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Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAP-7270-2021

ScopusID: 56919635900

Education Information

Post Doctorate, Ihsan Dogramaci Bilkent University, National Nanotechnology Research Center, Turkey 2021 - 2024

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biotechnology, Turkey 2012 - 2018

Postgraduate, The University of Edinburgh, School of Biological Sciences, Biotechnology, Scotland 2013 - 2014

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biotechnology, Turkey 2010 - 2012

Undergraduate Minor, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Turkey 2008 - 2010

Undergraduate, Hacettepe University, Mühendislik Fakültesi, Gıda Mühendisliği Bölümü, Turkey 2005 - 2010

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Transcriptional engineering of *Pichia pastoris* alcohol dehydrogenase 2 and alcohol oxidase 1 promoters for recombinant protein production, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biotechnology, 2018

Postgraduate, Species composition changes in the ovine intestinal microbiome resulting from invasive microbial infection and treatment, Yildiz Technical University, 2014

Postgraduate, Recombinant transglutaminase production by metabolically engineered *Pichia pastoris* cells, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biotechnology, 2012

Research Areas

Life Sciences, Biotechnology, Microbiology, Molecular Biology and Genetics

Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Molecular Biology And Genetics, 2024 - Continues

Researcher, Ihsan Dogramaci Bilkent University, National Nanotechnology Research Center, 2021 - 2024

Researcher, Universitaet für Bodenkultur Wien, Institute of Microbiology and Microbial Biotechnology, 2022 - 2022

Visiting Lecturer, Middle East Technical University, Faculty Of Engineering, Department Of Chemical Engineering, 2021 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Health benefits and risks of fermented foods—the PIMENTO initiative**
Todorovic S., Akpınar A., Assunção R., Bär C., Bavaro S. L., Berkel Kasikci M., Domínguez-Soberanes J., Capozzi V., Cotter P. D., Doo E., et al.
Frontiers in Nutrition, vol.11, 2024 (SCI-Expanded)
- II. **What makes Komagataella phaffii non-conventional?**
Ata Ö., Ergün B., Fickers P., Heisting L., Mattanovich D., Rebnegger C., Gasser B.
FEMS Yeast Research, vol.21, no.8, 2021 (SCI-Expanded)
- III. **Recombinant protein production in Pichia pastoris: From transcriptionally redesigned strains to bioprocess optimization and metabolic modelling**
Ergün B., Berríos J., Binay B., Fickers P.
FEMS Yeast Research, vol.21, no.7, 2021 (SCI-Expanded)
- IV. **Engineered Deregulation of Expression in Yeast with Designed Hybrid-Promoter Architectures in Coordination with Discovered Master Regulator Transcription Factor**
Ergün B., Demir İ., Özdamar T. H., Gasser B., Mattanovich D., ÇALIK P.
Advanced Biosystems, vol.4, no.4, 2020 (SCI-Expanded)
- V. **Engineering of alcohol dehydrogenase 2 hybrid-promoter architectures in Pichia pastoris to enhance recombinant protein expression on ethanol**
Ergün B., Gasser B., Mattanovich D., ÇALIK P.
Biotechnology and Bioengineering, vol.116, no.10, pp.2674-2686, 2019 (SCI-Expanded)
- VI. **Double promoter expression systems for recombinant protein production by industrial microorganisms**
Öztürk S., Ergün B., ÇALIK P.
Applied Microbiology and Biotechnology, vol.101, no.20, pp.7459-7475, 2017 (SCI-Expanded)
- VII. **Lignocellulose degrading extremozymes produced by Pichia pastoris: Current status and future prospects**
Gündüz Ergün B., ÇALIK P.
Bioprocess and Biosystems Engineering, vol.39, no.1, pp.1-36, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **Second generation Pichia pastoris strain and bioprocess designs**
Ergün B., Laçın K., Çaloğlu B., Binay B.
Biotechnology for Biofuels and Bioproducts, vol.15, no.1, 2022 (Scopus)
- II. **Interactions between Teladorsagia circumcincta Infections and Microbial Composition of Sheep with or without Monepantel Treatment—A Preliminary Study**
Watkins C. A., Bartley D. J., Ergün B., Yıldızhan B., Ross-Watt T., Morrison A. A., Rosales Sanmartín M. J., Strathdee F., Andrews L., Free A.
Ruminants, vol.1, no.1, pp.31-45, 2021 (Scopus)

