 107:359-370. doi.org/10.1007/s00122-003-1257-5
17. FRARY A, Doganlar S, Frampton A, Fulton T, Uhlig J, Yates H, Tanksley SD. 2003. Fine mapping of quantitative trait loci for improved fruit characteristics from *Lycopersicon chmielewskii* chromosome 1. *Genome* 46:235-243. doi.org/10.1139/g02-122
16. FRARY A, Doganlar S. 2003. Comparative genetics of crop plant domestication and evolution. *Turk J Agric For* 27:59-69.
15. Doganlar S, FRARY A, Daunay MC, Lester RN, Tanksley, S.D. 2002. A comparative genetic linkage map of eggplant (*Solanum melongena*) and its implications for genome evolution in the Solanaceae. *Genetics* 161:1697-1711.
14. FRARY A, Doganlar S, Daunay MC, Lester RN, Tanksley SD. 2002. Conservation of gene function in the Solanaceae as revealed by comparative mapping of domestication traits in eggplant. *Genetics*. 161:1713-1726.
13. Doganlar S, FRARY A, Ku HK, Tanksley SD. 2002. Mapping quantitative trait loci in inbred backcross lines of *Lycopersicon pimpinellifolium* (LA1589). *Genome* 45:1189-1202. doi.org/10.1139/g02-091
12. Daunay MC, Lester RN, Gebhardt C, Hennart JW, Jahn M, FRARY A, Doganlar S. 2001. Genetic resources of eggplant (*Solanum melongena*) and allied species: a new challenge for molecular geneticists and eggplant breeders. In: RG van den Berg, GW Barendse, C Mariani (eds.), *Solanaceae V, Advances in Taxonomy and Utilization*, pp. 251-274. Nijmegen, The Netherlands, Nijmegen University Press.
11. FRARY A, Hamilton CM. 2001. Efficiency and stability of high molecular weight DNA transformation: an analysis in tomato. *Transgenic Research* 10:121-132. doi.org/10.1023/A:1008924726270
10. FRARY A, Tanksley S. 2001. The molecular map of tomato. In: RL Phillips and IK Vasil (eds.), *DNA-Based Markers in Plants*, Boston, Kluwer Academic Publishers.
9. FRARY A, Nesbitt TC, Frary A, Grandillo S, Van derKnaap E, Cong B, Liu J, Meller J, Elber R, Alpert K, Tanksley S. 2000. fw2.2: A quantitative trait locus key to the evolution of tomato fruit size. *Science* 289:85-88. doi: 10.1126/science.289.5476.85
8. Brommonschenkel S, FRARY A, Frary A, Tanksley S. 2000. The broad spectrum tospovirus resistance gene Sw-5 of tomato is a homolog of the root knot nematode resistance gene Mi. *Mol Plant Microbe Interact* 13:1130-1138. doi.org/10.1094/MPMI.2000.13.10.1130
7. Doganlar S, FRARY A, Tanksley SD. 2000. The genetic basis of seed weight variation: tomato as a model system. *Theor Appl Genet* 100:1267-1273. doi.org/10.1007/s001220051433

6. Hamilton CM, FRARY A, Xu Y, Tanksley SD, Zhang H. 1999. Construction of high molecular weight genomic DNA libraries in a binary BAC (BIBAC) vector. *Plant Journal* 18:223-229. doi.org/10.1046/j.1365-313X.1999.00433.x
5. Doganlar S, FRARY A, Tanksley SD. 1997. Production of interspecific hybrids, BC1, BC2 and BC3 populations between *Lycopersicon esculentum* and two accessions of *L. peruvianum* carrying new root-knot nematode resistance genes. *Euphytica* 95:203-207. doi.org/10.1023/A:1002949700854
4. Hamilton CM, FRARY A, Lewis C, Tanksley SD. 1996. Stable transfer of intact high molecular weight DNA into plant chromosomes. *Proc Nat Acad Sci* 93:9975-9979. doi.org/10.1073/pnas.93.18.9975
3. FRARY A, Earle ED. 1996. An examination of factors affecting the efficiency of *Agrobacterium*-mediated transformation of tomato. *Plant Cell Reports* 16:235-240. doi.org/10.1007/BF01890875
2. Martin GB, FRARY A, Wu T, Brommonschenkel SH, Chunwongse J, Earle ED, Tanksley S. 1994. A member of the tomato Pto gene family confers sensitivity to fenthion resulting in rapid cell death. *Plant Cell* 6:1543-1552. doi.org/10.1105/tpc.6.11.1543
1. Martin GB, Brommonschenkel SH, Chunwongse J, FRARY A, Ganai MW, Spivey R, Wu T, Earle ED, Tanksley SD 1993. Map-based cloning of a protein kinase gene conferring disease resistance in tomato. *Science* 262:1432-1436. doi: 10.1126/science.7902614

