

Assoc. Prof. MUSTAFA GÜNGÖRMÜŞ

Personal Information

Office Phone: [+90 0312 906 2724](tel:+9003129062724)

Email: mgungormus@aybu.edu.tr

Web: <https://avesis.aybu.edu.tr/mgungormus>

International Researcher IDs

ScholarID: gungormus

ORCID: 0000-0001-8894-0467

Publons / Web Of Science ResearcherID: F-2814-2011

ScopusID: 14062083200

Yoksis Researcher ID: 27688

Education Information

Doctorate, University of Washington, School of Engineering, Materials Science And Engineering, United States Of America
2006 - 2012

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Moleküler Biyoloji-Genetik Ve Biyoteknoloji (YI)
(Tezli), Turkey 2003 - 2006

Undergraduate, Istanbul University, Cerrahpaşa Tıp Fakültesi, Tıbbi Biyolojik Bilimler Bölümü, Turkey 1998 - 2003

Foreign Languages

English, C2 Mastery

Dissertations

Doctorate, Design and Applications of Solid-Binding Peptides for Hard Tissue Engineering, University Of Washington,
Materials Science And Engineering, 2012

Postgraduate, Controlled biomineralization towards tissue engineering using genetically engineered hydroxyapatite
binding peptides, İstanbul Teknik Üniversitesi, Otomotiv, Moleküler Biyoloji-Genetik Ve Biyoteknoloji (YI) (Tezli), 2006

Research Areas

Biomedical Engineering, Life Sciences, Biotechnology, Molecular Biology and Genetics

Academic Titles / Tasks

Assistant Professor, Ankara Yıldırım Beyazıt University, Dış Hekimliği Fakültesi, Temel Bilimler, 2015 - Continues

Assistant Professor, Ankara Yıldırım Beyazıt University, Mühendislik ve Doğa Bilimleri Fakültesi, Biyomedikal
Mühendisliği, 2017 - 2023

Lecturer PhD, University of Washington, School Of Engineering, Materials Science And Engineering, 2012 - 2013

Research Assistant, University of Washington, School Of Engineering, Materials Science And Engineering, 2006 - 2012

Academic and Administrative Experience

Assistant Manager of Research and Application Center, Ankara Yildirim Beyazıt University, Rektörlük Merkezi, MERLAB Uygulama ve Araştırma Merkezi, 2020 - 2023

Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi, Ankara Yildirim Beyazıt University, Rektörlük Merkezi, MERLAB Uygulama ve Araştırma Merkezi, 2019 - 2019

Ankara Yıldırım Beyazıt Üniversitesi, Diş Hekimliği Fakültesi, 2017 - 2017

Courses

Bioinspired Design and Engineering of Materials, Postgraduate, 2019 - 2020

Introduction to Biomaterials, Undergraduate, 2018 - 2019

Introduction to Innovation and Technology Commercialization, Undergraduate, 2018 - 2019

Scientific Communication, Undergraduate, 2016 - 2017

Temel Klinik ve Laboratuvar Becerileri Eğitimi, Undergraduate, 2016 - 2017

Advising Theses

Güngörmüş M., Aksoy M., Yumurta Kabuğu Kaynaklı Hidroksiapatitin Dental Pulpa Kök Hücreleri Üzerindeki Sitotoksik Etkisinin ve Fiziksel Özelliklerinin İn-Vitro Ortamda Değerlendirilmesi, Doctorate, M.BUSE(Student), Continues

