

Asst. Prof. UĞUR UZUNER

Personal Information

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Address: KTU Fen Fak. Molekuler Biyoloji ve Genetik Bolumu

International Researcher IDs

ORCID: 0000-0002-5308-3730

Yoksis Researcher ID: 125625

Education Information

Doctorate, Texas A&M University, Agriculture And Life Sciences, Plant Pathology And Microbiology, United States Of America 2008 - 2013

Postgraduate, Karadeniz Technical University, Fen Fakültesi, Biyoloji, Turkey 2003 - 2006

Undergraduate, Karadeniz Technical University, Fatih Eğitim Fakültesi, Orta Öğretim Fen-Matematik Alanları Eğitimi, Turkey 1998 - 2003

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Foreign Language, English Language Institute, Syracuse University, 2008

Dissertations

Doctorate, STRUCTURE DYNAMICS GUIDED ENZYME IMPROVEMENT OF ENDO-BETA-1, 4-XYLANASE I, Texas A&M University, Agrilife And Life Sciences, Plant Pathology And Microbiology, 2013

Postgraduate, Kuzey Anadolu Doğal Primula L. (PRIMULACEAE) Taksonlarının nrDNA ITS Bölgeleri Bakımından Karşılaştırılması, Karadeniz Technical University, Fen Fakültesi, Biyoloji Bölümü Moleküler Bitki Sistematiği, 2006

Research Areas

Life Sciences, Biochemistry, Enzymology, Molecular Biochemistry, Structural Biology, Bioinformatics, Biological Modelling, Biotechnology, Industrial Biotechnology, Microbial Biotechnology, Microbiology, Algalogy, Molecular Biology and Genetics, Genetic Engineering, Protein Engineering, Chemistry, Biochemistry, Protein Chemistry, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Karadeniz Technical University, Fen Fakültesi, Moleküler Biyoloji ve Genetik, 2018 - Continues
Assistant Professor, Karadeniz Technical University, Fen Fakültesi, Moleküler Biyoloji ve Genetik, 2015 - 2018
Research Assistant PhD, Karadeniz Technical University, Fen Fakültesi, Moleküler Biyoloji ve Genetik, 2014 - 2015

Courses

Fermentation Technologies, Postgraduate, 2019 - 2020
Biyoinformatik, Undergraduate, 2019 - 2020
Microalgae Biotechnology, Postgraduate, 2019 - 2020
Molecular Biology of the Gene, Postgraduate, 2019 - 2020
Mesleki İngilizce, Undergraduate, 2019 - 2020
Farmasötik Biyoteknoloji Uygulamaları Ve Ürünler , Undergraduate, 2017 - 2018

Jury Memberships

Doctorate, Doctorate, Karadeniz Teknik Üniversitesi, December, 2019
Post Graduate, Post Graduate, Recep Tayyip Erdoğan Üniversitesi, July, 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Exploring epigenetic drugs as potential inhibitors of SARS-CoV-2 main protease: a docking and MD simulation study**
Uzuner U., Akkus E., Kocak A., Çelik Uzuner S.
JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS, 2023 (SCI-Expanded)
- II. **Newly Synthesized N-Glycosidic Halochalcones Reveal Inhibitory Activity on Pancreatic Triacylglycerol Lipase**
Yikilmaz M., Fandakli S., ŞENER S. Ö., BADEM M., KANBOLAT Ş., YAYLI N., UZUNER U., ALİYAZICIOĞLU R.
Chemistry of Natural Compounds, vol.59, no.4, pp.629-637, 2023 (SCI-Expanded)
- III. **Artificial intelligence-based HDX (AI-HDX) prediction reveals fundamental characteristics to protein dynamics: Mechanisms on SARS-CoV-2 immune escape**
Yu J., Uzuner U., Long B., Wang Z., Yuan J. S., Dai S. Y.
iScience, vol.26, no.4, 2023 (SCI-Expanded)
- IV. **Dihydroisocoumarins and Phenylglycosides from Scorzonera longiana, Their Antimicrobial Activities and Molecular Docking Studies**
KORKMAZ B., RENDA G., BOZDAL G., ÇOŞKUNÇELEBİ K., Bozdeveci A., UZUNER U., YAYLI N.
Chemistry and Biodiversity, vol.20, no.4, 2023 (SCI-Expanded)
- V. **The effect of friction stir process on the mechanical, tribological, and biocompatibility properties of AZ31B magnesium alloy as a biomaterial: A pilot study**
Kahramanzade H., Celik-Uzuner S., Uzuner U., Sert Y., Küçükömeroğlu T.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART H-JOURNAL OF ENGINEERING IN MEDICINE, vol.236, pp.1720-1731, 2022 (SCI-Expanded)
- VI. **Homology modeling and heterologous expression of highly alkaline subtilisin-like serine protease from Bacillus halodurans C-125**
Tekin A., Uzuner U., Sezen K.
BIOTECHNOLOGY LETTERS, vol.43, no.2, pp.479-494, 2021 (SCI-Expanded)
- VII. **The Detailed Comparison of Cell Death Detected by Annexin V-PI Counterstain Using Fluorescence Microscope, Flow Cytometry and Automated Cell Counter in Mammalian and Microalgae Cells**
Koç E., Celik-Uzuner S., Uzuner U., Cakmak R.

