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International Researcher IDs

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Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Biyoloji (Dr), Turkey 2011 - 2018

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Biyoloji (YI) (Tezli), Turkey 2008 - 2011

Undergraduate, Ankara University, Fen Fakültesi, Biyoloji Bölümü, Turkey 2004 - 2008

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Vocational Course, Deney Hayvanları Kullanım Sertifikası, Ankara Üniversitesi, 2013

Dissertations

Doctorate, Determining of the impacts of different environmental conditions and removal mechanisms on problematic geobacillus and anoxybacillus biofilms in dairy industry, Ankara University, Fen Bilimleri Enstitüsü, 2018

Postgraduate, TIDENTIFICATION OF BIOFILM FORMING ABILITIES OF Salmonella STRAINS ISOLATED FROM TURKEY, Ankara University, Fen Bilimleri Enstitüsü, Biyoloji (YI) (Tezli), 2011

Research Areas

Life Sciences, Microbiology, Molecular Biology and Genetics, Microbial Genetics, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Ankara University, Fen Fakültesi, Biyoloji Bölümü, 2022 - Continues

Research Assistant, Ankara University, Fen Fakültesi, Biyoloji Bölümü, 2009 - 2022

Academic and Administrative Experience

Erasmus Program Department Coordinator, Ankara University, Fen Fakültesi, Biyoloji Bölümü, 2023 - Continues

Teknofest Proje Değerlendirme Kurulu, Ankara University, Fen Fakültesi, Biyoloji Bölümü, 2022 - Continues

Courses

General Microbiology I, Undergraduate, 2023 - 2024

Microbial Biotechnology, Undergraduate, 2022 - 2023

Biyoteknolojide Gen Manipülasyonları, Postgraduate, 2022 - 2023

General Microbiology Laboratory I, Undergraduate, 2023 - 2024

Moleküler Genetik, Doctorate, 2022 - 2023

Biyoteknolojide Gen Manipülasyonları, Postgraduate, 2023 - 2024

Mikrobiyal Biyoteknoloji, Undergraduate, 2022 - 2023

Sağlık Mikrobiyolojisi, Undergraduate, 2023 - 2024

Progress to Professional Life, Undergraduate, 2020 - 2021

Transition to University Life and Life Skills, Undergraduate, 2020 - 2021

Biyoteknoloji ve Uygulama Alanları, Undergraduate, 2020 - 2021

Sağlık Mikrobiyolojisi, Undergraduate, 2018 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The Effects of Antiperspirant Aluminum Chlorohydrate on the Development of Antibiotic Resistance in *Staphylococcus epidermidis***
Aras A., RIZVANOĞLU S. S., Tanriverdi E. S., KARACA B., ERYILMAZ M.
MICROORGANISMS, vol.11, no.4, 2023 (SCI-Expanded)
- II. **Microbial Biofilms in Veterinary Medicine**
KIRAN F., KARACA B., Erdogan A. F.
ANKARA UNIVERSİTESİ VETERİNER FAKÜLTESİ DERGİSİ, vol.70, no.1, pp.107-114, 2023 (SCI-Expanded)
- III. **Exopolysaccharides of lactic acid bacteria isolated from honeybee gut and effects of their antibiofilm activity against *Streptococcus mutans***
KARACA B.
Anais da Academia Brasileira de Ciencias, vol.95, no.3, 2023 (SCI-Expanded)
- IV. **Analysis of Chemical Structure and Antibiofilm Properties of Exopolysaccharides from *Lactiplantibacillus plantarum* EIR/IF-1 Postbiotics**
Karaca B., Halışçelik O., Gursoy M., Kiran F., Loimaranta V., Soderling E., Gursoy U. K.
MICROORGANISMS, vol.10, no.11, 2022 (SCI-Expanded)
- V. **Targeting Nrf2 with Probiotics and Postbiotics in the Treatment of Periodontitis**
KARACA B., Yilmaz M., Gursoy U. K.
BIOMOLECULES, vol.12, no.5, 2022 (SCI-Expanded)
- VI. **Rapid detection of *Geobacillus* and *Anoxybacillus* species by quantitative qPCR (qPCR) in commercial dairy products**
KARACA B., Karakaya A. B., ÖZCAN B., ÇÖLERİ CİHAN A.
JOURNAL OF FOOD SAFETY, vol.42, no.2, 2022 (SCI-Expanded)
- VII. **The role of microbiota-derived postbiotic mediators on biofilm formation and quorum sensing-mediated virulence of *Streptococcus mutans*: A perspective on preventing dental caries**
Omeroglu E., KARACA B., Kibar H., HALIŞÇELİK O., KIRAN F.
MICROBIAL PATHOGENESIS, vol.164, 2022 (SCI-Expanded)
- VIII. **Investigation of antibacterial properties of polyacrylonitrile fibers modified by new functional**