Güngörmüş M., N-heptil-D-galaktonamid (GalC7) tabanlı hidrojellerin sert doku mühendisliğinde doku iskelesi olarak kullanım potansiyelinin in vitro olarak incelenmesi, Postgraduate, G.Yalçınkaya(Student), 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Salivary opiorphin levels in denture-related traumatic ulcers.**
Ozdogan M. S., Gungormus M.
Oral diseases, 2023 (SCI-Expanded)
- II. **In vitro caries- preventive effect of a mineralization-promoting peptide combined with fluoride gel on sound primary teeth**
Yaşar M., Bal C., Aksoy M., Güngörmüş M., Orhan K.
INTERNATIONAL JOURNAL OF PAEDIATRIC DENTISTRY, pp.1-11, 2023 (SCI-Expanded)
- III. **Thermal necrosis-aided dental implant removal: A rabbit model pilot study**
HASANOĞLU ERBAŞAR G. N., GÜNGÖRMÜŞ M., ALİMOĞULLARI E., ÇAYLI S., PEKER E., Narin A., ORHAN M.
Medicina Oral Patologia Oral y Cirugia Bucal, vol.28, no.2, 2023 (SCI-Expanded)
- IV. **Effects of a mineralization-promoting peptide on the physical and chemical properties of mineral trioxide aggregate**
Öztürk Z., Bal C., GÜNGÖRMÜŞ M., Aksoy M.
Journal of the Mechanical Behavior of Biomedical Materials, vol.138, 2023 (SCI-Expanded)
- V. **Biocatalytic synthesis and ordered self-assembly of silica nanoparticles via a silica-binding peptide**
Gungormus M.
BEILSTEIN JOURNAL OF NANOTECHNOLOGY, vol.14, pp.280-290, 2023 (SCI-Expanded)
- VI. **Acetone extracts of Berberis vulgaris and Cornus mas L. induce apoptosis in MCF-7 breast cancer cells**
Uslu B., Yaman M., ÖZDEMİR SANCI T., GÜNGÖRMÜŞ M., Köprü Ç. Z., Güneş F. E.
Turkish Journal of Medical Sciences, vol.53, no.5, pp.1476-1488, 2023 (SCI-Expanded)
- VII. **Peptide-assisted pre-bonding remineralization of dentin to improve bonding**
GÜNGÖRMÜŞ M., TULUMBACI F.

Journal of the Mechanical Behavior of Biomedical Materials, vol.113, 2021 (SCI-Expanded)

- VIII. **Tear Opiorphin Levels in Ocular Pain Caused by Corneal Foreign Body.**
Ozdogan S., Sonmez C., Yolcu D., GÜNGÖRMÜŞ M.
Cornea, vol.39, no.11, pp.1377-1380, 2020 (SCI-Expanded)
- IX. **In vitro remineralization of primary teeth with a mineralization-promoting peptide containing dental varnish.**
Tulumbaci F., Gungormus M.
Journal of applied oral science : revista FOB, vol.28, 2020 (SCI-Expanded)
- X. **Accelerated Calcium Phosphate Mineralization by Peptides with Adjacent Oppositely Charged Residues**
GÜNGÖRMÜŞ M., ÖZDOĞAN M. S., ERTEM S. Y., TULUMBACI F., KARA H., ORHAN M.
ACS Biomaterials Science and Engineering, vol.6, no.7, pp.3791-3798, 2020 (SCI-Expanded)
- XI. **A microbiological assessment of peri-implant sites and implant-abutment interfaces in diabetic and healthy individuals**
ERTEM S. Y., GÜNGÖRMÜŞ M., ÖZDOĞAN M. S., ORHAN M.
International Journal of Clinical and Experimental Medicine, vol.13, no.1, pp.208-215, 2020 (SCI-Expanded)
- XII. **Silicon nitride ceramic for all-ceramic dental restorations**
ÖZDOĞAN M. S., GÜNGÖRMÜŞ M., Çelik A., TOPATEŞ G.
Dental Materials Journal, vol.39, no.6, pp.1080-1086, 2020 (SCI-Expanded)
- XIII. **Transient Heat Transfer in Dental Implants for Thermal Necrosis-Aided Implant Removal: A 3D Finite Element Analysis**
Gungormus M., Erbasar G. N.
The Journal of oral implantology, vol.45, no.3, pp.196-201, 2019 (SCI-Expanded)
- XIV. **Salivary opiorphin in dental pain: A potential biomarker for dental disease**
Ozdogan M. S., Gungormus M., Yusufoglu S., Ertem S. Y., Sonmez C., Orhan M.
Archives of Oral Biology, vol.99, pp.15-21, 2019 (SCI-Expanded)
- XV. **Cementomimetics constructing a cementum-like biomineralized microlayer via amelogenin-derived peptides**
Gungormus M., Oren E. E., Horst J. A., Fong H., Hnilova M., Somerman M. J., Snead M. L., Samudrala R., Tamerler C., Sarikaya M.
International Journal of Oral Science, vol.4, no.2, pp.69-77, 2012 (SCI-Expanded)
- XVI. **In vitro labeling of hydroxyapatite minerals by an engineered protein**
Yuca E., Karatas A. Y., Seker U. O. S., Gungormus M., Dinler-Doganay G., Sarikaya M., Tamerler C.
Biotechnology and Bioengineering, vol.108, no.5, pp.1021-1030, 2011 (SCI-Expanded)
- XVII. **Biofunctionalization of materials for implants using engineered peptides**
Khatayevich D., Gungormus M., Yazici H., So C., Cetinel S., Ma H., Jen A., Tamerler C., Sarikaya M.
Acta Biomaterialia, vol.6, no.12, pp.4634-4641, 2010 (SCI-Expanded)
- XVIII. **Self assembled bi-functional peptide hydrogels with biomineralization-directing peptides**
Gungormus M., Branco M., Fong H., Schneider J. P., Tamerler C., Sarikaya M.
Biomaterials, vol.31, no.28, pp.7266-7274, 2010 (SCI-Expanded)
- XIX. **Molecular biomimetics: GEPI-based biological routes to technology.**
Tamerler C., Khatayevich D., Gungormus M., Kacar T., Oren E. E., Hnilova M., Sarikaya M.
Biopolymers, vol.94, no.1, pp.78-94, 2010 (SCI-Expanded)
- XX. **Quartz binding peptides as molecular linkers towards fabricating multifunctional micropatterned substrates**
Kacar T., Ray J., Gungormus M., Oren E. E., Tamerler C., Sarikaya M.
Advanced Materials, vol.21, no.3, pp.295-299, 2009 (SCI-Expanded)
- XXI. **Regulation of in vitro calcium phosphate mineralization by combinatorially selected hydroxyapatite-binding peptides**
Gungormus M., Fong H., Kim I. W., Evans J. S., Tamerler C., Sarikaya M.
Biomacromolecules, vol.9, no.3, pp.966-973, 2008 (SCI-Expanded)

