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Personal Information

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ScopusID: 56479256900
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Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Molecular Biology-Genetics and Biotechnology, Turkey 2011 - 2017
Postgraduate, Yeditepe University, Institute Of Science, Biotechnology, Turkey 2009 - 2011
Undergraduate, Yeditepe University, Faculty Of Engineering, Genetik Ve Biyomühendislik, Turkey 2004 - 2009

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Dental Stem Cell Mediated Bone Tissue Engineering Using Porcine Model, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Moleküler Biyoloji-Genetik Ve Biyoteknoloji, 2017
Postgraduate, Engineering a Vascularized Bone Tissue on Electrospun Biocomposite Scaffolds, Yeditepe Üniversitesi, Fen Bilimleri Enstitüsü, Biyoteknoloji, 2011

Research Areas

Life Sciences, Biotechnology, Biomaterial, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Biomedical Engineering, 2019 - Continues
Lecturer PhD, Yeditepe University, Mühendisik Fakültesi, Genetik Ve Biyomühendislik, 2018 - 2019

Academic and Administrative Experience

Deputy Head of Department, Yildiz Technical University, Faculty Of Electrical & Electronics, Biomedical Engineering, 2019 - 2022

Courses

Biothermodynamics, Undergraduate, 2020 - 2021
Biochemistry, Undergraduate, 2020 - 2021, 2019 - 2020
Cell Biology, Undergraduate, 2019 - 2020

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Evaluation of natural gum-based cryogels for soft tissue engineering**
Bektas E. I., GÜREL PEKÖZER G., Kök F. N., Torun Kose G.
Carbohydrate Polymers, vol.271, 2021 (SCI-Expanded)

II. **The effect of polyethylenglycol gel on the delivery and osteogenic differentiation of homologous tooth germ-derived stem cells in a porcine model.**
Ramazanoglu M., Moest T., Ercal P., Polyviou Z., Herrmann K., Gurel P., Molenberg A., Lutz R., Torun K., Neukam F., et al.
Clinical oral investigations, vol.25, pp.3043-3057, 2021 (SCI-Expanded)

III. **Investigation of Vasculogenesis Inducing Biphasic Scaffolds for Bone Tissue Engineering**
GÜREL PEKÖZER G., Abay Akar N., Cumbul A., Beyzadeoglu T., Torun Kose G.
ACS Biomaterials Science and Engineering, vol.7, pp.1526-1538, 2021 (SCI-Expanded)

IV. **A Current Overview of Scaffold-Based Bone Regeneration Strategies with Dental Stem Cells.**
Ercal P., Pekozer G.
Advances in experimental medicine and biology, 2020 (SCI-Expanded)

V. **Fibrous bone tissue engineering scaffolds prepared by wet spinning of PLGA**
Abay Akar N., Gürel Peközer G., Torun Kose G.
TURKISH JOURNAL OF BIOLOGY, vol.43, no.4, pp.235-245, 2019 (SCI-Expanded)

VI. **Role of STRO-1 sorting of porcine dental germ stem cells in dental stem cell-mediated bone tissue engineering**
Pekozer G., Ramazanoglu M., SCHLEGEL K. A., Kök F. N., Kose G. T.
ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY, vol.46, no.3, pp.607-618, 2018 (SCI-Expanded)

VII. **Dental Stem Cells in Bone Tissue Engineering: Current Overview and Challenges**
ERCAL P., Pekozer G., Kose G. T.
CELL BIOLOGY AND TRANSLATIONAL MEDICINE, VOL 3: STEM CELLS, BIO-MATERIALS AND TISSUE ENGINEERING, vol.1107, pp.113-127, 2018 (SCI-Expanded)

VIII. **Influence of STRO-1 selection on osteogenic potential of human tooth germ derived mesenchymal stem cells**
ERCAL P., Pekozer G., Gumru O. Z., Kose G. T., Ramazanoglu M.
ARCHIVES OF ORAL BIOLOGY, vol.82, pp.293-301, 2017 (SCI-Expanded)

IX. **Cartilage tissue engineering on macroporous scaffolds using human tooth germ stem cells**
Koyuncu A. C. C., Pekozer G., Ramazanoğlu M. K., Kose G. T., HASIRCI V. N.
JOURNAL OF TISSUE ENGINEERING AND REGENERATIVE MEDICINE, vol.11, no.3, pp.765-777, 2017 (SCI-Expanded)

X. **Influence of co-culture on osteogenesis and angiogenesis of bone marrow mesenchymal stem cells and aortic endothelial cells**
Pekozer G., Kose G. T., Hasirci V.
MICROVASCULAR RESEARCH, vol.108, pp.1-9, 2016 (SCI-Expanded)

XI. **Bone Formation from Porcine Dental Germ Stem Cells on Surface Modified Polybutylene Succinate**

Scaffolds
Abay N., Pekozer G., Ramazanoglu M., Kose G. T.
STEM CELLS INTERNATIONAL, 2016 (SCI-Expanded)