groups and silver nanoparticles

Okay Z., Kalkan Erdoğan M., Karaca B., Karakışla M., Saçak M.

TURKISH JOURNAL OF CHEMISTRY, vol.46, pp.1137-1151, 2022 (SCI-Expanded)

- IX. **Mathematical Models for the Biofilm Formation of *Geobacillus* and *Anoxybacillus* on Stainless Steel Surface in Whole Milk**
KARACA B., Buzrul S., ÇÖLERİ CİHAN A.
FOOD SCIENCE OF ANIMAL RESOURCES, vol.41, no.2, pp.288-299, 2021 (SCI-Expanded)
- X. **Comparison of the chemical composition and biological effects of *Clitocybe nebularis* and *Infundibulicybe geotropa***
Dizeci N., ONAR O., KARACA B., Demirtas N., ÇÖLERİ CİHAN A., YILDIRIM Ö.
MYCOLOGIA, vol.113, pp.1156-1168, 2021 (SCI-Expanded)
- XI. **Postbiotics secreted by *Lactobacillus sakei* EIR/CM-1 isolated from cow milk microbiota, display antibacterial and antibiofilm activity against ruminant mastitis-causing pathogens**
SEVİN S., KARACA B., HALİŞÇELİK O., Kibar H., OmerOglou E., KIRAN F.
ITALIAN JOURNAL OF ANIMAL SCIENCE, vol.20, no.1, pp.1302-1316, 2021 (SCI-Expanded)
- XII. **The Remarkable Antibiofilm Activity of the Sweet Tooth Mushroom, *Hydnum repandum* (Agaricomycetes) Displaying Synergetic Interactions with Antibiotics**
Dizeci N., Karaca B., Onar O., Çöleri Cihan A., Akata I., Yıldırım Ö.
INTERNATIONAL JOURNAL OF MEDICINAL MUSHROOMS, vol.23, no.10, pp.45-60, 2021 (SCI-Expanded)
- XIII. ***Weissella cibaria* EIR/P2-derived exopolysaccharide: A novel alternative to conventional biomaterials targeting periodontal regeneration**
Kibar H., ARSLAN Y. E., CEYLAN A., KARACA B., HALİŞÇELİK O., KIRAN F.
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol.165, pp.2900-2908, 2020 (SCI-Expanded)
- XIV. ***Anoxybacillus* and *Geobacillus* biofilms in the dairy industry: effects of surface material, incubation temperature and milk type**
KARACA B., Buzrul S., ÇÖLERİ CİHAN A.
BIOFOULING, vol.35, no.5, pp.551-560, 2019 (SCI-Expanded)
- XV. **Antioxidant, Anticancer, Antimicrobial, and Antibiofilm Properties of the Culinary-Medicinal Fairy Ring Mushroom, *Marasmius oreades* (Agaricomycetes)**
Shomali N., ONAR O., KARACA B., Demirtas N., ÇÖLERİ CİHAN A., AKATA I., Yildirim Ö.
INTERNATIONAL JOURNAL OF MEDICINAL MUSHROOMS, vol.21, no.6, pp.571-582, 2019 (SCI-Expanded)
- XVI. **Determination of the biofilm production capacities and characteristics of members belonging to *Bacillaceae* family**
ÇÖLERİ CİHAN A., KARACA B., Ozel B. P., KILIÇ T.
WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY, vol.33, no.6, 2017 (SCI-Expanded)
- XVII. **A Comparative Study: Taxonomic Grouping of Alkaline Protease Producing *Bacilli***
Tekin N., ÇÖLERİ CİHAN A., KARACA B., Cokmus C.
POLISH JOURNAL OF MICROBIOLOGY, vol.66, no.1, pp.39-56, 2017 (SCI-Expanded)
- XVIII. **Biofilm characteristics and evaluation of the sanitation procedures of thermophilic *Aeribacillus pallidus* E334 biofilms**
KILIÇ T., KARACA B., Ozel B. P., ÖZCAN B., Cokmus C., ÇÖLERİ CİHAN A.
BIOFOULING, vol.33, no.4, pp.352-367, 2017 (SCI-Expanded)
- XIX. **EFFECTS OF P22 BACTERIOPHAGE ON *SALMONELLA ENTERICA* SUBSP *ENTERICA* SEROVAR *TYPHIMURIUM* DMC4 STRAIN BIOFILM FORMATION AND ERADICATION**
KARACA B., AKÇELİK N., AKÇELİK M.
ARCHIVES OF BIOLOGICAL SCIENCES, vol.67, no.4, pp.1361-1367, 2015 (SCI-Expanded)
- XX. **MODELING AND PREDICTING THE BIOFILM FORMATION OF DIFFERENT *SALMONELLA* STRAINS**
KARACA B., Buzrul S., Tato V., AKÇELİK N., AKÇELİK M.
JOURNAL OF FOOD SAFETY, vol.33, no.4, pp.503-508, 2013 (SCI-Expanded)
- XXI. **Biofilm-producing abilities of *Salmonella* strains isolated from Turkey**
KARACA B., AKÇELİK N., AKÇELİK M.

