

Personal Information

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Education Information

Doctorate, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Biyomedikal Teknolojiler Anabilim Dalı, Turkey 2014 - 2018

Post Graduate, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Biyomedikal Teknolojiler (YI) (Tezli), Turkey 2012 - 2014

Under Graduate, Ege Üniversitesi, Mühendislik Fakültesi, Biyomühendislik Bölümü, Turkey 2008 - 2012

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Education Management and Planning, Radyasyondan Korunma Uzmanı Eğitim Çalıştayı, Ege Üniversitesi Nükleer Bilimler Enstitüsü - Radyasyondan Korunma Uzmanları Derneği (RADKOR), 2019

Education Management and Planning, LEICA TR CONFOCAL-LSR/WF Workshop, Leica, 2018

Education Management and Planning, Microcal PEAQ - ITC Cihaz Eğitimi, Atomika Teknik, 2018

Education Management and Planning, 1st Cellfit Training School "Dream it, print it, do it", COST CA16119 CELLFIT, 2018

Education Management and Planning, Thermo Fisher Scientific Look Again, Thermo Fisher Scientific, 2017

Education Management and Planning, ZEISS Yaşam Bilimlerinde İleri Mikroskopi Teknikleri Çalıştayı, ZEISS, 2017

Education Management and Planning, Training School Non Living Materials Meet Living Biology, COST MP1301 NEWGEN, 2017

Education Management and Planning, Deney Hayvanı Kullanım Sertifikası, Ege Üniversitesi, 2017

Education Management and Planning, Atomic Force Microscopy Eğitimi, Bruker, 2016

Occupational Health and Safety, İş Sağlığı ve Güvenliği Eğitimi, Ege Üniversitesi, 2015

Education Management and Planning, MeristemEGE Girişimcilik Sertifikası, Ege Üniversitesi, 2014

Education Management and Planning, Micro-CT Eğitim Sertifikası, Scanco Medical, 2014

Dissertations

Doctorate, ÜÇ BOYUTLU IN VITRO DİNAMİK KAN BEYİN BARIYERİ MODELİ GELİŞTİRİLMESİ VE MODELİN GEÇİRGENLİĞİNİN İNCELENMESİ, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Biyomedikal Teknolojiler Anabilim Dalı, 2018

Post Graduate, Bakteriyel selüloz doku iskelesi üzerinde damarlı kemik modeli oluşturulması, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Biyomedikal Teknolojiler (YI) (Tezli), 2014

Research Areas

Biomaterials, Life Sciences, Animal Biology, Animal Tissue Culture

Academic Titles / Tasks

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Production of hydroxyapatite-bacterial cellulose composite scaffolds with enhanced pore diameters for bone tissue engineering applications**
BAYIR E., Bilgi E., Hames E. E. , ŞENDEMİR A.
CELLULOSE, vol.26, pp.9803-9817, 2019 (Journal Indexed in SCI)
- **pH-Responsive Polymersome Microparticles as Smart Cyclodextrin-Releasing Agents**
Puglısı A., Bayır E., Timur S., Yağcı Y.
BIOMACROMOLECULES, vol.20, pp.4001-4007, 2019 (Journal Indexed in SCI)
- **The use of bacterial cellulose as a basement membrane improves the plausibility of the static in vitro blood-brain barrier model**
BAYIR E., ÇELTİKOĞLU M. M. , ŞENDEMİR A.
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, pp.1002-1013, 2018 (Journal Indexed in SCI)
- **Biocompatible polymeric coatings do not inherently reduce the cytotoxicity of iron oxide nanoparticles**
Sendemir Urkmez A., BAYIR E., BİLGİ E., Ozen M. O.
TURKISH JOURNAL OF BIOLOGY, vol.41, pp.322-332, 2017 (Journal Indexed in SCI)
- **Optimization of bacterial cellulose production by Gluconacetobacter xylinus using carob and haricot bean**
BILGI E., BAYIR E., Sendemir-Urkmez A., HAMEŞ E. E.
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol.90, pp.2-10, 2016 (Journal Indexed in SCI)
- **The effects of different intensities, frequencies and exposure times of extremely low-frequency electromagnetic fields on the growth of Staphylococcus aureus and Escherichia coli O157: H7**
Bayır E., Bilgi E., Sendemir-Urkmez A., Hames E. E.
ELECTROMAGNETIC BIOLOGY AND MEDICINE, vol.34, pp.14-18, 2015 (Journal Indexed in SCI)
- **In Vitro Biocompatibility and Antibacterial Activity of Electrospun Ag Doped HAp PHBV Composite Nanofibers**
SÜSLÜ A., ALBAYRAK A., BAYIR E., ŞENDEMİR ÜRKMEZ A., CÖCEN Ü.
International Journal Of Polymeric Materials, vol.64, pp.465-473, 2015 (Journal Indexed in SCI Expanded)
- **Effect of surfactant types on the biocompatibility of electrospun HAp/PHBV composite nanofibers**
Suslu A., Albayrak A. Z. , Urkmez A., BAYIR E., Cocen U.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE, vol.25, pp.2677-2689, 2014 (Journal Indexed in SCI)