JOURNAL OF FLUORESCENCE, vol.28, no.6, pp.1393-1404, 2018 (SCI-Expanded)

- VIII. **Improved pulp bleaching potential of *Bacillus subtilis* WB800 through overexpression of three lignolytic enzymes from various bacteria**
OZER A., UZUNER U., GÜLER H. İ., SAL F., BELDÜZ A. O., DENİZ İ., ÇANAKÇI S.
BIOTECHNOLOGY AND APPLIED BIOCHEMISTRY, vol.65, no.4, pp.560-571, 2018 (SCI-Expanded)
- IX. **Redesigning pH optimum of *Geobacillus* sp TF16 endoxylanase through in silico designed DNA swapping strategy**
UZUNER U., ÇANAKÇI S., BEKTAS K., SAPMAZ M. T., BELDÜZ A. O.
BIOCHIMIE, vol.137, pp.174-189, 2017 (SCI-Expanded)
- X. **Effects of various estrogen ligands on the structural conformation of human estrogen receptor alpha**
Chen X., UZUNER U., Li M., Shi W., Yuan J. S., Dai S. Y.
INTERNATIONAL JOURNAL OF MOLECULAR MEDICINE, vol.40, 2017 (SCI-Expanded)
- XI. **Phytoestrogens and Mycoestrogens Induce Signature Structure Dynamics Changes on Estrogen Receptor**
Chen X., Uzuner U., Li M., Shi W., Yuan J. S., Dai S. Y.
INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH, vol.13, no.9, 2016 (SCI-Expanded)
- XII. **Comparative analysis of insect gut symbionts for composition-function relationships and biofuel application potential**
Shi W., UZUNER U., Huang L., Jesudhasan P. R., Pillai S. D., Yuan J. S.
Biofuels, vol.2, no.5, pp.529-544, 2011 (SCI-Expanded)
- XIII. **HDX-Analyzer: a novel package for statistical analysis of protein structure dynamics**
Liu S., Liu L., UZUNER U., Zhou X., Gu M., Shi W., Zhang Y., Dai S. Y., Yuan J. S.
BMC BIOINFORMATICS, vol.12, 2011 (SCI-Expanded)
- XIV. **Enzyme structure dynamics of xylanase I from *Trichoderma longibrachiatum***
Uzuner U., Shi W., Liu L., Liu S., Dai S. Y., Yuan J. S.
BMC BIOINFORMATICS, vol.11, 2010 (SCI-Expanded)
- XV. **Internal transcribed spacer (ITS) polymorphism in the wild *Primula* (Primulaceae) taxa of Turkey**
Gultepe M., Uzuner U., ÇOŞKUNÇELEBİ K., BELDÜZ A. O., TERZİOĞLU S.
TURKISH JOURNAL OF BOTANY, vol.34, no.3, pp.147-157, 2010 (SCI-Expanded)