- XXII. **Peptide-mediated surface-immobilized quantum dot hybrid nanoassemblies with controlled photoluminescence**
Zin M. T., Munro A. M., Gungormus M., Wong N., Ma H., Tamerler C., Ginger D. S., Sarikaya M., Jen A. K.
Journal of Materials Chemistry, vol.17, no.9, pp.866-872, 2007 (SCI-Expanded)
- XXIII. **Materials specificity and directed assembly of a gold-binding peptide**
Tamerler C., Duman M., Oren E. E., Gungormus M., Xiong X., Kacar T., Parviz B. A., Sarikaya M.
Small, vol.2, no.11, pp.1372-1378, 2006 (SCI-Expanded)

Articles Published in Other Journals

- I. **A Hybrid Fuzzy Logic and Convolution Neural Network (FIS-CNN) for Automatic Detection and Classification of Objects in Comet Assay Images**
AL-Qaysi S., GÜNGÖRMÜŞ M.
INTERNATIONAL JOURNAL OF COMPUTING AND DIGITAL SYSTEM, vol.13, no.1, 2023 (Scopus)
- II. **Periodontal Tedavilerde Amelogenin (Emdogain) ve Mineralizan Peptid Uygulamaları**
Kurun A., GÜNGÖRMÜŞ M., KURTİŞ M. B., BAL C.
ADO Klinik Bilimler Dergisi, vol.11, no.1, pp.97-102, 2022 (Peer-Reviewed Journal)
- III. **Biosynthesis and Characterization of Silver Nanoparticles Using Myrtus Communis (Myrtle) and Grape Seed Extract**
GÜNGÖRMÜŞ M.
Gazi Mühendislik Bilimleri Dergisi, vol.7, no.3, pp.320-329, 2021 (Peer-Reviewed Journal)
- IV. **Antifungal Effect of Silver Nitrate on Prosthodontic Dentures**
ÖZDOĞAN M. S., GÜMÜŞOK M., YÜCEL M., DİNÇ B., MIZRAK M., GÜNGÖRMÜŞ M.
BALKAN JOURNAL OF DENTAL MEDICINE, vol.24, pp.96-101, 2020 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **in vitro INVESTIGATION OF N-HEPTYL-D-GALACTONAMIDE (GALC7)-BASED HYDROJELS AS POTENTIALS AS HARD TISSUE SCAFFOLDS**
Yalçinkaya S., Demiral A., GÜNGÖRMÜŞ M.
9th International Baskent Congress on Medicine, Nursing, and Health Sciences, Turkey, 20 May 2023
- II. **Cytotoxic Potentials of Biosynthesized Silver Nanoparticles by Humulus Lupulus, Inula Viscosa and Olea Europaea Extracts, Against Human Breast Cancer (Mcf-7) Cell Line**
ÖZDEMİR SANCİ T., ÖZALPER B., GÜNGÖRMÜŞ M., AYDIN T.
6th INTERNATIONAL CONFERENCE ON ADVANCES IN NATURAL & APPLIED SCIENCE PHYSICS & NANOTECHNOLOGY, Ağrı, Turkey, 11 October 2022
- III. **EDTA ve Borik Asitin Kök Kanal Dentin Sertliği Üzerine Etkileri**
İNCE YUSUFOĞLU S., SARIÇAM E., BULAK N., GÜNGÖRMÜŞ M., TULUMBACI F., ÖZCAN S.
TDB 24. ULUSLARARASI DİŞHEKİMLİĞİ KONGRESİ, Ankara, Turkey, 27 - 30 September 2018, vol.24, pp.270
- IV. **Hepatit B Enfekte Hastalarda Çürük, Restorasyon ve Eksik Diş Değerlendirmesi: Panoramik Radyograf İncelemesi**
SARIÇAM E., İNCE YUSUFOĞLU S., GÜNGÖRMÜŞ M.
SAKARYA ÜNİVERSİTESİ 1. Uluslararası Dental ve Oral Enfeksiyonlar Kongresi, Sakarya, Turkey, 7 - 09 September 2018, vol.2, pp.149-150
- V. **Hepatit B Virüsü Taşıyan Hastalarda Dental Tedavi İhtiyaçları Değerlendirilmesi**
İNCE YUSUFOĞLU S., SARIÇAM E., GÜNGÖRMÜŞ M.
SAKARYA ÜNİVERSİTESİ 1. Uluslararası Dental ve Oral Enfeksiyonlar Kongresi, Ankara, Turkey, 7 - 09 September 2018, vol.2, pp.155-156
- VI. **A Novel Approach For İmplant Removal Using Electrosurgery: An ex-vivo study / Elektrocerrahi ile**