Articles Published in Other Journals

- **Mechanobiology of cells and cell systems, such as organoids.**
Bayır E., Sendemir A., Missirlis Y.
Biophysical reviews, 2019 (Refereed Journals of Other Institutions)
- **Implementation of Nanoparticles in Cancer Therapy**
BAYIR E., BILGI E., Urkmez A. S.
HANDBOOK OF RESEARCH ON NANOSCIENCE, NANOTECHNOLOGY, AND ADVANCED MATERIALS, pp.447-491, 2014 (Refereed Journals of Other Institutions)

Book & Book Chapters

- **in: Biomaterials for Organ and Tissue Regeneration New Technologies and Future Prospects**
Bayır E., Şahinler M., Çeltikoğlu M. M. , Şendemir A.

Bioreactors in tissue engineering: mimicking the microenvironment, Nihal Vrana, Helena Knopf-Marques, Julien Barthes, Editor, Elsevier Science, Oxford/Amsterdam , Oxford, pp.709-752, 2020

• **in: HANDBOOK OF RESEARCH ON NANOSCIENCE, NANOTECHNOLOGY, AND ADVANCED MATERIALS**

BAYIR E., BİLGİ E., ŞENDEMİR ÜRKMEZ A.

Implementation of Nanoparticles in Cancer Therapy, Bououdina, M., Davim, JP., Editor, IGI GLOBAL, Hersey, PA, pp.447-491, 2014

Refereed Congress / Symposium Publications in Proceedings

• **Comparison of in vitro Static and Dynamic 3D Blood-Brain Barrier Models**

BAYIR E., Çeltikoğlu M. M. , Missirlis Y. F. , ŞENDEMİR A.

Biomaterials and Advanced Physical Techniques for Regenerative Cardiology and Neurology (BIONECA) COST Action Joint Meeting, Alicante, Spain, 18 Eylül 2018, pp.1

• **Bacterial Cellulose Scaffold as a Basal Lamina for In Vitro Blood Brain Barrier Model**

BAYIR E., ÇELTİKOĞLU M. M. , ŞENDEMİR A.

15th International Conference on Nanosciences & Nanotechnologies (NN18), Selanik, Greece, 03 Temmuz 2018, pp.1

• **Comparison of Different in Vitro Static Blood Brain Barrier (BBB) Models**

BAYIR E., ÇELTİKOĞLU M. M. , ŞENDEMİR ÜRKMEZ A.

International Biomedical Engineering Congress 2018 (IBMEC'18), Lefkoşe, Cyprus (Kktc), 24 Mayıs 2018, pp.1

• **Self-Assembled Polymer Spheres as a Vascularized Bone Tissue Engineering Scaffold**

BAYIR E., Çeltikoğlu M. M. , ŞENDEMİR ÜRKMEZ A.

International Biomedical Engineering Congress 2018 (IBMEC'18), Lefkoşe, Cyprus (Kktc), 24 Mayıs 2018, pp.1

• **Biocompatibility And Water Absorbtion Properties Of Bacterial Cellulose Polyacrylic Acid Composite**

BİLGİ E., BAYIR E., ÇAKAN M. S. , ŞENDEMİR ÜRKMEZ A., HAMEŞ E. E.

International Conference on Engineering Technologies (ICENTE 2018), Konya, Turkey, 7 - 09 Aralık 2017

• **Electromagnetic manipulation of iron oxide nanoparticle-labeled endothelial progenitor cell microtissues**

GÜRSES B. O. , ÇELTİKOĞLU M. M. , BAYIR E., ŞENER M., BALTACI A., ÇETİN L., BOZTEPE M., ŞENDEMİR ÜRKMEZ A.