Articles Published in Other Journals

- I. **An Extensive Method for Maintenance of Sterility in Mammalian Cell Culture Laboratory Routine**
ÇELİK UZUNER S., UZUNER U.
Challenges, vol.8, no.2, pp.1-6, 2017 (Peer-Reviewed Journal)
- II. **Relationships among some endemic Hieracium L s str Asteraceae taxa based on internal transcribed spacer ITS**
GÜLTEPE M., ÇOŞKUNÇELEBİ K., BELDÜZ A. O., UZUNER U.
Biological Diversity and Conservation, vol.6, no.2, pp.134-141, 2014 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Hücre İskelet Sistemleri**
UZUNER U.
in: BECKER'İN HÜCRE DÜNYASI, Ali Osman BELDÜZ, Editor, PALME YAYINEVİ, New Jersey, pp.351-376, 2019
- II. **Salicylic Acid: Molecular Basis of Stress Resistance in Plants**
UZUNER U., SAĞLAM A., KADIOĞLU A.

Refereed Congress / Symposium Publications in Proceedings

- I. **The Utilization of Microalgal Wastes in Mass Production of Medicinal Plants**
EL M., ÇAKMAK R., UZUNER U.
International Eurasian Conference on Biotechnology and Biochemistry (BioTechBioChem 2020), Ankara, Turkey, 16 December 2020
- II. **Chlorella vulgaris is a Promising Biofertilizer for Camellia sinensis Organic Farming**
ÇAKMAK R., EL M., UZUNER U.
International Eurasian Conference on Biotechnology and Biochemistry (BioTechBioChem 2020), Ankara, Turkey, 16 December 2020
- III. **Algae Potentials for Crop Protection and Modern Agriculture**
Uzuner U.
Eurasian Congress on Molecular Biotechnology, Trabzon, Turkey, 19 - 21 September 2019, pp.39-40
- IV. **Extracellular Production of Bacillus halodurans C-125 Alkaline Protease in Bacillus subtilis XW800**
SEZEN K., TEKİN A., UZUNER U.
Eurasian Congress on Molecular Biotechnology, 19 - 21 September 2019
- V. **In-Depth Structural Analysis of Thermostable Alkaline Serine Protease from Bacillus halodurans C-125: An in silico Approach.**
Tekin A., UZUNER U., SEZEN K.
International Conference Of Genomics And Bioinformatics (ICGB), Aydın, Turkey, 1 - 04 November 2018, pp.1
- VI. **Effects of various estrogen ligands on the structural conformation of human estrogen receptor ?**
Chen X., UZUNER U., Li M., Shi W., Yuan J. S., Dai S. Y.
22nd World Congress on Advances in Oncology and 20th International Symposium on Molecular Medicine, Atina, Greece, 5 - 07 October 2017, pp.11-12
- VII. **Structure and Homology Modelling of Arabidopsis thaliana Non-expresser of Pathogenesis Related 1 Gene and Thioredoxin 5**
UZUNER U.
2nd Japan – Turkey International Symposium on Pharmaceutical and Biomedical Sciences (JATUSPAB-2), Trabzon, Turkey, 11 - 12 September 2017, pp.22
- VIII. **Empowering enzyme characteristics through rational design**
UZUNER U., ÇANAKÇI S., Bektas K. I., TUNCEL M., BELDÜZ A. O.
European Biotechnology Congress, Dubrovnik, Croatia, 25 - 27 May 2017, vol.256
- IX. **Determination of paper bleaching potentials of some ligninolytic enzymes produced in operon form**
ÇANAKÇI S., Ozer A., UZUNER U., GÜLER H. İ., BELDÜZ A. O., DENİZ İ.
European Biotechnology Congress, Dubrovnik, Croatia, 25 - 27 May 2017, vol.256
- X. **DETERMINATION OF WASTE PAPER PULP BLEACHING CAPACITY OF THREE LIGNINOLYTIC ENZYMES PRODUCED SIMULTANEOUSLY**
BELDÜZ A. O., ÖZER A., UZUNER U., GÜLER H. İ., DENİZ İ., ÇANAKÇI S.
Internatioanl DNA Day and Genome Congress, Kırşehir, Turkey, 24 - 28 April 2017, pp.149
- XI. **Improving the Alkaline Tolerance of Geobacillus sp.TF16 Endoxylanase by In Silico Design Driven DNA Swapping**
Uzuner U., Tuncel M., İnan K., Canakci S., Beldüz A. O.
11th International Conference on Protein Stabilisation, İstanbul, Turkey, 9 - 11 May 2016, pp.1
- XII. **TF16 endoxylanase by In Silico Design Driven DNA Swapping**
UZUNER U., İNAN BEKTAŞ K., tuncel m., ÇANAKÇI S., BELDÜZ A. O.
11th International Conference on Protein Stabilisation, 9 - 11 May 2016
- XIII. **Construction and Characterization of A New Chimeric Xylanase Active At High Temperature and pH**