Books

- I. **Hybrid architected promoter design to engineer expression in yeast**
Gündüz Ergün B., Çalık P.
in: Methods in Enzymology - Recombinant Protein Expression: Eucaryotic Hosts, William B O'Dell,Zvi Kelman, Editor, Academic Press , London, pp.81-104, 2021
- II. **Hybrid-architected promoter design to deregulate expression in yeast**
Gündüz Ergün B., Çalık P.
in: Methods in Enzymology - Recombinant Protein Expression: Eukaryotic Hosts, WILLIAM B. O'DELL,ZVI KELMAN, Editor, Academic Press , London, pp.105-128, 2019
- III. **Established and upcoming yeast expression systems**
Gündüz Ergün B., Çelik Akdur E., Çalık P.
in: Recombinant Protein Production in Yeast, Brigitte Gasser,Diethard Mattanovich, Editor, Humana Press, Inc. , New York, pp.1-74, 2019

Refereed Congress / Symposium Publications in Proceedings

- I. **Living biocatalysts**
Gündüz Ergün B.
EBDays2024/5th International Enzyme and Bioprocess Days, EBDays2024, İzmir, Turkey, 27 - 29 August 2024, pp.20
- II. **Synthetic Control over Pichia pastoris Expression System: From Promoter Engineering to Transcriptional Circuitry Redesign**
Gündüz Ergün B., Gasser B., Mattanovich D., Çalık P.
RPP11 / 11th Conference on Recombinant Protein Production, Girona, Spain, 17 - 19 October 2023, pp.103
- III. **Living Therapeutic Design for Pernicious Anemia by Engineering Probiotic Yeast with Synthetic Biology Approaches**
Gündüz Ergün B., Albayrak D., Şeker U. Ö. Ş.
FEMS 2023 / 10th Congress of European Microbiologists, Hamburg, Germany, 9 - 13 July 2023, pp.1104
- IV. **Novel genetic tools for Pichia pastoris strain engineering**
Gündüz Ergün B.
EBDays2022/3rd International Enzyme and Bioprocess Days, Tokat, Turkey, 9 - 11 September 2022, pp.23
- V. **Yr15 Screening of Turkish Bread Wheat Varieties Using KASP Markers for Warrior, A New Race of Stripe Rust Pathogen (Puccinia striiformis) on Wheat in Turkey**
Ölmez F., Akan K., Maraş Vanlıoğlu F., Uslu T., Gündüz Ergün B.
Plant Health: Challenges Solutions, Antalya, Turkey, 23 - 28 April 2017, pp.41
- VI. **Potential applications of transglutaminase enzyme in cereal products**
Gündüz Ergün B.
15th ICBC/15th International Cereal and Bread Congress, İstanbul, Turkey, 16 - 21 April 2016, pp.189
- VII. **Extracellular microbial pro-transglutaminase production by recombinant Pichia pastoris**
Gündüz Ergün B.
Pichia 2016, Antalya, Turkey, 3 - 06 April 2016, pp.63
- VIII. **Recombinant transglutaminase production by metabolically engineered Pichia pastoris**
Gündüz Ergün B., Yılmaz R., Çalık P.
ECB15/15th European Congress on Biotechnology, İstanbul, Turkey, 23 - 26 September 2012, pp.80
- IX. **Transglutaminase Production Using Modified Pichia pastoris with Metabolic Engineering**
Gündüz Ergün B., Çalık P.
International Food, Agriculture and Gastronomy Congress, Antalya, Turkey, 15 - 19 February 2012, pp.245-246