Articles Published in Other Journals

- I. **Postbiotics of the *Lactiplantibacillus plantarum* EIR/IF-1 Strain Show Antimicrobial Activity against Oral Microorganisms with pH Adaptation Capability**
Karaca B., Gursoy M., KIRAN F., Loimaranta V., Söderling E., Gursoy U. K.
MICROBIOLOGY RESEARCH, vol.14, no.3, pp.1442-1456, 2023 (ESCI)
- II. **CONTROL OF THERMOPHILIC SPORES BY SPORICIDAL AGENTS AND THERMAL INACTIVATION**
Karakaya A. B., Karaca B., Ozcan B., Çöleri Cihan A.
JOURNAL OF MICROBIOLOGY BIOTECHNOLOGY AND FOOD SCIENCES, vol.11, no.6, 2022 (ESCI)
- III. **Evaluation of Clean-in-Place Agents on the Removal of Thermophilic Biofilms Formed under Partially Simulate Conditions Associated with the Dairy Industry**
KARACA B., Karakaya A. B., Gursoy G. E., Cihan A.
Food Protection Trends, vol.42, no.1, pp.38-47, 2022 (Scopus)
- IV. **Reduction of Salmonella Typhimurium, Escherichia coli, and Staphylococcus aureus Biofilms by Electrolysis**
Salmonella Typhimurium, Escherichia coli ve Staphylococcus aureus Biyofilmlerinin Elektrolizle Giderimi
KARACA B.
Adiyaman University Journal of Science, vol.11, no.1, pp.166-181, 2021 (Scopus)
- V. **Abiyotik yüzeylerde termofilik Anoxybacillus rupiensis DSM 17127T suşunun biyofilm oluşumu ve polistiren yüzeyler üzerindeki biyofilm yapısının giderimi**
KILIÇ T., ÇÖLERİ CİHAN A., KARACA B.
Balıkesir Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.23, no.2, pp.455-470, 2021 (Peer-Reviewed Journal)
- VI. **Green Synthesis of Silver Nanoparticles from Phaseolus vulgaris L. Extracts and Investigation of their Antifungal Activities**
EDİZ E., KURTAY G., KARACA B., BÜYÜK İ., GÖKDEMİR Ş. F., ARAS E. S.
Hacettepe Journal of Biology and Chemistry, 2020 (Peer-Reviewed Journal)
- VII. **Antibiofilm Activities of Fluoride Releasing Restorative Materials**
TARTICI M., TARTICI T., KARACA B., GÜR G.
Balkan Journal of Dental Medicine, vol.24, no.3, pp.8-15, 2020 (Peer-Reviewed Journal)
- VIII. **The potential thermophilic Bacilli contaminants for dairy industry**
KARACA B., ÇÖLERİ CİHAN A.
Natural and Engineering Sciences, vol.5, no.2, pp.53-67, 2020 (Peer-Reviewed Journal)