TUNCEL M., UZUNER U., ÇOLAK D. N., BELDÜZ A. O., ÇANAKÇI S.

ICBMB 2015 International Conference on Biochemistry and Molecular Biology, Paris, France, 17 - 24 April 2015, pp.22

- XIV. **Hidrojen Deuterium Değişimi Kütle Spektrometrisi Tabanlı Endo Beta (1,4) Ksilanaz 1 in Enzim Karakteristiklerinin Geliştirilmesi**
UZUNER U., Sun S., Shi W., Dai S. Y., Yuan J. S.
22. Ulusal Biyoloji Kongresi, Eskişehir, Turkey, 23 - 27 June 2014, pp.178
- XV. **Yüksek Enerji İçerikli Hidrokarbon Üretimine Yönelik Olarak *Oryza sativa* spp. Böcek Savunma Geninin *Chlamydomonas reinhardtii* Hücrelerinde Overekspresyonu**
UZUNER U., Syrenne R., Kyoung Kim, , Yuan J. S.
22. Ulusal Biyoloji Kongresi, Eskişehir, Turkey, 23 - 27 June 2014, pp.277
- XVI. **Creating chimeras of different xylanases isolated from two *Geobacillus* species with DNA shuffling**
TUNCEL M., UZUNER U., BELDÜZ A. O., ÇANAKÇI S.
3rd International Molecular Biology and Biotechnology Congress 2014, Sarajevo, Bosnia And Herzegovina, 2 - 06 June 2014, pp.161
- XVII. **Improving the Efficiency of Homologous Gene Replacement by Disrupting the NHEJ Pathway for Gene *KusA* in the Oleaginous Fungus *Mortierella alpina***
Krueger K., Dai Z., UZUNER U.
Annual Meeting of the California-Nevada Section of the APS, California, United States Of America, 2 - 03 November 2012, vol.57, no.13, pp.1
- XVIII. **Agrobacterium-Based Engineering of *Chlamydomonas reinhardtii* (CC-124) For Autotrophic Production of Terpenoid Hydrocarbons**
UZUNER U., Syrenne R., Xie S., Dai S. Y., Dai S. Y., Yuan J. S.
2nd International Conference on Algal Biomass, Biofuels & Bioproducts, San Diego, California, United States Of America, 10 - 13 June 2012, pp.7
- XIX. **Hydrogen Deuterium Exchange Mass Spectrometry-Based Enzyme Dynamics Analysis Reveals New Structure Determinants And Mechanisms**
UZUNER U., Shi W., Guo H., Dai S. Y., Yuan J. S.
Symposium for Biotechnology Fuels and Chemicals (34th SBFC), New Orleans, Louisiana, United States Of America, 29 April - 04 May 2012, pp.10-4
- XX. **Metabolic Engineering of Green Algae for Autotrophic Production of Terpenoid Hydrocarbons**
UZUNER U., Syrenne R., Xie S., Dai S. Y., Yuan J. S.
Symposium for Biotechnology Fuels and Chemicals (34th SBFC), New Orleans, Louisiana, United States Of America, 29 April - 04 May 2012, pp.12-3
- XXI. **Beyond Structure Characterization: Structure Dynamics (Hydrogen Deuterium Exchange) Guided Biocatalyst Improvement**
UZUNER U., Shi W., Johnson Q., Guo H., Dai S. Y., Yuan J. S.
24th Sanibel Conference on Mass Spectrometry January, Pete Beach, Florida, United States Of America, 19 January 2012, pp.14-15
- XXII. **Dramatically Different Molecular Dynamics of Two Proteins with Similar Folding as Probed by Hydrogen Deuterium Exchange Mass Spectrometry and Molecular Dynamics Simulation**
UZUNER U., Shi W., Johnson Q., Guo H., Dai S. Y., Yuan J. S.
24th Sanibel Conference on Mass Spectrometry January, Pete Beach, Florida, United States Of America, 19 January 2012, pp.18
- XXIII. **A Novel Package for Statistical Analysis of Protein Structure Dynamics**
Liu S., Liu L., UZUNER U., Zhou X., Gu M., Shi W., Zhang Y., Dai S. Y., Yuan J. S.
The Ninth Asia Pacific Bioinformatics Conference (APBC 2011), Incheon, South Korea, South Korea, 11 - 14 January 2011, pp.8
- XXIV. **Novel Software Package for HDX-Mass Spectrometry Analysis**
Liu L., Zhou X., UZUNER U., Dai S. Y., Yuan J. S.
7th Annual MidSouth Computational Biology and Bioinformatics Society (MCBIOS) Conference, Jonesboro,