Supported Projects

Gündüz Ergün B., Şeker U. Ö. Ş., Özkul Koçak C., Dudak Şeker F. C., TUBITAK Project, Design of a Probiotic Strain Producing Human Milk Oligosaccharides through Synthetic Biology for Functional Food Applications, 2023 - 2026
Gündüz Ergün B., Elibol M., Şener Mumcu A., Güneş Altuntaş E., TUBITAK Project, Development of Lactobacillus plantarum Species with High β -Glucosidase Enzyme Activity through CRISPR/Cas9 Gene Editing Technology, and the Use of This Species and High-Activity Free and Immobilized β -Glucosidase Enzyme in Table Olive Production, 2023 - 2026
Gündüz Ergün B., Şeker U. Ö. Ş., TUBITAK Project, Next Generation Pichia pastoris Host Development for Recombinant Protein Production with CRISPR/dCas9-based Synthetic Transcription Factor Designs, 2023 - 2026
Gündüz Ergün B., TAGEM Tarımsal Araştırmalar ve Politikalar Genel Müdürlüğü Projesi, 2023 - 2024
Gündüz Ergün B., Şeker U. Ö. Ş., TUBITAK Project, Yaşayan İlaç Sistemleri İçin Probiyotik Maya Konakçı Hücre Geliştirilmesi, 2022 - 2024
Gündüz Ergün B., TAGEM Tarımsal Araştırmalar ve Politikalar Genel Müdürlüğü Projesi, 2018 - 2023
Gündüz Ergün B., TAGEM Tarımsal Araştırmalar ve Politikalar Genel Müdürlüğü Projesi, Gıda Endüstrisinde Yüksek Potansiyele Sahip Transglutaminaz Enzimi Üretimi İçin Pichia pastoris Mayası ile Biyoproses Geliştirilmesi, 2018 - 2023
Çalık P., TUBITAK Project, Pichia pastoris Alkol Dehidrojenaz-1 Promotorunun Geliştirilmesi ve Tasarlanmış Promotor ile Terapötik Protein Üretimini Artırılması, 2017 - 2019

Patent

Gündüz Ergün B., Çalık P., 'Design of Alcohol Dehydrogenase 2 (ADH2) Promoter Variants by Promoter Engineering, Patent, CHAPTER A Human Needs, The Invention Registration Number: US12091658B2 , Standard Registration, 2024
Gündüz Ergün B., Çalık P., MODIFIED AOX1 PROMOTER VARIANTS, Patent, CHAPTER A Human Needs, The Invention Recourse Number: PCT/TR2019/050783 , Standard Registration, 2019

Metrics

Publication: 21
Citation (WoS): 244
Citation (Scopus): 281
H-Index (WoS): 9
H-Index (Scopus): 9

Scholarships

TUBITAK 2218 National Postdoctoral Research Fellowship, TUBITAK, 2022 - 2024
European Cooperation in Science and Technology (EU-COST) Action CA18229 Yeast4Bio ITC Conference grant, European Commission, 2023 - 2023
TUBITAK 2224 Grant for Participation in Scientific Meetings Abroad, TUBITAK, 2023 - 2023
Yeast4Bio Short-term scientific mission, European Commission, 2022 - 2022
TUBITAK 2214 International Research Fellowship for PhD Students, TUBITAK, 2017 - 2018
TUBITAK 2211 National PhD Scholarship, TUBITAK, 2014 - 2016
Ministry of National Education International Postgraduate Scholarship, Ministry of Education, 2013 - 2014
TUBITAK 2210 National MSc Scholarship, TUBITAK, 2010 - 2012

Awards

Gündüz Ergün B., Çalık P., Silver Medal at ISIF'24 (9th International Invention Fair), Tc Teknoloji Ve Sanayi Bakanlığı,

October 2024

Gündüz Ergün B., Mattanocivh D., Gasser B., Fickers P., FEMS Yeast Research 2021 best article award, Fems Yeast Research Editorial Board, February 2022

Gündüz Ergün B., METU Graduate Courses Performance Award (PhD), Orta Doğu Teknik Üniversitesi, June 2014

Gündüz Ergün B., METU Graduate Courses Performance Award (MSc), Orta Doğu Teknik Üniversitesi, June 2012

Non Academic Experience

Public Research Center, TAGEM Journals, Biotech Studies

Ministry, Ministry of Agriculture and Forestry, GDAR, Biotechnology Research Center