



Curriculum Vitae

Personal Information

Full Name: Yusuf Sürmeli
Title: Associate Professor
Office Phone: +90 282 250 2249
Mobile Phone: +90 530 696 93 68
E-mail: ysürmeli@nku.edu.tr

Education

PhD

University: Istanbul Technical University
Institute: Graduate School of Science and Engineering
Department: Molecular Biology, Genetics and Biotechnology
Years: 2013 – 2020

Thesis:

Inverse metabolic engineering and molecular characterization of caffeine-resistant *Saccharomyces cerevisiae* (2020)

Master's Degree

University: Izmir Institute of Technology
Institute: Graduate School of Engineering and Natural Sciences
Department: Biotechnology and Bioengineering
Years: 2010 – 2013

Thesis:

Investigation of alkaline and thermal stability of α -L-arabinofuranosidase produced by directed evolution (2013)

Bachelor's Degree

University: Istanbul University

Faculty: Faculty of Science

Department: Molecular Biology and Genetics

Years: 2004 – 2008

Academic Positions

Associate Professor

Tekirdağ Namık Kemal University, Faculty of Agriculture, Department of Agricultural Biotechnology, Division of Enzyme and Microbial Biotechnology
(2023 – Present)

Assistant Professor

Tekirdağ Namık Kemal University, Faculty of Agriculture, Department of Agricultural Biotechnology, Division of Enzyme and Microbial Biotechnology
(2022 – 2023)

Research Assistant

Tekirdağ Namık Kemal University, Faculty of Agriculture, Department of Agricultural Biotechnology, Division of Enzyme and Microbial Biotechnology
(2019 – 2022)

Istanbul Technical University, Graduate School of Science and Engineering, Department of Molecular Biology, Genetics and Biotechnology
(2014 – 2019)

Tekirdağ Namık Kemal University, Faculty of Agriculture, Department of Agricultural Biotechnology, Division of Enzyme and Microbial Biotechnology
(2013 – 2014)

Izmir Institute of Technology, Graduate School of Engineering and Natural Sciences, Department of Biotechnology and Bioengineering
(2011 – 2013)

Tekirdağ Namık Kemal University, Faculty of Agriculture, Department of Agricultural Biotechnology, Division of Enzyme and Microbial Biotechnology
(2009 – 2011)

Scientific Fields

- Molecular Biology and Genetics
- Enzyme and Microbial Biotechnology
- Microbiology
- Molecular Biology

Research Projects

1. **Discovery and characterization of novel enzymes effective in plastic degradation using bioinformatics and molecular approaches**
TÜBİTAK 1001 Project – **Researcher**
(01.11.2024 – Ongoing)
2. **Development of multi-azole resistance in *Saccharomyces cerevisiae* via adaptive laboratory evolution, identification of underlying genes/mutations, and discovery of alternative drugs**
Scientific Research Project – **Principal Investigator**
(03.09.2024 – Ongoing)
3. **Identification of hydrolase group enzymes from Angus cattle rumen using metagenomic and bioinformatic approaches**
Scientific Research Project – **Researcher**
(09.05.2024 – Ongoing)
4. **Development of prochloraz-resistant *Saccharomyces cerevisiae* mutant strains via adaptive laboratory evolution and investigation of the effects of various fungicides**
TÜBİTAK 2209-A – **Advisor**
(15.04.2024 – Ongoing)
5. **Identification, biochemical characterization and biotechnological applications of novel extremophilic xylanase enzymes from Anatolian water buffalo rumen using sequence-homology based metagenomics**
TÜBİTAK 1001 – **Principal Investigator**
(15.03.2022 – Ongoing)
6. **Evolutionary engineering and molecular characterization of tebuconazole-resistant *Saccharomyces cerevisiae* mutant strains**
TÜBİTAK 1002 – **Principal Investigator**
(15.02.2021 – 14.11.2022) (*Completed*)

International Fellowships

Erasmus Staff Training Program

Department of Biochemistry and Biotechnology
University of Thessaly, Greece
12.04.2010 – 16.04.2010

Short-Term Scientific Mission

Department of Medicinal Chemistry
Medical University of Graz, Austria
30.06.2025 – 01.08.2025

Articles Published in International Peer-Reviewed Journals

(The underlined author indicates the corresponding author)

