



Huseyin Tombuloglu, PhD

POSITION: Full-time Researcher

Personal Data

Nationality | Turkish

Date of Birth | 09-12-1983

Department | Genetics Research

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Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2014	PhD – Biotechnology	Istanbul (Fatih) University	Turkiye
2010	MSc – Biology	Istanbul (Fatih) University	Turkiye
2007	BSc – Molecular Biology and Genetics BSc – Eukaryotic Microbiology	Istanbul University University of Groningen	Turkiye Netherland

Academic Honors or Distinctions

Poster Award	The second-best poster award in the Scientific Forum of the College of Science, IAU, Saudi Arabia. 12/05/24
ISEF 2023	Supervisor of high-school students under the Mawhiba Program. 2nd place in the ISEF, USA
Sandford University	2% Top Scientist List in the world, 2023
Sandford University	2% Top Scientist List in the world, 2022
Sandford University	2% Top Scientist List in the world, 2021
ISEF-2021	Supervisor of a high school student under the Mawhiba Program, who won second place in Saudi Arabia.
European Molecular Biology Laboratories-EMBL	Young Researcher Fellowship, European Molecular Biology Laboratories-EMBL, 04/05/2013
The Scientific and Technological Research Council of Turkey (TÜBİTAK)	Fellowship for Participating in Scientific Activities Abroad, 01/02/2012
The Scientific and Technological Research Council of Turkey (TÜBİTAK)	Fellowship for Participating in Scientific Activities Abroad, 01/07/2009



Academic Award	Contribution to Academic and Scientific Development, Fatih University (2014)
Academic Award	Contribution to Academic and Scientific Development Fatih University (2015)
Erasmus Fellowship	Erasmus Exchange Student Grand, the Netherlands

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work		Date
Assoc Professor	Imam Abdulrahman bin Faisal University	Saudi Arabia	2019
Assist Professor	Imam Abdulrahman bin Faisal University	Saudi Arabia	2017 - 2019
Assist Professor	Istanbul (Fatih) University	Turkiye	2014 - 2016
Lecturer	Istanbul (Fatih) University	Turkiye	2013 - 2014
Teaching Assistant	Istanbul (Fatih) University	Turkiye	2007 - 2013
Researcher	TUBITAK-MAM (Marmara Research Center), Turkey	Turkiye	2006 - 2008

Administrative Positions Held: (Beginning with the most recent)

Administrative Position	Office	Date
Chairperson of Genetics Department	Imam Abdulrahman bin Faisal University, Saudi Arabia	2021 - 2024
IRMC Council Member	Imam Abdulrahman bin Faisal University, Saudi Arabia	2021 - 2024

Scientific Achievements

Published Refereed Scientific Researches

- Alhamid G, **Tombuloglu H**, BenRashed HA, Almessiere MA, Rabaan AA (2024) Ultra-sensitive colorimetric detection of SARS-CoV-2 by novel gold nanoparticle (AuNP)-assisted loop-mediated isothermal amplification (LAMP) and freezing methods. *Microchimica Acta*. <https://doi.org/10.1007/s00604-024-06422-0> (IF: 5.7)
- Alsaeed, M., Alhamid, G., **Tombuloglu, H.**, Kabanja, J. H., Karagoz, A., Tombuloglu, G., ... & Unver, T. (2024). Ultrasensitive and fast detection of SARS-CoV-2 using RT-LAMP without pH-dependent dye. *Functional & Integrative Genomics*, 24(1), 1-12. (IF: 3.67)
- Rabaan, A. A., Al-Subaie, M. F., Al Kaabi, N. A., Alkathlan, M. S., **Tombuloglu, H.**, Al Abdullah, R., ... & Alissa, M. (2024). Deciphering Clinical Predictors in Japanese Encephalitis: A Systematic Review and Meta-Analysis of Effective Diagnosis and Prognosis Indicators. <https://www.researchsquare.com/article/rs-4603955/v1>
- Baba, B., Ceylani, T., Gurbanov, R., Acikgoz, E., Keskin, S., Allahverdi, H., Samgane, G., **Tombuloglu, H.**, Teker, H. T. (2024). Promoting longevity in aged liver through NLRP3 inflammasome inhibition using tauroursodeoxycholic acid (TUDCA) and SCD probiotics. *Archives of Gerontology and Geriatrics*, 105517. (IF: 3.5)