- IX. **Anti-Biofilm and Antimicrobial Activities of Five Edible and Medicinal Macrofungi Samples on Some Biofilm Producing Multi Drug Resistant Enterococcus Strains**
KARACA B., ÇÖLERİ CİHAN A., AKATA I., ALTUNER E. M.
Turkish Journal of Agriculture - Food Science and Technology, vol.8, no.1, pp.69-80, 2020 (Peer-Reviewed Journal)
- X. **Antimicrobial and antibiofilm activities of Lentinus edodes, Lactarius delicious, and Ganoderma lucidum**
Karaca B., Akata I., ÇÖLERİ CİHAN A.
Kastamonu Üniversitesi Orman Fakültesi Dergisi, vol.17, no.4, pp.660-668, 2017 (Peer-Reviewed Journal)
- XI. **PRODUCTIVE BIOFILMS FROM MESOPHILIC TO THERMOPHILIC ENDOSPORE-FORMING BACILLI FOR INDUSTRIAL APPLICATIONS**
Ozel P. B., KILIÇ T., KARACA B., Yildiz E. D., Cokmus C., ÇÖLERİ CİHAN A.
JOURNAL OF MICROBIOLOGY BIOTECHNOLOGY AND FOOD SCIENCES, vol.7, no.1, pp.14-21, 2017 (ESCI)
- XII. **Antimicrobial and antibiofilm activities of Lentinus edodes, Lactarius delicious, and Ganoderma lucidum**
KARACA B., AKATA I., ÇÖLERİ CİHAN A.
KASTAMONU UNIVERSITY JOURNAL OF FORESTRY FACULTY, vol.17, no.4, pp.660-668, 2017 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **Effects Of Lactic Acid Bacteria Derived Postbiotics Against Oral Microorganisms**
KARACA B., GURSOY M., KIRAN F., Loimaranta V., Soderling E., Gürsoy U. K.
2. Uluslararası Dental Oral Enfeksiyonlar ve 1. Ağız Mikrobiyotası Kongresi, Sakarya, Turkey, 18 March 2022, pp.60
- II. **Biofilm Formation and Removal Studies on Facultative Thermophile *Bacillus pumilus***
KILIÇ T., KARACA B., ÇÖLERİ CİHAN A.
VI. International Congress on Molecular Biology and Biotechnology, Afyon, Turkey, 22 December 2017
- III. **Evaluation of *Pleurotus ostreatus* extracts for its Potential Antibiofilm Activity**
KARACA B., SHOMALI N., KARAKAYA A. B., ÇÖLERİ CİHAN A., YILDIRIM Ö.
1st International Congress on Medicinal and Aromatic Plants –natural and healthy life, 10 - 12 May 2017
- IV. **SYNERGISM BETWEEN LACTARIOUS DELICIOUS AND VANCOMYCIN AGAINST VANCOMYCIN-RESISTANT *ENTEROCOCCUS FAECIUM***
ÇÖLERİ CİHAN A., KARACA B., ALTUNER E. M., AKATA I., YILDIRIM Ö.
I. INTERNATIONAL CONGRESS on MEDICINAL and AROMATIC PLANTS: “NATURAL and HEALTHY LIFE”, Konya, Turkey, 10 April - 11 July 2017, pp.912
