

Assist. Prof. Dr. NURCAN VARDAR YEL

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Interview Hours: Çarşamba- 10:00 - 12:00
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EDUCATIONAL INFORMATION

Degree	University	Department	Year(s)
Doctoral Degree	Istanbul Technical University	Molecular Biology-genetics and Biotechnology (Phd)	2011 - 2017
Master's Degree	Istanbul Technical University	Molecular Biology-genetics and Biotechnology (Master's) (with Thesis)	2009 - 2011
Bachelor's Degree	Halic University	Department of Molecular Biology and Genetics	2004 - 2008

RESEARCH AREAS

enzyme and microbial technology

ACADEMIC DUTIES

Duty	University	Area	Year(s)
Doctor Faculty Member	Altinbas University		2018 -
Teaching Assistant	Istanbul Kemerburgaz University		2017 -

ADMINISTRATIVE DUTIES

Duty	University	Year(s)
Head of Medical Laboratory Techniques Programme	Altınbas University	2026 -
Scientific Research Projects Commission Membership	Altınbas University	2026 -

ACADEMIC AND PROFESSIONAL MEMBERSHIPS

Organisation	Membership	Year(s)

NON-UNIVERSITY EXPERIENCE

Country	Organisation	Duty	Year(s)

BOOKS

Fen Bilimleri ve Matematikte Uluslararası Araştırmalar
TÜTÜNCÜ HAVVA ESRA, VARDAR YEL NURCAN
Serüven Yayınevi, 978-625-6399-06-8, 2023
Scientific Book Chapter(s)

50 Soruda Tıbbi Laboratuvar Teknikerliği
KARADAYI ŞÜKRİYE, VARDAR YEL NURCAN, GÖNENÇ SULTAN CANSU
NOBEL, 9786052065884, 2022
Textbook Entire Book

ARTICLES

ARTICLES

Machine learning-driven classification of acidic and alkaline enzymes in the α/β hydrolase family
Maryam Ahmed Abed Alghabawi, Nurcan Vardar-Yel
BIOLOGIA, 2026
International DOI: https://doi.org/10.1007/s11756-025-02119-8

Recent advances of structure, function, and engineering of carboxylesterases for the pharmaceutical industry: A minireview
SÜRMELİ YUSUF,VARDAR YEL NURCAN,TÜTÜNCÜ HAVVA ESRA
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, 2025
International DOI: https://doi.org/10.1016/j.ijbiomac.2025.142206

Machine learning techniques for differentiating psychrophilic and non-psychrophilic bacterial α/β hydrolase enzymes
NURCAN VARDAR YEL
BIOLOGIA, 2025
International DOI: https://doi.org/10.1007/s11756-025-01920-9

Lipases for targeted industrial applications, focusing on the development of biotechnologically significant aspects: A comprehensive review of recent trends in protein engineering
VARDAR YEL NURCAN,SÜRMELİ YUSUF,TÜTÜNCÜ HAVVA ESRA
International Journal of Biological Macromolecules, 2024
International DOI: 10.1016/j.ijbiomac.2024.132853

Marine Microalgae Schizochytrium sp. S31: Potential Source for NewAntimicrobial and Antibiofilm Agent
Hammadi Al-Ogaidi Doaa Abdullah,KARAÇAM SEVİNÇ,GURBANOV RAFİG,VARDAR YEL NURCAN
Current Pharmaceutical Biotechnology, 2024
International DOI: 10.2174/0113892010291960240223054911

Machine Learning Approaches for Differentiating Thermophilic and Mesophilic Lipases
NURCAN VARDAR YEL
Gazi University Journal of Science Part A: Engineering and Innovation, 2024
National DOI: 10.54287/gujsa.1558391

Enhancement of Docosahexaenoic Acid Production by UV Mutagenesis Coupled with Flow Cytometry Screening in Schizochytrium sp. S31
NURCAN VARDAR YEL, Emrah Yelboğa , Nevin Gül Karagüler , Melek Tüter
Caucasian Journal of Science, 2024
International DOI: https://doi.org/10.48138/cjo.1559402

Regiospecific Oxidation of Chlorobenzene to 4-Chlororesorcinol, Chlorohydroquinone, 3-Chlorocatechol and 4-Chlorocatechol by Engineered Toluene o-Xylene Monooxygenases
YanıK-Yıldırım Cansu, Phul Onkar K., Roth Owen S., Tlatelpa Areli, Soria-P Gerardo, VARDAR YEL NURCAN, Schara Gonul
Applied and Environmental Microbiology, 2022
International DOI: 10.1128/aem.00358-22

Investigation of The Activity of Lipase Variants on Different 4-Nitrophenyl Esters by Spectrophotometric Assay
VARDAR YEL NURCAN
Caucasian Journal of Science, 2021
International DOI: 10.48138/cjo.968723