5. Tombuloglu, G., Slimani, Y., **Tombuloglu, H.**, Alsaeed, M., Turumtay, E. A., Sozeri, H., ... & Baykal, A. (2024). Impact of sonication time in nanoparticle synthesis on the nutrition and growth of wheat (*Triticum aestivum* L.) plant. *Plant Nano Biology*, 100075.
6. Tombuloglu, G., **Tombuloglu, H.**, Slimani, Y., Almessiere, M. A., Baykal, A., Bostancioglu, S. M., ... & Ercan, I. (2024). Effects of foliar iron oxide nanoparticles (Fe₃O₄) application on photosynthetic parameters, distribution of mineral elements, magnetic behaviour, and photosynthetic genes in tomato (*Solanum lycopersicum* var. *cerasiforme*) plants. *Plant Physiology and Biochemistry*, 210, 108616. **(IF: 3.4)**
7. Tombuloglu, G., Aldahnem, A., **Tombuloglu, H.**, Slimani, Y., Akhtar, S., Hakeem, K. R., ... & Manikandan, A. (2024). Uptake and bioaccumulation of iron oxide nanoparticles (Fe₃O₄) in barley (*Hordeum vulgare* L.): effect of particle-size. *Environmental Science and Pollution Research*, 1-16. **(IF: 5.8)**
8. Alhamid, G., **Tombuloglu, H.**, & Al-Suhaimi, E. (2023). Development of Loop-mediated Isothermal Amplification (LAMP) Assays Using Five Primers Reduces the False-positive Rate in COVID-19 Diagnosis. *Scientific Reports*. **(IF: 5.01)**
9. Karagoz, A., **Tombuloglu, H.**, Alsaeed, M., Tombuloglu, G., AlRubaish, A. A., Mahmoud, A., ... & Alsuhaime, E. (2023). Monkeypox (mpox) virus: classification, origin, transmission, genome organization, antiviral drugs, and molecular diagnosis. *Journal of Infection and Public Health*. 16 (4), 531-541. **(IF: 7.57)**
10. Rabaan, A. A., et al. (2023). A narrative review on SARS-CoV-2 infection in pediatrics: concerns, challenges, management, and mitigation strategies. *Journal of Population Therapeutics and Clinical Pharmacology*, 30(17), 187-205. **(IF: 1.94)**
11. Rabaan, A. A., Smajlović, S., **Tombuloglu, H.**, Ćordić, S., Hajdarević, A., Kudić, N., ... & Al-Suhaimi, E. (2023). SARS-CoV-2 infection and multi-organ system damage: a review. *Biomolecules and Biomedicine*, 23(1), 37-52. **(IF: 3.75)**
12. Rabaan, A. A., et al (2023). An Updated Review on Monkeypox Viral Disease: Emphasis on Genomic Diversity. *Biomedicines*, 11(7), 1832. **(IF: 4.75)**
13. Bostancioglu, S. M., Sandalli, A., Almohazey, D., Alsaeed, M., Alhamid, G., Rabaan, A., ... & **Tombuloglu, H.** (2023). Targeting SARS-CoV-2 main protease 3CL pro and human ACE2 with Paeonia Phytochemicals by in silico and in vitro Studies in Terms of Possible COVID-19 Therapeutics. *Researchsquare*. <https://www.researchsquare.com/article/rs-3666689/v1>
14. Alhamid, G., **Tombuloglu, H.**, Motabagani, D., Motabagani, D., Rabaan, A. A., Unver, K., ... & Unver, T. (2022). Colorimetric and fluorometric reverse transcription loop-mediated isothermal amplification (RT-LAMP) assay for diagnosis of SARS-CoV-2. *Functional & integrative genomics*, 1-11. **(IF: 3.15)**
15. Alhamid, G., **Tombuloglu, H.**, Rabaan, A. A., & Al-Suhaimi, E. (2022). SARS-CoV-2 detection methods: A comprehensive review. *Saudi Journal of Biological Sciences*, 103465. **(IF: 4.75)**
16. **Tombuloglu, H.**, Sabit, H., Al-Khallaf, H., Kabanja, J. H., Alsaeed, M., Al-Saleh, N., & Al-Suhaimi, E. (2022). Multiplex real-time RT-PCR method for the diagnosis of SARS-CoV-2 by targeting viral *N*, *RdRp* and human *RP* genes. *Scientific Reports*, 12(1), 1-10. **(IF: 4.99)**



17. **Tombuloglu H**, Sabit H, Al-Suhaimi E, Al Jindan R, Alkharsah KR (2021) Development of multiplex real-time RT-PCR assay for the detection of SARS-CoV-2. **PLoS ONE** 16(4): e0250942. <https://doi.org/10.1371/journal.pone.0250942> (IF: 3.75)
18. **Tombuloglu, H.**, Yaman, C., Boudelloua, I., Cevik, E., Anil, I., Aga, O., ... & Gunday, S. T. (2023). Metagenome analyses of microbial population in geotextile fabrics used in permeable reactor barriers for toluene biodegradation. *3 Biotech*, 13(2), 40. (IF: 3.05)
19. Altwayan, R., **Tombuloglu, H.**, Alhusil, A., Awadh, T., Altwayan, M., Albaqawi, H., ... & Unver, T. (2023). KASP-PCR method to screen thrombophilia genetic risk factors. *medRxiv*, 2023-10.
20. **Tombuloglu, H.**, Ercan, I., Alqahtani, N., Alotaibi, B., Bamhrez, M., Alshumrani, R., ... & Ercan, F. (2023). Impact of magnetic field on the translocation of iron oxide nanoparticles (Fe₃O₄) in barley seedlings (*Hordeum vulgare* L.). *3 Biotech*, 13(9), 296. (IF: 3.05)
21. **Tombuloglu, H.**, Alsaeed, M., Slimani, Y., Demir-Korkmaz, A., Tombuloglu, G., Sozeri, H., ... & Ercan, I. (2023). Formulation of Manganese Zinc Spinel Ferrite (Mn_{0.5}Zn_{0.5}Fe₂O₄) Nanoparticles for the Growth Promotion of Plants. *Journal of Soil Science and Plant Nutrition*, 1-14. (IF: 3.05)
22. **Tombuloglu, H.**, Slimani, Y., Akhtar, S., Alsaeed, M., Tombuloglu, G., Almessiere, M. A., ... & Ercan, I. (2022). The size of iron oxide nanoparticles determines their translocation and effects on iron and mineral nutrition of pumpkin (*Cucurbita maxima* L.). *Journal of Magnetism and Magnetic Materials*, 564, 170058. (IF: 3.01)
23. Turumtay, H., **Tombuloglu, H.**, Er, H., Sandalli, C., & Turumtay, E. A. (2022). Elucidation of Bioactive compounds in flower extracts of *Camellia sinensis* by HPLC-DAD-MS/MS and their inhibitory effects on replicative bacterial DNA polymerases. *Industrial Crops and Products*, 188, 115528. (IF: 6.05)
24. Ercan, I., **Tombuloglu, H.**, Alqahtani, N., Alotaibi, B., Bamhrez, M., Alshumrani, R., ... & Kayed, T. S. (2022). Magnetic field effects on the magnetic properties, germination, chlorophyll fluorescence, and nutrient content of barley (*Hordeum vulgare* L.). *Plant Physiology and Biochemistry*, 170, 36-48. (IF: 5.4)
25. **Tombuloglu, H.**, Albenayyan, N., Slimani, Y., Akhtar, S., Tombuloglu, G., Almessiere, M., ... & Manikandan, A. (2022). Fate and impact of maghemite (γ-Fe₂O₃) and magnetite (Fe₃O₄) nanoparticles in barley (*Hordeum vulgare* L.). *Environmental Science and Pollution Research*, 1-12. (IF: 5.1)
26. Al-Suhaimi, E. A., Aljafary, M. A., Alfareed, T. M., Alshuyeh, H. A., Alhamid, G. M., Sonbol, B., ... & Homeida, A. M. (2022). Nanogenerator-Based Sensors for Energy Harvesting From Cardiac Contraction. *Frontiers in Energy Research*, 579. (IF: 3.52)
27. Ercan, I., Kaygili, O., Kayed, T., Bulut, N., **Tombuloğlu, H.**, İnce, T., ... & Ercan, F. (2022). Structural, spectroscopic, dielectric, and magnetic properties of Fe/Cu co-doped hydroxyapatites prepared by a wet-chemical method. *Physica B: Condensed Matter*, 625, 413486. (IF: 2.4)
28. **Tombuloglu, H.**, Slimani, Y., AlShammari, T. M., Tombuloglu, G., Almessiere, M. A., Sozeri, H., ... & Ercan, I. (2021). Delivery, fate and physiological effect of engineered cobalt ferrite nanoparticles in barley (*Hordeum vulgare* L.). *Chemosphere*, 129138. (IF: 8.94)