- V. **ANTIBIOFILM EFFECTS OF THREE MACROFUNGI (*MORCHELLA ANGUSTICEPS*, *TRAMETES VERSICOLOR*, *LACTARIOUS DELICIOUS*) ON *ENTEROCOCCUS FAECALIS***
ÇÖLERİ CİHAN A., KARACA B., KARAKAYA A. B., AKATA I., ALTUNER E. M.
I. INTERNATIONAL CONGRESS on MEDICINAL and AROMATIC PLANTS: “NATURAL and HEALTHY LIFE”, Konya, Turkey, 10 April - 11 July 2017, pp.908
- VI. ***Brevibacillus thermoruber* B93: a remarkable biofilm producing strain for further industrial applications.**
Ozel P. B., Kilic T., KARACA B., ÇÖLERİ CİHAN A.
Biofilms 7, Porto, PORTUGAL, 26 - 28 June 2016
- VII. **Determinations of biofilm characteristics and evaluation of sanitation procedurs on biofilms of thermophilic *Aeribacillus pallidus***
Kilic T., Ozel P. B., KARACA B., ÇÖLERİ CİHAN A.
Biofilms 7, Porto, PORTUGAL, 26 - 28 June 2016
- VIII. **Determination of biofilm characteristics and evaluation of the sanitation procedures on biofilms of thermophilic *Aeribacillus pallidus* P3 17**
Tugba K., Ozel P. B., KARACA B., ÖZCAN B., ÇÖLERİ CİHAN A.
Biofilms 7, Porto, Portugal, 26 - 28 June 2016
- IX. ***Brevibacillus thermoruber* B93 a remarkable biofilm producing strain for further industrial applications P2 31**
Ozel P. B., Kilic T., KARACA B., ÇÖKMÜŞ C., ÇÖLERİ CİHAN A.
Biofilm 7, Porto, Portugal, 26 - 28 June 2016
- X. **LENTİNULA EDODES (BERK.) PEGLER. (SHİİTAKE): ANTİMİKROBİYALVE ANTİBİYOFİLM KULLANIM POTANSİYELLERİNİN ARAŞTIRILMASI,**
KARACA B., AKATA I., AKÇELİK M.
II. ULUSAL MİKOLOJİ GÜNLERİ, Turkey, 1 - 03 September 2015
- XI. **More Powerful Salmonella Biofilms A New Scenario Directed by the Subinhibitory Antibiotic Concentrations**
KARACA B., ÖZDEMİR C., FATMA NESLİHAN Y., AKÇELİK M.
25th ECCMID Congress, Copenhagen, DENMARK, 2015, 25 - 28 April 2015
- XII. **The role of extracellular DNA in Salmonella biofilms is it in intimate relationship with matrix or initial adhesion**
ÖZDEMİR C., KARACA B., AKÇELİK N.
25th ECCMID Congress, Copenhagen, DENMARK, 2015, Ankara, Turkey, 25 - 28 April 2015
- XIII. **More powerful Salmonella biofilms a new scenario directed by subinhibitory antibiotic concentrations**