Surface residues serine 69 and arginine 194 of metagenome-derived lipase influence catalytic activity
Özgen Fatma Feyza,VARDAR YEL NURCAN,Roth Owen Scott,Shahbaz Lersa Sayyad,Schara Gonul
BIOCHEMICAL ENGINEERING JOURNAL, 2019
International

Manipulation of a glycolytic regulator alters growth and carbon partitioning in the marine diatom Thalassiosira pseudonana
Abbriano Raffaela,VARDAR NURCAN,Yee Daniel,Hildebrand Mark
Algal Research, 2018
International DOI: 10.1016/j.algal.2018.03.018

ARTICLES

Comparison of Cell Disruption and Lipid Extraction Methods for Improving LipidContent of Schizochytrium sp. S31
VARDAR NURCAN,Yelboga Emrah,TÜTER MELEK,GÜL-KARAGÜLER NEVİN
Journal of Molecular Biology and Biotechnology, 2017
International

Optimization of Cultivation and Supercritical Fluid Lipid Extraction Conditions of Schizochytrium sp. S31
VARDAR YEL NURCAN,Ayhan Yiğit,YELBOĞA EMRAH,Bahar Banu,TÜTER MELEK,GÜL KARAGÜLER NEVİN
International journal series in engineering science (IJSES), 2016
International

Cavity residue leucine 95 and channel residues glutamine 204, aspartic acid 211, and phenylalanine 269 of toluene o-xylene monooxygenase influence catalysis
Kurt Cansu,Sönmez Burcu,VARDAR NURCAN,Yıldırım Cansu,Schara Gönül
Applied Microbiology and Biotechnology, 2016
International DOI: 10.1007/s00253-016-7658-6

Fosmid cloning, nucleotide sequence, and characterization of a beta-lactamase gene from subsurface isolates
VARDAR NURCAN,Schara Gönül
Journal of Microbiology, 2012
International DOI: 10.1007/s12275-012-2139-9

Bacterial community composition of sediments from Artificial Lake Maslak, Istanbul, Turkey
ÇELİK BALCI NURGÜL,VARDAR NURCAN,Yelboga Emrah,GÜL-KARAGÜLER NEVİN
Environmental Monitoring and Assessment, 2012
International DOI: 10.1007/s10661-011-2368-0

PROCEEDINGS

Protein Mühendisliği ile Katma Değerli Maddeler Üreten Proses Teknolojilerin Geliştirilmesi
VARDAR YEL NURCAN
9.Uluslararası Bilimsel Araştırmalar ve Yenilikçi Çalışmalar Sempozyumu (ISSRIS'21), 2021
International

Pestisitler ve Bazı Ağır Metallerin Toksik Etkileri İle Serbest Radikaller ve Antioksidanlar Arasındakiİlişki
SUGEÇTİ SERKAN,VARDAR NURCAN,AKGÜN SELİN
VI. National Congress of Molecular Biology and Biotechnology, 2017
National

Specification of microalgal oil derived from schizochytrium sp.S31 and its nutritional benefits
VARDAR NURCAN,Yelboga Emrah,GÜL-KARAGÜLER NEVİN,TÜTER MELEK
XIII. Congress of Ecology and Environment with International Participation, 2017
International

Production of High Omega-3 Content Schizochytrium sp. S31 in Bioreactor
VARDAR NURCAN,YELBOGA EMRAH,YİĞİT AYHAN,TÜTER MELEK,GÜL-KARAGÜLER NEVİN
VI. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, 2017
National

Profiling of Complex Microbial Population in Soil Samples by Molecular Biology Techniques
VARDAR NURCAN,AKGÜN SELİN,SUGEÇTİ SERKAN
XIII. Uluslararası Katılımlı Ekoloji ve Çevre Kongresi, 2017
International

Evaluation of Carbon Monoxide Intoxication Among Patients Presenting with Nonspesific Symptoms to the Emergency Department
AKGÜN SELİN,VARDAR NURCAN,SUGEÇTİ SERKAN
XIII. Uluslararası Katılımlı Ekoloji ve Çevre Kongresi, 2017
International

PROCEEDINGS

Evaluation of Clinical Findings in Children with Acute Viral Hepatitis A
AKGÜN SELİN,VARDAR NURCAN,SUGEÇTİ SERKAN
XIII. Uluslararası Katılımlı Ekoloji ve Çevre Kongresi, 2017
International

Klinik Patojen Mikroorganizma Suşlarının Antibiyotiklere Karşı Oluşturduğu İnhibisyon Çaplarının Belirlenmesi ve Dirençli Suşlara Alternatif Yöntemler
SUGEÇTİ SERKAN,VARDAR NURCAN,KOÇER FERUDUN
XIII. Uluslararası Katılımlı Ekoloji ve Çevre Kongresi, 2017
International

Production of Heavy Metal-Free and High DHA Concentrated Omega-3 Fatty Acid and Supercritical Fluid Lipid Extraction
VARDAR NURCAN,YELBOGA EMRAH,BAHAR BANU
XIII. Uluslararası Katılımlı Ekoloji ve Çevre Kongresi, 2017
International