29. Basim, H., Basim, E., **Tombuloglu, H.**, & Unver, T. (2021). Comparative transcriptome analysis of resistant and cultivated tomato lines in response to *Clavibacter michiganensis* subsp. *michiganensis*. *Genomics*. <https://doi.org/10.1016/j.ygeno.2021.05.033> (IF: 6.2)
30. Sabit, H., Cevik, E., Tombuloglu, H., Abdel-Ghany, S., Tombuloglu, G., & Esteller, M. (2021). Triple Negative Breast Cancer in the Era of miRNA. *Critical Reviews in Oncology/Hematology*, 103196. (IF: 6.3)
31. Badad, O., Lakhssassi, N., Zaid, N., El Baze, A., Zaid, Y., Meksem, J., ... & Meksem, K. (2021). Genome Wide MeDIP-Seq Profiling of Wild and Cultivated Olives Trees Suggests DNA Methylation Fingerprint on the Sensory Quality of Olive Oil. *Plants*, 10(7), 1405. (IF: 3.89)
32. Gunday, S. T., **Tombuloglu, H.**, Anil, I., Alagha, O., & Bozkurt, A. (2021). Natural pozzolan super-absorbent polymer: synthesis, characterization, and its application on plant growing under drought condition. *International Journal of Energy and Environmental Engineering*, 1-10. (IF: 4.57)
33. Hussein Sabit, Shaimaa Abdel-Ghany, **Huseyin Tombuloglu**, Emre Cevik, Amany Alqosaibi, Fatma Almulhim, Afnan Al-Muhanaa (2021) New insights on CRISPR/Cas9-based therapy for breast Cancer. **Genes and Environment**, 43:15 (IF: 2.07)
34. Sabit, H., **Tombuloglu, H.**, Cevik, E., Abdel-Ghany, S., El-Zawahri, E., El-Sawy, A., ... & Al-Suhaimi, E. (2021). Knockdown of c-MYC Controls the Proliferation of Oral Squamous Cell Carcinoma Cells in vitro via Dynamic Regulation of Key Apoptotic Marker Genes. *International Journal of Molecular and Cellular Medicine*, 10(1), 45. (IF: 1.24)
35. Sabit, H., **Tombuloglu, H.**, Rehman, S., Almandil, N. B., Cevik, E., Abdel-Ghany, S., ... & Wayne, M. M. Y. (2021). Gut microbiota metabolites in autistic children: An epigenetic perspective. *Heliyon*, 7(1), e06105. (IF: 3.77)
36. Shakeel A, Khan AA, Alharby H, Bamagoos AA, **Tombuloglu H**, Hakeem KR (2021). Evaluation of Coal Fly Ash for Modulating the Plant Growth, Yield, and Antioxidant Properties of *Daucus carota* (L.): A Sustainable Approach to Coal Waste Recycling. **Sustainability**. (IF: 3.25)
37. Unver, T., & **Tombuloglu, H.** (2020). Barley long non-coding RNAs (lncRNA) responsive to excess boron. **Genomics**, 112(2):1947-1955. (IF: 6.2)
38. **Tombuloglu, H.** (2020). Genome-wide identification and expression analysis of R2R3, 3R-and 4R-MYB transcription factors during lignin biosynthesis in flax (*Linum usitatissimum*). **Genomics**, 112(1), 782-795. (IF: 6.2)
39. Khan, S., **Tombuloglu, H.**, Hassanein, S. E., Rehman, S., Bozkurt, A., Cevik, E., ... & Sabit, H. (2020). Coronavirus diseases 2019: Current biological situation and potential therapeutic perspective. **European Journal of Pharmacology**, 886, 173447. (IF: 3.2)
40. Tombuloglu, H., Slimani, Y., AlShammari, T. M., Bargouti, M., Ozdemir, M., Tombuloglu, G., ... & Ercan, I. (2020). Uptake, translocation, and physiological effects of hematite (α -Fe₂O₃) nanoparticles in barley (*Hordeum vulgare* L.). **Environmental Pollution**, 266, 115391. (IF: 9.98)