Arkansas, United States Of America, 19 - 20 February 2010, pp.14

- XXV. **Structure Dynamics Analysis of Xylanases**
UZUNER U., Shi W., Liu L., Dai S. Y., Yuan J. S.
MidSouth Computational Biology and Bioinformatics Society (7th Annual MCBIOS Conference), Jonesboro, Arkansas, United States Of America, 19 - 20 February 2010, pp.12
- XXVI. **Bazı Endemik Hieracium L. (Asteraceae) Türlerinin ITS nrDNA Dizileri Bakımından Karşılaştırılması**
GÜLTEPE M., ÇOŞKUNÇELEBİ K., UZUNER U., BELDÜZ A. O., ÇANAKÇI S., BERİŞ F. Ş.
19. Ulusal Biyoloji Kongresi, Trabzon, Turkey, 23 - 27 June 2008, pp.461
- XXVII. **Bazı Primula L. (Primulaceae) Türlerinin nrITS Bölgeleri Bakımından Karşılaştırılması**
GÜLTEPE M., UZUNER U., ÇOŞKUNÇELEBİ K., BELDÜZ A. O., TERZİOĞLU S.
19. Ulusal Biyoloji Kongresi, Trabzon, Turkey, 23 - 27 June 2008, pp.472
- XXVIII. **Bazı Hieracium L. (Asteraceae) Türlerinin Nüklear rDNA ITS Bölgeleri Açısından Karşılaştırılması**
ÇOŞKUNÇELEBİ K., GÜLTEPE M., UZUNER U., ÇANAKÇI S., BELDÜZ A. O.
18. Ulusal Biyoloji Kongresi, Aydın, Turkey, 26 - 30 June 2006, pp.264
- XXIX. **Bazı Hieracium L. (Asteraceae) Türlerinin Nüklear rDNA ITS Bölgeleri Açısından Karşılaştırılması**
ÇOŞKUNÇELEBİ K., GÜLTEPE M., UZUNER U., ÇANAKÇI S., BELDÜZ A. O.
18. Ulusal Biyoloji Kongresi, Aydın, Turkey, 26 - 30 June 2006, pp.264

Supported Projects

UZUNER U., Project Supported by Other Official Institutions, Doğu Karadeniz Kıyı Şeridi Makroalg Türlerinin Biyokimyasal İçeriklerinin Belirlenmesi, 2018 - Continues

KALAY E., KILIÇ A. O., YENİLMEZ E., ALİYAZICIOĞLU Y., SERDAR B., DEMİRBAĞ Z., KADIOĞLU A., DEĞİRMENCİOĞLU İ., DEMİR İ., KUTRUP B., et al., Project Supported by Higher Education Institutions, Karadeniz Teknik Üniversitesi Lazer Taramalı Konfokal Mikroskop Ünitesinin Kurulması, 2018 - 2019