PROJECTS

Use of molecular markers for selection of faba bean (*Vicia faba* L.) lines for breeding and cultivar development. SAN-TEZ. 2014-2016. Principal Investigator.

Molecular marker characterization of tomato inbred lines and metabolic profiling for taste and aroma. SAN-TEZ. 2014-2016. Principal Investigator.

Elucidation of boron hyperaccumulation and tolerance mechanisms in *Puccinellia distans* (Jacq.) Parl. using proteomics approach. TUBITAK. 2014-2017. Principal Investigator.

Genetic diversity and association analysis in Turkish and Slovenian hazelnuts (*Corylus avellana* L.). TUBITAK. 2013-2016. Principal Investigator.

Molecular mapping and breeding of *N* gene conferring resistance to root-knot nematodes in pepper. TUBITAK. 2011-2014. Principal Investigator.

Transfer of cryAb and cry1Ac genes for insect resistance in to tomato. IYTE-BAP. 2014-2016. Principal Investigator.

Characterization of world spinach germplasm collections using molecular markers. IYTE-BAP. 2012-2014. Principal Investigator.

Molecular genetic analysis of opium poppy (*Papaver somniferum*). TUBITAK. 2010-2013. Principal Investigator.

Genomic and metabolic characterization of sesame (*Sesamum indicum*). TUBITAK. 2008-2011. Assistant Researcher.

Physiological and genomic control of drought tolerance in chickpea (*Cicer arietinum*). TAGEM 2010-2013. Principal Investigator.

Comparative genome analysis in Solanaceae: Eggplant (*Solanum melongena* L.) as a model system. TUBITAK. 2004-2010. Assistant Researcher.

Physiological and genetic characterization for salt tolerance in tomato (*Lycopersicon esculentum*). TUBITAK. 2003-2006. Assistant Researcher.

Identification, molecular mapping and introgression of genes conferring resistance to tobacco mosaic virus (TMV), potato virus Y (PVY) and cucumber mosaic virus (CMV) in pepper (*Capsicum annuum*). TUBITAK. 2002-2005. Assistant Researcher.

Identification and molecular mapping of genes conferring resistance to PVX from *Solanum tuberosum* population. TUBITAK. 2004-2007. Assistant Researcher.

Determination of genetic diversity in the national melon (*Cucumis melo*) collection. TUBITAK. 2006-2009. Principal Investigator.

AB-QTL (Advanced Backcross Quantitative Trait Loci) analysis in processing tomatoes: identification of agronomically, biologically, nutritionally and technologically important genes from wild tomato species and their simultaneous introgression into cultivated tomatoes using DNA markers. DPT. 2002-2007. Assistant Researcher.

Determination of molecular and genetic control of the biochemical and physiological responses to biotic and abiotic stresses in tomato. DPT. 2003-2008. Principal Investigator.

Determination of genetic variation in and molecular mapping of antioxidant activity and dietary fiber content in cultivated and wild species of tomato, pepper and eggplant. TUBITAK. 2003-2006. Principal Investigator.

Development of fresh market inbred lines using AB-QTL approach. SANTEZ. 2007-2010. Assistant Researcher.

Breeding of fresh market tomatoes for heat stable root knot nematode (*Meloidogyne* spp) resistance. TUBITAK-TEYDEP. 2006-2009. Project Advisor

Genetic and metabolic characterization of olive (*Olea europaea*) and cotton (*Gossypium hirsutum*). TUBITAK-TEYDEP. 2006-2009. Project Advisor.