41. Cevik, E., **Tombuloglu, H.**, Anıl, I., Senel, M., Sabit, H., AbdulAzeez, S., ... & Barghouthi, M. (2020). Direct electricity production from Microalgae Choricystis sp. and investigation of the boron to enhance the electrogenic activity. *International Journal of Hydrogen Energy*. 45 (19): 11330-11340. **(IF: 5.81)**
42. Norah Al-Amri, **Huseyin Tombuloglu**, Yassine Slimani, Sultan Akhtar, Mohammad Barghouthi, Munirah Almessiere, Thamer Alshammari, Abdulhadi Baykal, Hussain Sabit, Ismail Ercan, Sezen Ozcelik (2020). Size effect of iron (III) oxide nanomaterials on the growth, and their uptake and translocation in common wheat (*Triticum aestivum* L.). *Ecotoxicology and Environmental Safety*, 194:110377. **(IF: 4.71)**
43. **Tombuloglu, H.**, Khan, F. A., Almessiere, M. A., Aldakheel, S., & Baykal, A. (2020). Synthesis of niobium substituted cobalt-nickel nano-ferrite (Co_{0.5}Ni_{0.5}Nb_xFe_{2-x}O₄ (x≤0.1) by hydrothermal approach show strong anti-colon cancer activities. *Journal of Biomolecular Structure and Dynamics*, (just-accepted), 1-9. **(IF: 3.22)**
44. **Tombuloglu, H.**, Slimani, Y., Tombuloglu, G., Alshammari, T., Almessiere, M., Korkmaz, A. D., ... & Samia, A. C. S. (2020). Engineered magnetic nanoparticles enhance chlorophyll content and growth of barley through the induction of photosystem genes. *Environmental Science and Pollution Research*, 27(27), 34311-34321. **(IF: 3.05)**
45. **Tombuloglu, H.**, Anıl, I., Akhtar, S., Turumtay, H., Sabit, H., Slimani, Y., ... & Baykal, A. (2020). Iron oxide nanoparticles translocate in pumpkin and alter the phloem sap metabolites related to oil metabolism. *Scientia Horticulturae*, 265, 109223. **(IF: 2.76)**
46. Abdel-Ghany, S., Raslan, S., **Tombuloglu, H.**, Shamseddin, A., Cevik, E., Said, O. A., ... & Sabit, H. (2020). Vorinostat-loaded titanium oxide nanoparticles (anatase) induce G2/M cell cycle arrest in breast cancer cells via PALB2 upregulation. *3 Biotech*, 10(9), 1-14. **(IF: 2.38)**
47. **Tombuloglu, H.**, Ercan, I., Alshammari, T., Tombuloglu, G., Slimani, Y., Almessiere, M., & Baykal, A. (2020). Incorporation of Micro-nutrients (Nickel, Copper, Zinc, and Iron) into Plant Body Through Nanoparticles. *JOURNAL OF SOIL SCIENCE AND PLANT NUTRITION*. **(IF: 3.57)**
48. **Tombuloglu, H.**, Slimani, Y., Tombuloglu, G., Almessiere, M., Sozeri, H., Demir-Korkmaz, A., ... & Hakeem, K. R. (2019). Impact of calcium and magnesium substituted strontium nano-hexaferrite on mineral uptake, magnetic character, and physiology of barley (*Hordeum vulgare* L.). *Ecotoxicology and environmental safety*, 186, 109751. **(IF: 4.71)**
49. Sabit, H., Cevik, E., & **Tombuloglu, H.** (2019). Colorectal cancer: The epigenetic role of microbiome. *World Journal of Clinical Cases*, 7(22), 3683.
50. **Tombuloglu, H.**, Slimani, Y., Tombuloglu, G., Munireh Almessiere & Baykal, A. (2019). Uptake and translocation of magnetite (Fe₃O₄) nanoparticles and its impact on photosynthetic genes in barley (*Hordeum vulgare* L.). *Chemosphere* 226, 110-122 **(IF: 5.77)**
51. **Tombuloglu, H.**, Slimani, Y., Tombuloglu, G., Munireh Almessiere, Baykal, A. Ercan, I., Sozeri, H. (2019). Impact of superparamagnetic iron oxide nanoparticles (SPIONs) and ionic iron on physiology of summer squash (*Cucurbita pepo*): a comparative study. *Plant Physiology and Biochemistry* 139, 56-65. **(IF: 3.72)**