Computational Characterization of Unreviewed Proteins: A Bioinformatics Approach for Enzyme Discovery
TÜTÜNCÜ HAVVA ESRA, VARDAR YEL NURCAN, SÜRMELİ YUSUF
COZYME,
International

Identification and In Silico Characterization of Novel Enzymes for PET and PUR Degradation
TÜTÜNCÜ HAVVA ESRA, VARDAR YEL NURCAN, SÜRMELİ YUSUF
VI. International Enzyme and Bioprocess Days,
International

A novel beta-lactamase from subsurface sediments
VARDAR NURCAN, SCHARA GONUL
European Biotechnology Congress,
International

Assessment of Knowledge Levels, Attitudes and Behaviors of a Training and Research Hospital Staff on Medical Waste Management and Occupational Health and Safety in Medical Wastes
SUGEÇTİ SERKAN,VARDAR NURCAN,AKGÜN SELİN
XIII. Uluslararası Katılımlı Ekoloji ve Çevre Kongresi,
International

Machine Learning Strategies for Identifying Cold-Adapted α/β Hydrolase Enzymes
NURCAN VARDAR YEL
COZYME,
International

PROJECTS

Biyoinformatik Ve Moleküler Yaklaşım İle Plastik Bozunumunda Etkili Yeni Enzimlerin Bulunması Ve Karakterizasyonu (Researcher)
Tübitak 1001, 20.02.2025 -
National Continues

TEZP2022-2 : İspendere İçmeleri'nde Metagenomik Yaklaşım ile Mikrobiyal Populasyonun Belirlenmesi (Executive)
Scientific research project supported by Higher Education Institutions, 18.05.2023 - 22.11.2024
National Completed

Lipaz Enziminin Protein Mühendisliği Yöntemleriyle Biyoproses Endüstrileri İçin Geliştirilmesi (Executive)
Scientific research project supported by Higher Education Institutions, 21.01.2021 - 19.01.2022
National Completed

Schizochytrium sp Organizmasından Omega-3 Yağ Asitlerinin Eldesine Yönelik Optimizasyon Çalışmaları (Researcher)
Scientific research project supported by Higher Education Institutions, 28.04.2016 - 28.04.2017
National Completed

PROJECTS

İ.T.Ü Maslak Göletinin Mikrobiyolojik Topluluğu ve Biyojeokimyasal Özelliklerinin Araştırılması (Researcher)
Scientific research project supported by Higher Education Institutions, 01.05.2009 - 01.05.2011
National Completed

Asit maden sahalarının oluşumunu kontrol eden biyojeokimyasal faktörlerin araştırılması (Researcher)
TÜBİTAK Project, 06.01.2008 - 07.02.2010
National Completed

THESIS SUPERVISION

DISCRIMINATION OF ACIDIC AND ALKALINE ALPHA/BETA HYDROLASE ENZYMES THROUGH DATA-DRIVEN MACHINE LEARNING APPROACHES
MARYAM AHMED ABED ALGHABAWI
2026 Master's Degree

Determination of microbial composition of thermal and mineralspring in Turkey by metagenomic method
NOURAN ADEL ABDELAZIM ABDELAZIZ
2024 Master's Degree

Antimicrobial and anti-biofilm activities of lipids extracted from Schizochytrium sp. S31 microalgae
DOAA ABDULLAH HAMMADI AL-OGAIDI
2022 Master's Degree

Optimization of cultivation conditions and engineering by random mutagenesis for high lipid production in Schizochytrium sp. S31
NURCAN VARDAR
2016 Doctorate

Investigation of biogeochemical and microbiological characteristics of acid mine drainage in Balıkesir-Balya region by molecular biology techniques
NURCAN VARDAR
2011 Master's Degree

COURSES

Course Type	Course Code	Course Name
Master's Degree	BMSE525	MOLECULER BIOLOGY
Bachelor's Degree	MBG 306	MOLEKÜLER BİYOLOJİDE KULANILAN YÖNTEMLER II
Bachelor's Degree	MBG 302	MOLEKÜLER BİYOLOJİDE KULANILAN YÖNTEMLER I
Associate Degree	ADS227	NANOBİYOTEKNOLOJİ
Associate Degree	TLT100	TEMEL LABORATUVAR BİLGİSİ VE UYGULAMALARI
Associate Degree	TLT203	TIBBİ BİYOLOJİ VE GENETİK
Associate Degree	TLT205	KLİNİK MİKROBİYOLOJİ
Associate Degree	TLT202	MOLEKÜLER BİYOLOJİ TEKNİKLERİ
Associate Degree	TLT290	STAJ
Master's Degree	BMSE551	SPECIAL TOPICS IN BIOMEDICAL SCIENCES II

PERSONAL INFORMATION

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CONTACT INFORMATION

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