18th International Symposium on Electromagnetic Fields in Mechatronics Electrical and Electronic Engineering (ISEF 2017), Lodz, Poland, 14 - 16 Eylül 2017

• **Magnetic force based vascularized bone tissue engineering with chitosan-alginic acid-magnetite beads**

BAYIR E., ŞENDEMİR ÜRKMEZ A.

28th Annual Conference of the European Society for Biomaterials (ESB 2017), Atina, Greece, 4 - 08 Eylül 2017

• **Producing tissue engineering scaffolds containing nanoparticles via magneto-spinning**

Türkay C., BAYIR E., ŞENER M., Gega S. C. , GÜRSES B. O. , ŞENDEMİR ÜRKMEZ A.

Non Living Materials Meet Living Biology, Patras, Greece, 09 Mayıs 2017, pp.1

• **Alginic Acid - Chitosan Polyelectrolyte Complex as a Vascularized Bone Tissue Engineering Scaffold**

BAYIR E., ŞENDEMİR ÜRKMEZ A.

Non Living Materials Meet Living Biology, Patras, Greece, 09 Mayıs 2017, pp.1

• **Vascularisation Strategies for Bone Tissue Engineering Using Endothelial Progenitor Cells**

ŞENDEMİR ÜRKMEZ A., BAYIR E., GÖRGÜN C.

Cost Action MP1301 - NEWGEN - Working Groups and Scientific Workshop Biomaterials for Dental and Orthopedic Applications, Cluj-Napoca, Romania, 13 - 15 Mart 2017

• **Three dimensional vascularized self assembled tumor spheroids**

BAYIR E., KABADAYI H., GÖRGÜN c., ANIL m., GÜLÇE İZ S., VATANSEVER H. S. , sendemir urkmez a.

41st FEBS Congress on Molecular Systems Biology for a Better Life, Aydın, Turkey, 3 - 08 Eylül 2016, vol.283, pp.1

• **Different Formation Techniques of Iron Oxide Nanoparticle Labeled Microtissues and Comparison of Cytotoxic Effects of Nanoparticle Concentrations**

ÇELTİKOĞLU M. M. , BAYIR E., ŞENDEMİR ÜRKMEZ A.

13th International Conference on Nanosciences & Nanotechnologies (NN16), Selanik, Greece, 05 Temmuz 2016, pp.1