52. **H Tombuloglu**, Y Slimani, G Tombuloglu, M Almessiere, A Baykal, I Ercan, (2019) Tracking of NiFe₂O₄ nanoparticles in barley (*Hordeum vulgare* L.) and their impact on plant growth, biomass, pigmentation, catalase activity, and mineral uptake. *Environmental Nanotechnology, Monitoring & Management*, 11:100223 (IF: 3.72)
53. Aydin, M., Tombuloglu, G., Sakcali, M. S., Hakeem, K. R., & **Tombuloglu, H.** (2019). Boron alleviates drought stress by enhancing gene expression and antioxidant enzyme activity. *Journal of Soil Science and Plant Nutrition*, 19(3), 545-555. (IF: 2.27)
54. **Tombuloglu, H.**, Slimani, Y., Alshammari, T., Tombuloglu, G., Almessiere, M., Baykal, A., ... & Demirci, T. (2019). Magnetic Behavior and Nutrient Content Analyses of Barley (*Hordeum vulgare* L.) Tissues upon CoNd_{0.2}Fe_{1.8}O₄ Magnetic Nanoparticle Treatment. *Journal of Soil Science and Plant Nutrition*, 1-10. (IF: 2.27)
55. Guzin Tombuloglu, **Huseyin Tombuloglu**, Emre Cevik, Hussain Sabit (2019) Genome-wide identification of Lysin-Motif Receptor-Like Kinase (LysM-RLK) gene family in *Brachypodium distachyon* and docking analysis of chitin/LYK binding. *Physiological and Molecular Plant Pathology* 106, 217-225. (IF: 1.64)
56. Hussain, S., Cevik, E., **Tombuloglu, H.**, Farag, K., & Said, O. A. M. (2019). miRNA Profiling in MCF-7 Breast Cancer Cells: Seeking a New Biomarker. *J Biomedical Sci*, 8(2), 3.
57. **Tombuloglu, H.**, Slimani, Y., Güngüneş, H., Tombuloglu, G., Almessiere, M. A., Sozeri, H., ... & Ercan, I. (2019). Tracking of SPIONs in barley (*Hordeum vulgare* L.) plant organs during its growth. *Journal of Superconductivity and Novel Magnetism*, 32(10), 3285-3294. (IF: 1.06)
58. H Sabit, S Nazir, S Abdel-Ghany, O Said, E Wagih, O Badawy, A Alzayyat, **H Tombuloglu** (2019). Poly (ADP-ribose) Polymerase Promoter Hypermethylation Predispose Females to Breast Cancer. *Asian Pacific Journal of Cancer Biology*, 4 (1).
59. **Tombuloglu, H.** (2019). Genome-wide analysis of the auxin response factors (ARF) gene family in barley (*Hordeum vulgare* L.). *Journal of Plant Biochemistry and Biotechnology*, 28(1), 14–24.
60. H Sabit, E Cevik, **H Tombuloglu**, S Abdel-ghany (2019). CRISPR-mediated therapeutics: i. Neurodegenerative diseases. *Indo American Journal of Pharmaceutical Sciences* 6 (2), 3912-3916
61. **Tombuloglu, H.**, Tombuloglu, G., Slimani, Y., Ercan, I., Sozeri, H., & Baykal, A. (2018). Impact of manganese ferrite (MnFe₂O₄) nanoparticles on growth and magnetic character of barley (*Hordeum vulgare* L.). *Environmental Pollution*, 243, 872-881. (IF: 6.79)
62. Turgay Unver, Zhangyan Wu, Lieven Sterck, Mine Turktas, Rolf Lohaus, Zhen Li, Ming Yang, Lijuan He, Tianquan Deng, Francisco Javier Escalante, Carlos Llorens, Francisco J. Roig, Iskender Parmaksiz, Ekrem Dundar, Fuliang Xie, Baohong Zhang, Arif Ipek, Serkan Uranbey, Mustafa Erayman, Emre Ilhan, Oussama Badad, Hassan Ghazal, David A. Lightfoot, Pavan Kasarla, Vincent Colantonio, **Huseyin Tombuloglu**, Pilar Hernandez, Nurengin Mete, Ozgur Cetin, Marc Van Montagu, Huanming Yang, Qiang Gao, Gabriel Dorado, and Yves Van de Peer (2017). Genome of wild olive and the evolution of oil biosynthesis. *Proceedings of the National Academy of Sciences, (PNAS)*, 114(44), E9413-E9422. (IF: 11.2)



63. **Tombuloglu, H.**, Tombuloglu, G., Sakcali, M. S., Turkan, A., Hakeem, K. R., Alharby, H. F., ... & Abdul, W. M. (2017). Proteomic analysis of naturally occurring boron tolerant plant *Gypsophila sphaerocephala* L. in response to high boron concentration. **Journal of Plant Physiology**. 216, 212-217 (IF: 3.12)
64. Bostancioglu, S. M., Tombuloglu, G., & **Tombuloglu, H.** (2018). Genome-wide identification of barley MCs (metacaspases) and their possible roles in boron-induced programmed cell death. **Molecular biology reports**, 45(3), 211-225. (IF: 2.1)
65. Cevik, E., Cerit, A., **Tombuloglu, H.**, Sabit, H., & Yildiz, H. B. (2018). Electrochemical Glucose Biosensors: Whole Cell Microbial and Enzymatic Determination Based on 10-(4H-Dithieno [3, 2-b: 2', 3'-d] Pyrrol-4-yl) Decan-1-Amine Interfaced Glassy Carbon Electrodes. **Analytical Letters**, 1-15. (IF: 1.26)
66. **Tombuloglu, H.**, Filiz, E., Aydın, M., & Koc, I. (2017). Genome-wide identification and expression analysis of sulphate transporter (SULTR) genes under sulfur deficiency in *Brachypodium distachyon*. **Journal of Plant Biochemistry and Biotechnology**, 26(3), 263-273.
67. **Hüseyin Tombuloglu**, Abdugaffar Ablazov, Ertugrul Filiz (2016) "Genome-wide analysis of response to low sulfur (LSU) genes in grass species and expression profiling of model grass species *Brachypodium distachyon* under S-deficiency" **Turkish Journal of Biology**. DOI: 10.3906/biy-1508-32.
68. Abdugaffar Ablazov, **Huseyin Tombuloglu**, (2016) "Genome-wide identification of the mildew resistance locus O (MLO) gene family in novel cereal model species *Brachypodium distachyon*", **European Journal of Plant Pathology**, 145 (2), 239-253. (IF: 1.81)
69. **TOMBULOGLU HÜSEYİN**, ÖZCAN ISMAIL, TOMBULOGLU GÜZİN, SAKÇALI MEHMET SERDAL, ÜNVER TURGAY. (2016). Aquaporins in Boron-Tolerant Barley: Identification, Characterization, and Expression Analysis. **Plant Molecular Biology Reporter**, 34 (2), 374-386 (IF: 1.9)
70. İlhan Dogan, Ibrahim Ilker Ozyigit, Guzin Tombuloglu, Mehmet Serdal Sakcali, **Huseyin Tombuloglu** (2016) "Assessment of Cd-induced genotoxic damage in *Urtica pilulifera* L. using RAPD-PCR analysis", **Biotechnology & Biotechnological Equipment**, 30 (2), 284-291. (IF: 1.15)
71. **TOMBULOGLU HÜSEYİN**, Mehtap Aydın, FILİZ ERTUGRUL Comparative analysis of embryo surrounding region (Esr-6) genes in Turkish maize varieties: sequencing and modeling. **Brazilian Journal of Botany**, 39 (1), 287-293, Doi: 10.1007/s40415-015-0206-2, (2016). (IF: 1.01)
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BOOKS