COURSES TAUGHT

Undergraduate: MBG203 Genetics
 MBG213 Genetics Laboratory
 MBG325 Molecular Evolution

MBG326 Plant Biology
MBG402 Seminar in Molecular Biology & Genetics
MBG405 Current Technique in Molecular Biology (team-taught)

Graduate: MBG508 Molecular Phylogenetics
MBG514 Plant Cell Culture
MBG537 Genome Organization & Structure
MBG547 Plant Biotechnology
BTEC590 Technical Report Writing

GRADUATE STUDENT ADVISEES

Deniz Gol, Izmir Institute of Technology, MS, 2006
Oykum Kirsoy, Izmir Institute of Technology, MS, 2006
Hasan Ozgur Sigva, Izmir Institute of Technology, MS, 2008
Duygu Yuce, Izmir Institute of Technology, MS, 2009
Zehra Ipek Uluturk, Izmir Institute of Technology, MS, 2009
Hatice Selale, Izmir Institute of Technology, MS, 2010; PhD, in progress
Nilufer Tamer, Izmir Institute of Technology, MS, 2010
Neslihan Isik, Izmir Institute of Technology, MS, 2010
Leyla Ozturk, Izmir Institute of Technology, MS, 2012
Hilal Keskin, Izmir Institute of Technology, MS, 2012
Mehmet Enes Arslan, Izmir Institute of Technology, MS, 2013
Tesfa Altaye, Izmir Institute of Technology, MS, 2015
Surhan Gol, Izmir Institute of Technology, MS, 2015
Cantug Bar, Izmir Institute of Technology, MS, 2015
Mehmet Goktay, Izmir Institute of Technology, MS, 2015
Ayse Dulger Uncu, Izmir Institute of Technology, PhD, 2015
Saniye Elvan Ozturk, Izmir Institute of Technology, PhD, 2017
Tulin Tascioglu, Izmir Institute of Technology, PhD, in progress
Gulsum Cakir, Izmir Institute of Technology, MS, 2018
Aysu Basak Kok, Izmir Institute of Technology, MS, 2018
Engin Tatlidil, Izmir Institute of Technology, MS, 2019

SERVICE

Editorial Board: Turkish Journal of Agriculture and Forestry, International Journal of Secondary Metabolites

Advisory Board: Akdeniz University Journal of the Faculty of Agriculture, Halic University Journal of Cell and Molecular Biology, BATEM Derim

Ad Hoc Reviewer: Theoretical and Applied Genetics, Euphytica, Molecular Breeding, BMC Genomics, Frontiers in Plant Science, HortScience, Journal of Phytopathology, Plant Systematics and Evolution, Chemosphere, Plant Genetic Resources, Molecular Genetics and Genomes, Canadian Journal of Plant Science, Plant Cell, Tissue and Organ Culture, Biotechnology Advances, Journal of Botany, Scientia Horticulturae, Natural Product Research, Plant Cell Reports, Genetica, Turkish Journal of Botany, Turkish Journal of

Agriculture and Forestry, Turkish Journal of Biology, Journal of Applied Research on Medicinal and Aromatic Plants, Potato Research, BBA Proteins & Proteomics

Scientific Committee, Eucarpia 17th Capsicum and Eggplant Working Group Meeting, Avignon, France, 11-13 Sept 2019.

Scientific Committee, III. International Symposium on Biotechnology of Fruit Species, ISHS, Antalya, Turkey, 27 Apr-1 May 2016.

Scientific Committee, 3rd International Congress of the Molecular Biology Association of Turkey, Izmir, Turkey, 10-12 Sept 2014.

International Scientific Committee, International Plant Breeding Congress, Antalya, Turkey, 10-14 Nov 2013.

International Scientific Committee, Eucarpia XVth Capsicum and Eggplant Working Group Meeting, Turin, Italy, 2-4 Sept 2013.

International Scientific Committee. ISHS International Symposium on Biotechnology and Other Omics in Vegetable Science, Antalya, Turkey, 29 Apr-2 May 2012.

International Scientific Committee, Eucarpia XIVth Capsicum and Eggplant Working Group Meeting, Valencia, Spain, 30 Aug-1 Sept 2010.

Instructor, Turkish Plant Breeder's Union, Plant Breeding Course, 2011-2013.

AWARDS & HONORS

Outstanding Young Scientist Award, Turkish Academy of Science, 2003

Plant Science Center Fellowship, Cornell University, 1993-1994

Plant Science Center Scholar, Cornell University, 1990-1995

Clare Booth Luce Fellowship, Cornell University, 1990-1992

National Science Foundation Fellowship, 1990-1993

Sigma Xi Honor Society, Mount Holyoke College, 1990

Phi Beta Kappa Honor Society, Mount Holyoke College, 1989