- **Bakteriyel Selüloz Üretimine Alternatif Hammaddede İçeren Yeni Bir Besiyeri Kullanılarak İstatistiksel Optimizasyonu**
BILGI E., BAYIR E., ŞENDEMİR ÜRKMEZ A., HAMEŞ E. E.
18. Biyoteknoloji Kongresi, Konya, Turkey, 18 - 19 Aralık 2015
- **An electromagnetic actuator for manipulation of biological samples**
GÜRSES B. O. , BAYIR E., ÇELTİKOĞLU M., ŞENDEMİR ÜRKMEZ A., İŞİTMAN O., AYDIN İ., ŞENER M., ÇETİN L., BALTACI A., BOZTEPE M., et al.
VII. International Bioengineering Congress, 19 - 21 Kasım 2015
- **Preparation and characterization of iron oxide nanoparticles for enzyme immobilization**
ÇOĞAN Ş., BAYIR E., ELİBOL M.
BEC2015, İzmir, Turkey, 19 - 21 Kasım 2015
- **Enzymatic transesterifications of soybean oil and microalgal oil using immobilized lipase on Fe₃O₄ magnetic nanospheres as biocatalyst**
TAŞDEMİR Ş., BAYIR E., SENAY R. H. , URAL Z., FEYZİOĞLU E., AKGÖL S., ELİBOL M.
VII. Bioengineering Congress, 19 - 21 Kasım 2015
- **Investigation of in vitro blood vessel production capability of bacterial cellulose with different endothelial cell lines**
BILGI E., BAYIR E., HAMEŞ E. E. , ŞENDEMİR ÜRKMEZ A.
VII. International Bioengineering Congress (BEC2015), İzmir, Turkey, 19 - 21 Kasım 2015
- **Investigation of in vitro biocompatibility of bacterial cellulose with different cell lines**
BILGI E., BAYIR E., ŞENDEMİR ÜRKMEZ A., HAMEŞ E. E.
2nd International Symposium on Bacterial NanoCellulose (BNC 2015), Gdansk, Poland, 9 - 11 Eylül 2015
- **Utilisation of BC for Tissue Engineering Applications**
ŞENDEMİR ÜRKMEZ A., BAYIR E., KESKİN Z., BILGI E., HAMEŞ E. E.
2nd International Symposium on Bacterial NanoCellulose (BNC 2015), Gdansk, Poland, 9 - 11 Eylül 2015
- **Statistical Optimization of Bacterial Cellulose Production by Gluconacetobacter xylinus using Alternative Raw Materials**
BILGI E., BAYIR E., ŞENDEMİR ÜRKMEZ A., HAMEŞ E. E.
International Biomedical Engineering Congress 2015, İzmir, Cyprus (Kktc), 12 - 14 Mart 2015
- **Enhancing Pore Diameters of Bacterial Cellulose to Use in Biomedical Applications**
BAYIR E., BILGI E., HAMEŞ E. E. , ŞENDEMİR ÜRKMEZ A.
International Biomedical Engineering Congress 2015, Lefkoşa, Cyprus (Kktc), 12 - 14 Mart 2015
- **Production of Bacterial Cellulose Hydroxyapatite Composite Scaffolds for Bone Regeneration**
BAYIR E., BILGI E., HAMEŞ E. E. , ŞENDEMİR ÜRKMEZ A.
International Biomedical Engineering Congress, Lefkoşa, Cyprus (Kktc), 12 - 14 Mart 2015
- **Hammaddede Olarak Keçiboynuzu ve Kuru Fasulye Kullanılarak Bakteriyel Selüloz Üretim Yöntemi**
BILGI E., BAYIR E., ŞENDEMİR ÜRKMEZ A., HAMEŞ E. E.
3.Ege Ar-Ge ve Teknoloji Günleri, İzmir, Turkey, 11 - 12 Aralık 2014
- **İçerideki Boş Yapıda Farklı Şekillerde Bakteriyel Selüloz Üretimi için Reaktör**
BILGI E., BAYIR E., ŞENDEMİR ÜRKMEZ A., ÖNCEL S. Ş. , HAMEŞ E. E.
3.Ege Ar-Ge ve Teknoloji Günleri, İzmir, Turkey, 11 - 12 Aralık 2014
- **The utilization of bacterial cellulose and hydroxyapatite-bacterial cellulose composite as a tissue scaffold**
BAYIR E., Bilgi E., HAMEŞ E. E. , ŞENDEMİR ÜRKMEZ A.
VI. International Bioengineering Congress (BEC2013), Aydın, Turkey, 12 Kasım 2013, pp.80
- **Bakteriyel selülozün manyetik nanopartiküller ve hidroksiapatit için taşıyıcı olarak kullanılması**
Bilgi E., BAYIR E., HAMEŞ E. E. , ŞENDEMİR ÜRKMEZ A.
Ege Nanoteknoloji Günleri, İzmir, Turkey, 18 Nisan 2013
- **Nanofiber yapıları bakteriyel selülozün alternatif karbon kaynakları ile üretilmesi**
Bilgi E., BAYIR E., HAMEŞ E. E. , ŞENDEMİR ÜRKMEZ A.
Ege Nanoteknoloji Günleri, İzmir, Turkey, 18 Nisan 2013
- **Mikroorganizmaların Ketlenmesinde Elektromanyetik Alan Kullanımı**
Bilgi E., BAYIR E., ŞENDEMİR ÜRKMEZ A., HAMEŞ E. E.
21. Ulusal Biyoloji Kongresi, İzmir, Turkey, 03 Eylül 2012, pp.77

- **Çok düşük frekanslı elektromanyetik alanın sağlıklı ve kanser kökenli hücreler üzerine etkisi**

BAYIR E., Bilgi E., HAMEŞ E. E. , ŞENDEMİR ÜRKMEZ A.

17. Biyomedikal Mühendisliği Ulusal Toplantısı, İstanbul, Turkey, 03 Ekim 2012, pp.19-20

Supported Projects

GÜNBAYT., IŞIK G., KENÇ S., BAYIR E., ÖZGÜL S., GÜNBAYS., Project Supported by Higher Education Institutions, Kemik rejenerasyonu ve rekonstrüksiyonunda yeni nesil trombosit konsantrasyonlarının değerlendirilmesi, 2020 - Continues

YEŞİL ÇELİKTAŞ Ö., SAYGILI E., BAYIR E., DEVAMOĞLU U., Project Supported by Higher Education Institutions, Çip-üstü-küçük havayolu platformu, 2020 - Continues