implantın çıkarılması için yeni bir yaklaşım: Exvivo çalışma

HASANOĞLU ERBAŞAR G. N., KONARILI F. N., GÜNGÖRMÜŞ M., ORHAN M.

Turkish Association of Oral and Maxillofacial Surgery 25th International Scientific Congress, 13 - 17 May 2018

- VII. **EVALUATION OF SALIVA OPIORPHIN LEVELS IN ODONTALGIA: CLINICAL STUDY**
ÖZDOĞAN M. S., GÜNGÖRMÜŞ M., İNCE YUSUFOĞLU S., ERTEM S. Y., SÖNMEZ Ç., ORHAN M.
8. ULUSLARARASI ENDODONTİ SEMPOZYUMU/ADANA, Adana, Turkey, 10 - 13 May 2018, pp.88-90
- VIII. **Well-controlled arrays of core-shell quantum dots with tunable photoluminescence properties**
Zin M. T., Ma H., Munro A., Ginger D. S., GÜNGÖRMÜŞ M., Leong K., Tamerler C., Sarikaya M., Alex KY J.
ACS Division of Polymeric Materials: Science & Engineering, 9 - 11 October 2006, vol.95, pp.1002-1003
- IX. **3D Photonic Crystals of SiO₂ particles Prepared by Single Step Peptide Assisted Synthesis and Assembly**
GÜNGÖRMÜŞ M.
Global Academic Network International Conference in Los Angeles, Los-Angeles, Chile, 19 - 21 March 2015
- X. **Novel applications in enamel dentin and cementum remineralization Remineralizing peptides and their use in dentistry**
GÜNGÖRMÜŞ M.
The 12th Arab & 3rd Palestinian Orthodontic Congress, Eriha, FİLİSTİN, 11 - 13 November 2015
- XI. **Cementum analogs using hydroxyapatite binding peptides Toward periodontal regeneration**
GÜNGÖRMÜŞ M., fong h., ÖREN E. E., Tamerler C., Somerman M., Sarikaya M.
The 237th ACS National Meeting, 22 - 26 March 2009, vol.237, pp.1155
- XII. **Biomedical engineered ferrofluids**
Fischer B., Mao L., Gungormus M., Tamerler-Behar C., Sarikaya M., Koser H.
Nanoscale Magnetic Materials and Applications, Boston, MA, United States Of America, 26 - 30 November 2007, vol.1032, pp.128-133
- XIII. **Knowledge-based design of inorganic-binding peptides**
Samudrala R., Oren E. E., Cheng G., Horst J., Bernard B., Gungormus M., Hnilova M., Fong H., Tamerler C., Sarikaya M.
5th Conference on Foundations of Nanoscience: Self-Assembled Architectures and Devices, FNANO 2008, Snowbird, UT, United States Of America, 22 - 25 April 2008, pp.75-80
- XIV. **Ferro-microfluidic device for pathogen detection**
Fischer B., Man L., Gungormus M., Tamerler C., Sarikaya M., Koser H.
3rd IEEE International Conference on Nano/Micro Engineered and Molecular Systems, NEMS 2008, Sanya, China, 6 - 09 January 2008, pp.907-910
- XV. **Electronic control of binding of genetically engineered polypeptides to microfabricated structures**
Xiong X., Gungormus M., Tamerler C., Sarikaya M., Parviz B.
19th IEEE International Conference on Micro Electro Mechanical Systems, İstanbul, Turkey, 22 - 26 January 2006, vol.2006, pp.358-361
- XVI. **Genetically engineered polypeptide for differential recognition of platinum on microfabricated structures**
Gungormus M., Xiong X., Tamler C., Parviz B. A., Sarikaya M.
2005 International Conference on MEMS, NANO and Smart Systems, ICMENS 2005, Banff, Canada, 24 - 27 July 2006, pp.167-171
- XVII. **Nanoscale self-assembly mediated by genetically engineered gold-binding polypeptide**
Xiong X., Gungormus M., Tamerler C., Sarikaya M., Parviz B. A.
2005 5th IEEE Conference on Nanotechnology, Nagoya, Japan, 11 - 15 July 2005, vol.1, pp.519-522
- XVIII. **Micro-scale self-assembly using genetically engineered gold binding polypeptide**
Gungormus M., Xiong X., Kacar T., Tamerler C., Parviz B. A., Sarikaya M.
2nd Conference on Foundations of Nanoscience: Self-Assembled Architectures and Devices, FNANO 2005, Snowbird, UT, United States Of America, 24 - 28 April 2005, pp.85-88