#	Authors	BOOK TITLE	Publisher	Date
1	Tombuloglu, H. , Tombuloglu, G	Genetic Modified Organisms	Intech Open	2024
2	Tombuloglu, H. , & Amal, M.	Microbial Genomics: Clinical, Pharmaceutical, and Industrial Applications	Elsevier	2024
3	Tombuloglu, H. , Tombuloglu, G., Al-Suhaimi, E., Baykal, A., & Hakeem, K. R.	Molecular Impacts of Nanoparticles on Plants and Algae	Elsevier	2024
4	Tombuloglu, H. , Unver, T., Tombuloglu, G., & Hakeem, K. R.	Oil Crop Genomics.	Springer	2021
5	Hakeem, K. R., Tombuloğlu, H. , & Tombuloğlu, G	Plant omics: trends and applications	Springer	2016

BOOK CHAPTERS

1. Alsanie, S. I., Aljabari, L. A., Aljabari, N. A., Smajlovic, S., & **Tombuloglu, H.** (2024). Bacterial identification and diagnosis of bacterial infections through genomics, proteomics, nanotechnology, machine learning, and microelectromechanical systems. In *Microbial Genomics: Clinical, Pharmaceutical, and Industrial Applications* (pp. 143-172). Academic Press.
2. Smajlovic, S., Alhamid, G., Tombuloglu, G., Khalil, A. A., & **Tombuloglu, H.** (2024). Molecular techniques for the diagnosis of viral infections. In *Microbial Genomics: Clinical, Pharmaceutical, and Industrial Applications* (pp. 117-141). Academic Press.
3. Ji, A., Hamid, A., Andrabi, S. A. H., ul Haq, E., & **Tombuloglu, H.** (2024). Interaction of nanoparticles with biomolecules. In *Molecular Impacts of Nanoparticles on Plants and Algae* (pp. 143-157). Academic Press.
4. Alhamid, G., & **Tombuloglu, H.** (2022) Perspective Chapter: Recent Progressions on the Colorimetric Diagnosis of SARS-CoV-2 by Loop-Mediated Isothermal Amplification (LAMP) Assay. IntechOpen, UK.
5. Al-Suhaimi, E. A., **Tombuloglu, H.**, Aljafary, M. A., Attia, K. A., & Homeida, A. M. (2022). Blood Group Serotyping and Genotyping. *Journal: Encyclopedia of Infection and Immunity*, 199-205.
6. Mehtap Aydin, **Huseyin Tombuloglu**, Pilar Hernandez, Gabriel Dorado, Turgay Unver (2021). Olive-tree genome sequencing: towards a better understanding of oil biosynthesis. In *Oil Crops Genomics*. Springer, 21/05/2021.
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8. Samira Smajlovic, Azra Frkatovic, Hussein Sabit, **Huseyin Tombuloglu**, Turgay Unver (2021). Applications of CRISPR/Cas9 in oil crops to improve oil composition. In *Oil Crops Genomics*. Springer, 21/05/2021.



9. Aljafary, M. A., Alshwyeh, H., Alahmadi, N., Shehzad, A., **Tombuloglu, H.**, Gymalov, Z., ... & Al-Suhaimi, E. (2021). Physiological and Cellular Functions of Vitamin K on Cardiovascular Function.
10. Slimani, Y., Hannachi, E., **Tombuloglu, H.**, Güner, S., Almessiere, M. A., Baykal, A., ... & Ercan, I. (2020). Magnetic nanoparticles based nanocontainers for biomedical application. In *Smart Nanocontainers* (pp. 229-250). Elsevier.
11. Karlik, E., & **Tombuloğlu, H.** (2016). Molecular Markers and Their Applications. In *Plant Omics: Trends and Applications* (pp. 137-157). **Springer International Publishing**.
12. Genotoxic Effects of Boron on Chickpea (*Cicer arietinum* L.) and Tomato (*Solanum lycopersicum* L.)", (Güzin Tombuloglu, **Hüseyin Tombuloglu**, M. Serdal Sakcali) in *Plants, Pollutants and Remediation*, **Springer**, 01/12/2015, pp. 179-189
13. Agricultural Biomass Based Potential Materials, Bamboo Biomass: Various Studies and Potential Applications for Value-Added Products) (2015)., hakeem Khalid Rahman, Ibrahim Samsudin, Ibrahim Farudah Hanum, **TOMBULOGLU HUSEYIN**, **Springer**, Khalid Rehman Hakeem, Mohammad Jawaid, Othman Y. Alotman, Basim sayısı:1, Sayfa Sayısı 505, ISBN:978-3-319-13846-6.
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15. Plant adaptation and Phytoremediation, Chapter:(Boron and Plants) (2010)., Munir Ozturk, Serdal Sakcali, Salih Gucl, **Huseyin Tombuloglu**, Springer, Editör:M. Ashraf, M. Ozturk, M. S. A. Ahmad, ISBN:978-90-481-9369-1.