BAYIR E., Project Supported by Higher Education Institutions, Hidrojel bazlı üç boyutlu statik kan-beyin bariyeri modeli oluşturulması, 2018 - Continues

Şendemir A., Gürses B. O. , Baltacı A., BAYIR E., GÖKSEL T., TÜBİTAK Project, Temassız Uzaktan Kontrol Edilebilen Bronkoskopik Elektromanyetik Navigasyon Sisteminin Geliştirilmesi, 2019 - 2022

Şendemir A., Bayır E., EU Supported Other Project, Hipertansiyonun Kan Beyin Bariyeri Üzerine Etkilerinin In Vitro Modelde İncelenmesi, 2017 - 2020

Bayır E., Şendemir A., TÜBİTAK Project, Bakteriyel Selüloz İskele Üzerinde İnsan Beyin Mikrovasküler Endotel Hücreleri ve İnsan Astrosit Hücreleri ile İki Boyutlu Kan Beyin Bariyeri Modeli Oluşturulması, 2017 - 2018

ŞENDEMİR A., BAYIR E., Project Supported by Higher Education Institutions, ÜÇ BOYUTLU İN VİTRO DİNAMİK KAN BEYİN BARIYERİ MODELİ GELİŞTİRİLMESİ VE MODELİN GEÇİRGENLİĞİNİN İNCELENMESİ, 2016 - 2018

BAYIR E., ELİBOL M., TÜBİTAK Project, Rekombinant İnsanlaştırılmış Anti Tümör Nekrozis Faktör-Alfa Monoklonal Antikor Üretim Prosesinin Optimizasyonu, 2013 - 2016

BAYIR E., ŞENDEMİR A., EU Supported Other Project, Bakteriyel Selülozun Doku İskelesi Olarak Kullanıldığı Damarlanma Sağlayabilen In Vitro Üç Boyutlu Tümör Modeli Geliştirilmesi, 2013 - 2015

BAYIR E., TÜBİTAK Project, Çok Düşük Frekanslı Elektromanyetik Alanın Mikroorganizmalar Sağlıklı ve Kanserli Memeli Hücreleri Üzerine Etkilerinin Karşılaştırılması, 2011 - 2012

Hameş E. E. , Bilgi E., Bayır E., TÜBİTAK Project, Çok Düşük Frekanslı Elektromanyetik Alanın Mikroorganizmalar Sağlıklı ve Karsinojenik Memeli Hücreleri Üzerine Etkisi, 2011 - 2012

Memberships / Tasks in Scientific Organizations

Member, 2017 - 2018

Scientific Refereeing

RSC ADVANCES, SCI Journal, November 2019

RSC ADVANCES, SCI Journal, July 2019

RSC ADVANCES, SCI Journal, March 2019

RSC ADVANCES, SCI Journal, January 2019

Invited Congress and Symposium Activities

1st Cellfit Training School "Dream it, print it, do it", Attendee, Bergamo, Italy, 2018

International Conference on Engineering Technologies (ICENTE 2017), Attendee, Konya, Turkey, 2017

Non Living Materials Meet Living Biology, Attendee, Patras, Greece, 2017

Training School Non Living Materials Meet Living Biology, Attendee, Patras, Greece, 2017

VII. Bioengineering Congress (BEC 2015), Attendee, Aydın, Turkey, 2015

2nd International Symposium on Bacterial NanoCellulose, Attendee, Gdansk, Poland, 2015

International Biomedical Engineering Congress 2015 (IBMEC'15), Attendee, Lefkoşa, Cyprus (Kktc), 2015

VI. International Bioengineering Congress, Attendee, Aydın, Turkey, 2013

1. Ege Nanoteknoloji Günleri, Attendee, İzmir, Turkey, 2013

21.Ulusal Biyoloji Kongresi, Attendee, Turkey, 2012

Nanosafety Congress-Turkey: Workshop on the safety assessment of nanomaterials: New paradigms,, Attendee, Antalya, Turkey, 2012

Citations

Total Citations (WOS):72

h-index (WOS):4

Scholarships

2211-C Yurt İçi Öncelikli Alanlar Doktora Burs Programı, TÜBİTAK, 2017 - 2018

Awards

BAYIR E., Non Living Materials Meet Living Biology Best Second Poster Presentation Award, European Cooperation in Science and Technology (COST), CellFit Cost Action, May 2017

BAYIR E., Near East University Center of Excellence Award First Rank Best Oral Presentation, International Biomedical Engineering Congress 2015 (IBMEC'15), March 2015