1. Kurt Halil, Sever-Kaya Dilek, Akçok İsmail, Sarı Ceyhun, Albayrak Ebru, Velioglu Hasan Murat, Şanlı Hasan Ersin, Özduven Mehmet Levent, **Sürmeli Yusuf** (2025). Discovery and In Silico Characterization of Anatolian Water Buffalo Rumen-Derived Bacterial Thermostable Xylanases: A Sequence-Based Metagenomic Approach. ACS Omega. <https://doi.org/10.1021/acsomega.5c00965> (SCI-E – Q2)
2. **Sürmeli Yusuf**, Vardar-Yel Nurcan, Tütüncü Havva Esra (2025). Recent advances of structure, function, and engineering of carboxylesterases for the pharmaceutical industry: A minireview. International Journal of Biological Macromolecules, 142206. <https://doi.org/10.1016/j.ijbiomac.2025.142206> (SCI-E – Q1)
3. Demir-Yılmaz Filiz, Arslan Mevlüt, Holyavkin Can, Topaloğlu Alican, Kısakesen Halil İbrahim, **Sürmeli Yusuf**, Çakar Zeynep Petek (2025). Molecular Characterization of Propolis-Resistant *Saccharomyces cerevisiae* Obtained by Evolutionary Engineering. Fermentation, 11(2), 47. <https://doi.org/10.3390/fermentation11020047> (SCI-E – Q2)
4. **Sürmeli Yusuf**, Durmuş Naciye, Şanlı-Mohamed Gülşah (2024). Exploring the Structural Insights of Thermostable *Geobacillus* esterases by Computational Characterization. ACS Omega, (9), 32931-32941. <https://doi.org/10.1021/acsomega.4c03818>. (SCI-E – Q2)
5. Vardar-Yel Nurcan, Tütüncü Havva Esra, **Sürmeli Yusuf** (2024). Lipases for targeted industrial applications, focusing on the development of biotechnologically significant aspects: A comprehensive review of recent trends in protein engineering. International Journal of Biological Macromolecules, 273(1), 132853. <https://doi.org/10.1016/j.ijbiomac.2024.132853>. (SCI-E – Q1)
6. Tütüncü Havva Esra, Durmuş Naciye, **Sürmeli Yusuf** (2024). Unraveling the potential of uninvestigated thermoalkaliphilic lipases by molecular docking and molecular dynamic simulation: an in silico characterization study. 3 Biotech, 14(179), Doi: 10.1007/s13205-024-04023-5. (SCI-E – Q3)
7. **Sürmeli Yusuf**, Tekedar Hasan Cihad, Şanlı-Mohamed Gülşah (2024). Sequence identification and in silico characterization of novel thermophilic lipases from *Geobacillus* species. Biotechnology and Applied Biochemistry, 71(1), 162-175. <https://doi.org/10.1002/bab.2529> (SCI-E – Q2)
8. Özdamar Burcu, **Sürmeli Yusuf**, Şanlı-Mohamed Gülşah (2023). Immobilization of Olive Leaf Extract with Chitosan Nanoparticles as an Adjunct to Enhance Cytotoxicity. ACS Omega, 8, 28994- 29002. <https://doi.org/10.1021/acsomega.3c01494>. (SCI-E – Q2)
9. Bal Yıldız, **Sürmeli Yusuf**, Şanlı-Mohamed Gülşah (2023). Antiproliferative and Apoptotic Effects of Olive Leaf Extract Microcapsules on MCF-7 and A549 Cancer Cells. ACS Omega, 8, 28984-28993. <https://doi.org/10.1021/acsomega.3c01493>. (SCI-E – Q2)