PATENTS

1. **US Patent App. (18/785,879)** Method of fertilizing a plant with zinc and manganese co-doped cerium oxide nanoparticles. H Tombuloglu, F Alghofaili, M Almessiere. 13/08/2024
2. **United States Patent** filed. Gold nanoparticle (AuNP)-assisted loop-mediated isothermal amplification (LAMP) for the ultra-sensitive colorimetric detection of SARS-CoV-2. **Huseyin TOMBULOGLU** 09/01/2024.
3. **United States Patent App. (18/489,441)** Oligonucleotides and process for isothermal amplification assay in detection of SARS-CoV-2 without mis-amplification. Galyah Alhamid, **Huseyin TOMBULOGLU** 15/02/2023.
4. **United States Patent App (18/415,814)** Method of detecting SARS-COV in a sample. **Huseyin TOMBULOGLU**, Moneerah Alsaeed, Galyah Alhamid. 01/12/2023.
5. **United States Patent App. (18/480,993)** Formulation of Manganese Zinc Spinel Ferrite ($Mn_{0.5}Zn_{0.5}Fe_2O_4$) Nanoparticles for the Growth Promotion of Plants. Guzin Tombuloglu, **Huseyin TOMBULOGLU**, Yassine Slimani, Munirah Almessiere, Abdulhadi Baykal. 02/05/2023.
6. **United States Patent (US20220195540 A1)**. `Development of multiplex RT-PCR method for SARS-CoV-2 diagnosis` **Huseyin Tombuloglu**, Ebtesam Al-Suhaimi. 23/06/2022.



7. **United States Patent (US20200102498A1)**. 'Pozzolan polymer composite for soil amendment.' Ayhan Bozkurt, Omer Aga, **Huseyin Tombuloglu**, Ismail Anil, Tugba G. Anil. 02/04/2020.
8. **United States Patent. (US11352559 B2)**. Method for improving water retention in a soil. Inventors: Ayhan Bozkurt, Omer Aga, Huseyin Tombuloglu, Ismail Anil, Seyda Tugba G. Anil. Date of Patent: June 7, 2022
9. **United States Patent (US20220267674 A1)** 'Super absorbing resin composite with base material for improving soil water retention' A Bozkurt, AGA Omer, **H Tombuloglu**, A Ismail, A Seyda. US Patent App. 17/742,973. 2022

Completed Research Projects

#	Research Title	Founder	Report Date	Role
1	Diagnosis of <i>Blastocystis hominis</i> using novel isothermal amplification methods	Deanship of Scientific Research, IAU	2024	PI
2	Development of CRISPR-Cas12 assisted gold nanoparticle LAMP method for the fast detection of SARS-CoV-2	Deanship of Scientific Research, IAU	2024	PI
3	Detection of <i>Helicobacter pylori</i> using gold nanoparticle-based molecular techniques	Deanship of Scientific Research, IAU	2024	PI
4	Development of Human papillomavirus (HPV) diagnosis kit	Deanship of Scientific Research, IAU	2024	PI
5	Development and commercialization of SARS-COV-2 diagnosis kit	Deanship of Scientific Research, IAU	2023	PI
6	Development of an SNP detection panel for the cost-effective diagnosis of thrombosis risk factors	Deanship of Scientific Research, IAU	2022	PI
7	Development of rapid and on-site SARS-COV-2 diagnosis kit directly from swab samples based on colorimetric RT-LAMP assay	Deanship of Scientific Research, IAU	2021	PI
8	Development of fast multiplex SARS-COV-2 diagnosis kit	Deanship of Scientific Research, IAU	2020	PI
9	Genome sequencing of garlic	Deanship of Scientific Research, IAU	2020	PI
10	One pot synthesis of hard/soft nanoferrites with exchange behaviour via sonochemical approach: Magnetic and electrical investigation	Deanship of Scientific Research, IAU	2020	Researcher
11	Identification of MLO genes related to powdery-mildew disease and development of disease-resistant barley by using CRISPR-Cas9 system	Deanship of Scientific Research, IAU	2019	PI
12	Effect of magnetic Nanospinel ferrites on the growth and Development of tomato and Pumpkin	Deanship of Scientific Research, IAU	2018	CO-PI
13	Development of an Electrochemical Glucose Biosensor for Diabetes Patients: Fast and Reliable Detection From Saliva	Deanship of Scientific Research, IAU	2018	CO-PI
14	Effect of magnetic nanospinel ferrites on the growth and development of Saudi tomato and pumpkin	Deanship of Scientific Research, IAU	2018	CO-PI
15	Development of biosensor systems for early detection of cancer biomarkers	Deanship of Scientific Res, IAU	2018	CO-PI