Supported Projects

ÇAYLI S., KORKMAZ BAYRAM K., GÜNGÖRMÜŞ M., ALİMOĞULLARI E., PIŞKİN İ., ÖZDEMİR SANCİ T., Project Supported by Higher Education Institutions, p97VCP ve etkileşimde olduğu otofajik proteinlerin kanser hücre invazyonundaki rollerinin araştırılması, 2021 - Continues

Güngörmüş M., Turhan Bal B., Karaca B., Tulumbacı F., Bal C., TUBITAK Project, Nano-biyoteknoloji tabanlı bir remineralizasyon sisteminin geliştirilmesi ve adezivlerin dentine bağlanma dayanıklılığının artırılmasına yönelik uygulaması, 2022 - 2024

GÜNGÖRMÜŞ M., AYDOĞAN E., GÜLERMAN A., Project Supported by Higher Education Institutions, Silikaya Bağlanan Peptid ve Polimer Köpük Replikasyon Yöntemi Kullanılarak Gözenekli Biyoaktif Silika (Biyo-cam) Doku İskelesi Üretimi, 2022 - 2022

Tulumbacı F., Güngörmüş M., Çaylı S., Bay Karabulut A., Bozkurt Doğan Ş., TUBITAK Project, Diş Hastalıklarının Remineralizasyon İle Tedavisine Yönelik Peptid Tabanlı Bir Ajanın İn Vivo Etkinliğinin Belirlenmesi, 2018 - 2021

Güngörmüş M., Orhan M., Demir T., Uzuner F. D., Kaygısız E., TUBITAK Project, Ortodontik Non-Osteoentegre Mini Implantlar'ın (ONMI) Stabilitelerinin Ölçümünde Rezonans Frekansı Analizi (RFA) Yönteminin Etkinliğinin Klinik Olarak Belirlenmesi, 2017 - 2019

Güngörmüş M., Ertem S. Y., Çarhan A., Orhan M., Project Supported by Higher Education Institutions, Dental İmplant Uygulamalarında Diyabetin Peri implant Patojen Sayısına Etkisinin İncelenmesi, 2016 - 2018

Güngörmüş M., Orhan M., Kara H., Özdoğan M. S., Ertem S. Y., Project Supported by Higher Education Institutions, Diş hastalıklarının remineralizasyon ile önlenmesi ve tedavisine yönelik peptid tabanlı bir tıbbi cihazın geliştirilmesi, 2016 - 2018

Patent

GÜNGÖRMÜŞ M., Reagents and methods for treating dental disease, Patent, CHAPTER B Implementation of Operations; Transport, 2017

Güngörmüş M., Amelogenin derived polypeptides for treating dental disease, Patent, CHAPTER A Human Needs, The Invention Recourse Number: JP2017012188A , Standard Registration, 2017

Scientific Refereeing

BIOMACROMOLECULES, SCI Journal, June 2021

TRAKYA ÜNİVERSİTY JOURNAL OF NATURAL SCIENCES, National Scientific Refreed Journal, October 2020

NATURE COMMUNICATIONS, Journal Indexed in SCI-E, June 2020

Metrics

Publication: 45

Citation (WoS): 2

Citation (Scopus): 621

H-Index (WoS): 1

H-Index (Scopus): 9