10. **Sürmeli Yusuf, Şanlı-Mohamed Gülşah** (2023). Structural and functional analyses of GH51 alpha-L-arabinofuranosidase of *Geobacillus vulcani* GS90 reveal crucial residues for catalytic activity and thermostability. *Biotechnology and Applied Biochemistry*, 70(3), 1100-1108. <https://doi.org/10.1002/bab.2423>. (SCI-E – Q2)
11. Tütüncü Havva Esra, **Sürmeli Yusuf** (2023). In silico investigation of sequences and predicted three-dimensional homology models of thermoalkaliphilic GH13 α -amylases. *Biologia*, 78, 1833- 1845. <https://doi.org/10.1007/s11756-023-01432-4>. (SCI-E – Q3)
12. **Sürmeli Yusuf, Şanlı-Mohamed Gülşah** (2023). Engineering of xylanases for the development of biotechnologically important characteristics. *Biotechnology and Bioengineering*, 120, 1171-1188. <https://doi.org/10.1002/bit.28339>. (SCI-E – Q2)
13. **Sürmeli Yusuf** (2023). In Silico Phylogeny, Sequence and Structure Analyses of Fungal Thermoacidophilic GH11 Xylanases. *JOTAF*, 20(1), 211-229. <https://doi.org/10.33462/jotaf.1155764>. (ESCI)
14. **Sürmeli Yusuf** (2022). Comparative investigation of bacterial thermoalkaliphilic GH11 xylanases at molecular phylogeny, sequence and structure level. *Biologia*, 77, 3241-3253. <https://doi.org/10.1007/s11756-022-01169-6>. (SCI-E – Q3)
15. Öz Yasin, **Sürmeli Yusuf, Şanlı-Mohamed Gülşah** (2022). Enhanced thermostability of the immobilized thermoalkaliphilic esterase onto magnetic-cornstarch nanoparticle. *Biotechnology and Applied Biochemistry*, 69, 1418-1427. <https://doi.org/10.1002/bab.2213>. (SCI-E – Q2)
16. Tercan Çisem, **Sürmeli Yusuf, Şanlı-Mohamed Gülşah** (2021). Thermoalkaliphilic Recombinant Esterase Entrapment in Chitosan/Calcium/Alginate-blended Beads and Its Characterization. *Journal of Chemical Technology and Biotechnology*, 96, 2257-2264. <https://doi.org/10.1002/jctb.6750>. (SCI-E – Q2)
17. Algan Müge, **Sürmeli Yusuf, Şanlı-Mohamed Gülşah** (2021). A novel thermostable xylanase from *Geobacillus vulcani* GS90: Production, biochemical characterization, and its comparative application in fruit juice enrichment. *Journal of Food Chemistry*, 45, 1-10. <https://doi.org/10.1111/jfbc.13716>. (SCI-E – Q2)
18. Güracar-Baykara Seden, **Sürmeli Yusuf, Şanlı-Mohamed Gülşah** (2021). Purification and Biochemical Characterization of a Novel Thermostable Serine Protease from *Geobacillus* sp. GS53. *Applied Biochemistry and Biotechnology*, 193, 1574-1584. <https://doi.org/10.1007/s12010-021-03512-0>. (SCI-E – Q2)
19. Burhanoğlu Tülin, **Sürmeli Yusuf, Şanlı-Mohamed Gülşah** (2020). Identification and characterization of novel thermostable alpha-amylase from *Geobacillus* sp. GS33. *International Journal of Biological Macromolecules*, 164, 578-585. <https://doi.org/10.1016/j.ijbiomac.2020.07.171>. (SCI-E – Q1)
20. **Sürmeli Yusuf, Holyavkin Can, Topaloğlu Alican, Arslan Mevlüt, Kısakesen Halil İbrahim, Çakar Zeynep Petek** (2019). Evolutionary engineering and molecular characterization of a caffeine-resistant *Saccharomyces cerevisiae* strain. *World Journal of Microbiology & Biotechnology*, 35(183), 1-16. <https://doi.org/https://doi.org/10.1007/s11274-019-2762-2>. (SCI-E – Q2)

21. **Sürmeli Yusuf**, İlgü Hüseyin, Şanlı-Mohamed Gülşah (2019). Improved activity of α -L- arabinofuranosidase from *Geobacillus vulcani* GS90 by directed evolution: Investigation on thermal and alkaline stability. *Biotechnology and Applied Biochemistry*, 66(1), 101-107. <https://doi.org/10.1002/bab.1702>. (SCI-E – Q2)
22. Arslan Mevlüt, Holyavkin Can, Kısakesen Halil İbrahim, Topaloğlu Alican, **Sürmeli Yusuf**, Çakar Zeynep Petek (2018). Physiological and Transcriptomic Analysis of a Chronologically Long- Lived *Saccharomyces cerevisiae* Strain Obtained by Evolutionary Engineering. *Molecular Biotechnology*, 60(7), 468-484. <https://doi.org/10.1007/s12033-018-0087-2>. (SCI-E – Q3)
23. İlgü Hüseyin, **Sürmeli Yusuf**, Şanlı-Mohamed Gülşah (2018). A thermophilic α -l-Arabinofuranosidase from *Geobacillus vulcani* GS90: heterologous expression, biochemical characterization, and its synergistic action in fruit juice enrichment. *European Food Research and Technology*, 244(9), 1627-1636. <https://doi.org/10.1007/s00217-018-3075-7>. (SCI-E – Q2)
24. Günel Tuba, Kalelioğlu İbrahim, **Sürmeli Yusuf**, Türken Başak, Ermiş Bülent Hayri, Aydınlı Kılıç (2011). Comparison of real time polymerase chain reaction assay methods for detection of RHD gene in amniotic fluid. *Journal of Natural Science Biology and Medicine*, 2(2), 193- 197. <https://doi.org/10.4103/0976-9668.92327>.