ÇELİK UZUNER S., İNAN K., MURATOĞLU H., SAĞLAM A., UZUNER U., Project Supported by Higher Education Institutions, FEN FAKÜLTESİ MOLEKÜLER BİYOLOJİ VE GENETİK BÖLÜMÜNÜN MEMELİ HÜCRE KÜLTÜRÜ ÇALIŞMALARI İÇİN YAPILANDIRILMASI, 2015 - 2016

Patent

Uzuner U., A HERBAL COMPOSITION COMPRISING ANTIFUNGAL PROTEIN DERIVATIVES, Patent, CHAPTER B Implementation of Operations; Transport, Standard Registration, 2022

Activities in Scientific Journals

Turkish Journal of Botany, Editor, 2014 - 2014

Memberships / Tasks in Scientific Organizations

Kappa Delta Pi (Honor Society), Member, 2012 - Continues

Scientific Refereeing

TURKISH JOURNAL OF BOTANY, National Scientific Refreed Journal, February 2023

JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, Journal Indexed in SSCI, September 2022

Apiterapi ve Doğa Dergisi, National Scientific Refreed Journal, January 2018

Current Proteomics, SCI Journal, August 2016

Turkish journal of Botany, National Scientific Refreed Journal, September 2015

Botanical Journal of the Linnean Society, SCI Journal, June 2011

Scientific Research / Working Group Memberships

Ca21134 Towards Zer0 Pesticide Agriculture : European Network For Sustainability (T0p-Agri-Network), Karadeniz Technical University, Türkiye, <https://www.cost.eu/actions/CA21134/>, 2023 - Continues

Ca21162 - Establishing A Pan-European Network On Computational Redesign Of Enzymes (Cozyme), Belgium, <https://www.cost.eu/actions/CA21162/>, 2022 - Continues

Ca20101 - Plastics Monitoring Detection Remediation Recovery (Priority), Belçika, <https://www.cost.eu/actions/CA20101/>, 2022 - Continues

Ca19110 - Plasma Applications For Smart And Sustainable Agriculture (Plagri), University of Belgrade, Serbia, <https://www.cost.eu/actions/CA19110/#tabs|Name:overview>, 2020 - Continues

National Alliance for Advanced Biofuels and Bioproducts, Arizona State University, Arizona, USA, Amerika Birleşik Devletleri, <http://www.algalbbb.com/profile-naabb.html>, 2010 - 2013

Metrics

Publication: 48

Citation (WoS): 91

Citation (Scopus): 113

H-Index (WoS): 6

H-Index (Scopus): 7

Congress and Symposium Activities

Eurasian Congress of Molecular Biotechnology (ECOMB 2019), Attendee, Trabzon, Turkey, 2019

Eurasian Congress of Molecular Biotechnology (ECOMB 2019), Invited Speaker, Trabzon, Turkey, 2019

22nd World Congress on Advances in Oncology and 20th International Symposium on Molecular Medicine, Attendee, Athens, Greece, 2017

The Second Japan-Turkey International Symposium on Pharmaceutical and Biomedical Sciences - JATUSPAB-2", Attendee, Trabzon, Turkey, 2017

European Biotechnology Congress 2018, Attendee, Dubrovnik, Croatia, 2017

Ulusal Biyoloji Kongresi, Attendee, Eskisehir, Turkey, 2014

Symposium on Biotechnology for Fuels and Chemicals, Attendee, New Orleans, Louisiana, USA, United States Of America, 2012

The MidSouth Computational Biology and Bioinformatics Society, Attendee, Jonesboro, Arkansas, USA, United States Of America, 2010

Ulusal Biyoloji Kongresi, Attendee, Kusadasi, Aydin, Turkey, 2006

Awards

UZUNER U, 3rd Place In the Royal Academy of Engineer's Leaders in Innovation Fellowships final Pirch Session

2018/2019, Leaders Innovation Fellowship Program of Royal Academy of Engineering / Newton Fund, March 2019