16	Methylation profiling of Saudi and wild olives by Methylated-DNA Immuno Precipitation-sequencing (MeDIP)	Deanship of Scientific Research, IAU	2017	PI
17	Synthesis and characterization of rare earth element doped barium and strontium hexaferrites by solid state and sol-gel methods and investigation of its microwave absorber properties	Deanship of Scientific Research, IAU	2017	CO-PI
18	The International Olive Genome Project http://olivegenome.karatekin.edu.tr/	Olive Genome Consortium	2012-2015	Researcher
19	Transcriptome-wide identification of Boron (B) tolerance genes in <i>Bacillus boroniphilus</i>	Fatih University, BAP Commission	2015-2016	PI
20	Identification of mobile miRNAs having a role in long distance communication mechanism of plants	The Scientific and Technological Research Council of Turkey (TÜBİTAK)- 1001 Program	2014-2016	PI
21	Ectopic expression of selected genes in yeast (<i>S. cerevisiae</i>) as a means of functional identification in Boron tolerance	Fatih University, BAP Commission	2014-2016	PI
22	Identification and characterization of miRNAs that have a role in the oil biosynthesis mechanism of olives (<i>Olea Europaea</i> L.)	The Scientific and Technological Research Council of Turkey (TÜBİTAK)- 1002 Program	2013-2014	PI
23	Transcriptome-level investigation of boron tolerance mechanism on barley (<i>Hordeum vulgare</i> L.)	The Scientific and Technological Research Council of Turkey (TÜBİTAK)- 1002 Program	2013-2014	Researcher
24	Generation of boron tolerant alfalfa plant	BOREN- National Boron Research Institute	2009-2012	Researcher
25	Identification of boron tolerance genes by mRNA differential display technique	Fatih University, BAP Commission	2009-2011	Researcher
26	Cloning of AtBOR4 gene to <i>Medicago sativa</i> L. to generate boron tolerant plant	Fatih University, BAP Commission	2014-2016	Researcher
27	Investigation to amelioration effect of heavy metal-contaminated agricultural lands and water resources by using plants, algae and microorganisms	The Scientific and Technological Research Council of Turkey (TÜBİTAK)- COST Program	2006-2010	Assistant



Teaching Activities

Undergraduate

#	Course/Rotation Title	No./Code	Graduate / Postgraduate	Contribution
1	Molecular Biology	BTECH 801, Credit:3	Postgraduate	Full/Single Instructor
2	Molecular Biology Lab	BTECH 801L, Credit:1	Postgraduate	Full/Single Instructor
3	MOLECULAR GENETICS	BIOL 302/A, Credit:3	Graduate	Full/Single Instructor
4	Advanced Bioinformatics	BTEC 649/A, Credit:3	Postgraduate	Full/Single Instructor
5	GENETICS	BIOL 301/A, Credit:3	Graduate	Full/Single Instructor
6	GENOMICS AND PROTEOMICS	GBE 423/A, Credit:3	Graduate	Full/Single Instructor
7	GENETICS	BIOL 301/A, Credit:3	Graduate	Full/Single Instructor
8	TECHNIQUES IN GENETIC ENGINEERING	GBE 310/A, Credit:4	Graduate	Full/Single Instructor
9	GENERAL BIOLOGY II	BIOL 102/A, Credit:4	Graduate	Full/Single Instructor
10	INTRODUCTION TO MODERN BIOLOGY	BIOL 106/A, Credit:3	Graduate	Full/Single Instructor
11	TECHNIQUES IN GENETIC ENGINEERING	GBE 310/A, Credit:3	Graduate	Full/Single Instructor
12	GENETİK LABORATUVARI	BİYO 351/LAB A, Credit:1	Graduate	Full/Single Instructor
13	GENETICS LABORATORY	BIOL 351/LAB A, Credit:1	Graduate	Full/Single Instructor
14	MOLECULAR GENETICS LABORATORY	BIOL 352/A, Credit:1	Graduate	Full/Single Instructor
15	PLANT BIOTECHNOLOGY	GBE 309/A, Credit:3	Graduate	Full/Single Instructor
16	PLANT PHYSIOLOGY AND ENGINEERING	GBE 304/A, Credit:3	Graduate	Full/Single Instructor
17	PLANT PHYSIOLOGY II	BIOL 304/A, Credit:3	Graduate	Full/Single Instructor
18	PLANT BIOLOGY	BIOL 415/A, Credit:3	Graduate	Full/Single Instructor
19	PLANT PHYSIOLOGY AND ENGINEERING	GBE 304/A, Credit:3	Graduate	Full/Single Instructor
20	PLANT PHYSIOLOGY II	BIOL 304/A, Credit:3	Graduate	Full/Single Instructor
21	PLANT BIOLOGY	BIOL 415/A, Credit:3	Graduate	Full/Single Instructor

Student Academic Supervision and Mentoring

#	Level	Number of Students	From	To
	Undergraduate	>200	2007	2016
	Master	7	2014	2024
	PhD	1	2022	2025

Supervision of Master and/or PhD Thesis

#	Name	Degree Type	First/Co-supervision	Date
1	Mehtap Aydın	MSc	First Supervisor	2013-2014
2	Ömer Faruk Karabulut	MSc	First Supervisor	2013-2014
3	Safiye Merve Çelik	MSc	First Supervisor	2013-2015
4	Sedat Karadeniz	MSc	Co-Supervisor	2014-2016
5	Galyah Alhamid	MSc	First Supervisor	2020-2022
6	Reham Altawayyan	MSc	First Supervisor	2021-2023
7	Fatimah Alghofaili	PhD	Co-Supervisor	2021-2025



Last Update

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