KARACA B., AKÇELİK M., TAŞKALE KARATUĞ N., yüksel n.

25th ECCMID Congress, Copenhagen, DENMARK, 2015, Ankara, Turkey, 25 - 28 April 2015

XIV. **B. KARACA, GANODERMA LUCIDUM'UN ANTMİKROBİYAL VE ANTİBİYOFİLMETKİLERİNİN DEĞERLENDİRİLMESİ,**

Karaca B., Akata I., Akçelik M.

1. ULUSAL MİKOLOJİ GÜNLERİ, Erzurum, Turkey, 1 - 04 September 2014

XV. **Ganoderma lucidum un Curtis P karst Antimikrobiyal ve Antibiyofilm Etkilerinin Değerlendirilmesi**
KARACA B., AKÇELİK M.

Ulusal Mikoloji Günleri, Turkey, 1 - 03 September 2014, pp.30

XVI. **THE EFFICACY OF P22 BACTERIOPHAGE AS A METHOD OF SALMONELLA TYPHIMURIUM BIOFILM ERADICATION**

KARACA B., Özdemir C., AKÇELİK M.

23RDECCMID CONGRESS, BERLİN, GERMANY, 27 - 30 April 2013

XVII. **The efficacy of P22 bacteriophage as a method of Salmonella Typhimurium biofilm eradication**
KARACA B., AKÇELİK M., TAŞKALE KARATUĞ N., YÜKSEL F. N.

23 rd European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), 27 - 30 April 2013

XVIII. **Biofilm producing ability of Salmonella Typhimurium BK4 isolated from Turkey 22nd European Congress of Clinical Microbiology and Infectious Diseases ECCMID**

KARACA B., YÜKSEL F. N., EŞİYOK Ö. G., DIANI M., BADALLI N., YAVAŞ B., AKÇELİK N., AKÇELİK M.

22nd. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), 31 March - 03 May 2012

XIX. **Biofilm producing ability of Salmonella TyphimuriumBK4, isolated From Turkey**

KARACA B., Ariafar N., Diani M., Taşkale Karatug N., Yavaş B.

22ND ECCMID CONGRESS, LONDON, UK, 31 March - 03 April 2012

Supported Projects

Çöleri Cihan A., Karaca B., TUBITAK Project, Süt ve Süt Ürünlerinde Kontaminasyon İndikatörü olarak Bilinen Bacillaceae Ailesine Üye Sporlu Basillerin Multipleks qRT-PCR ile Tespitine Yönelik Kit Geliştirilmesi, 2023 - 2024

Karaca B., TUBITAK Project, Evaluation of the Effects of Lactobacillus plantarum F.10 Strain Postbiotic Mediators on Periodontal Disease-Causing Pathogens with Antimicrobial, Antibiofilm and Antivirulent Approaches, 2021 - 2022

Karaca B., Project Supported by Higher Education Institutions, Dental biyofilm (plak) gideriminde bakteriyel ekzopolisakkaritlerin potansiyel etkilerinin belirlenmesi, 2019 - 2020

Karaca B., Çöleri Cihan A., TUBITAK Project, Süt Endüstrisinde Termofilik Basillerin Biyofilm Oluşumlarının ve Biyofilm-Spor Giderimlerinin Mikrobiyolojik, Mikroskopik ve Moleküler Biyolojik Tekniklerle İncelenmesi, 2017 - 2020

Çöleri Cihan A., Karaca B., Project Supported by Higher Education Institutions, Termofilik Anoxybacillus türlerinde α-amilaz genlerinde yapısal ve işlevsel genomik çalışmalar., 2016 - 2017

Scientific Refereeing

FRONTIERS IN MICROBIOLOGY, SCI Journal, July 2022

Metrics

Publication: 52

Citation (WoS): 162

Citation (Scopus): 147

H-Index (WoS): 8

H-Index (Scopus): 7

Scholarships

2219 - Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TÜBİTAK, 2021 - 2022

Artistic Activity

KARACA B., Biyofilm Oluşumu ve Su Sistemlerinde Patojen Mikroorganizmalar İçin Önemi, November 2017