Articles Published in Other Journals

I. **Recent advances in health biotechnology during pandemic**
Arı Yuka S., Akpek A., Özarslan A., Vural A., Koçer A. T., Aslan A., Karaaltin A. B., Gök B., Yilmaz B. B., İnan B., et al.
Sigma Journal of Engineering and Natural Sciences, vol.41, no.3, pp.625-655, 2023 (ESCI)

II. **Osteo/odontogenic differentiation analysis of dental stem cells from tooth germ, apical papilla, and dental follicle**
Ercal P., Cayir F., Pekozer G., Kose G. T.
ORAL SCIENCE INTERNATIONAL, vol.19, no.3, pp.180-192, 2022 (ESCI)

Books & Book Chapters

I. **Usage of stem cells in bone and cartilage tissue engineering**
GÜREL PEKÖZER G.
in: Biomedical Nanomaterials: From Design to Implementation, Yazici H., Webster T., Editor, Iet, Herts, pp.93-114, 2016

Refereed Congress / Symposium Publications in Proceedings

I. **A Tissue Engineering Approach with Natural Biomaterials**
Bektaş E. İ., Gürel Peközer G., Köse G.
International Biomedical Science and Technology Symposium-Biomed 2019, İzmir, Turkey, 17 - 20 October 2019, pp.11

II. **Usage of Wet-Spun PLGA Scaffolds for Bone Regeneration**
Abay N., Gürel Peközer G., Köse G.
International Biomedical Science and Technology Symposium-Biomed, İzmir, Turkey, 17 - 20 October 2019, pp.10

III. **Determination of a Compatible Dental Stem Cell Source for Bone Tissue Engineering**
Erçal P., Gürel Peközer G., Çayır F., Köse G.
CED-IADR Oral Health Research Congress , Madrid, Spain, 19 September - 21 October 2019, pp.179-180

IV. **Fibrous bone tissue engineering scaffolds prepared by wet-spinning of PLGA**
Bektaş E. İ., Abay N., Gürel Peközer G., Köse G.
Annual Conference of the European Society for Biomaterials, Athens, Greece, 4 - 08 September 2017, pp.11

V. **Bone tissue engineering using STRO-1 positive porcine dental germ stem cells encapsulated in a poly-ethylene glycol based hydrogel**
Gürel Peközer G., Ramazanoğlu M., Schlegel K. A., Köse G.
World Biomaterials Congress, Montreal, Canada, 17 - 22 May 2016, pp.22

VI. **Role of STRO-1 positive porcine dental germ stem cells in dental stem cell-mediated bone tissue engineering**
Pekozer G., Ramazanoğlu M. K., Schlegel K. A., Kose G. T.
FEBS EMBO 2014 Conference, Paris, France, 30 August - 04 September 2014, vol.281, pp.234

VII. **Chondrogenic differentiation of human tooth germ stem cells on 3-D Scaffolds**
Çalıkoğlu A. C., Gürel Peközer G., Köse G., Hasırcı V.
International Biomedical Science and Technology Symposium - BIOMED, İstanbul, Turkey, 28 September 2010 - 02 November 2019, pp.1

VIII. **Co-culture of Rat Bone Marrow Stromal Cells with Rat Aortic Endothelial Cells Enhances MSC Differentiation**
Gürel Peközer G., Köse G., Hasırcı V.
International Biomedical Science and Technology Symposium - BIOMED, İstanbul, Turkey, 28 September - 02 October 2010, pp.1

IX. **Bone tissue engineering potential of vasculogenesis inducing biphasic scaffold**
GÜREL PEKÖZER G., Abay N., Köse G.
International Symposium of Materials on Regenerative Medicine, Taiwan, pp.1

X. **The Effect of a Biodegradable Novel Matrix on the Delivery and Osteogenic Differentiation of Autologous Tooth Germ Derived Stem Cells in a Porcine Model**
Köse G., GÜREL PEKÖZER G., Schlegel K. A., Molenberg A., Ramazanoğlu M.
International Biomedical Science and Technology Symposium - BIOMED, Antalya, Turkey, pp.1

XI. **Bone Tissue Engineering Potential of Poly(?-caprolactone) Films and Foams**
GÜREL PEKÖZER G., Yılgör P., Köse G., Hasırcı V.
International Biomedical Science and Technology Symposium - BIOMED, İstanbul, Turkey, pp.1

XII. **Evaluation of osteogenic potential in Stro-1-positive human tooth-germ derived mesenchymal stem cells**
Erçal P., GÜREL PEKÖZER G., Ramazanoğlu M., Gümrü O., Köse G.
International Osteology Symposium, Monaco, pp.1

XIII. **The Effect of a Biodegradable Polyethylenglycol Gel on The Delivery and Osteogenic Behavior of Homologous Tooth Germ Derived Stem Cells in a Pig Model**
Ramazanoğlu M., Möst T., Erçal P., GÜREL PEKÖZER G., Molenberg A., Lutz R., Neukam F., Schlegel K. A.
Annual Scientific Meeting of European Association for Osseointegration, Ireland, pp.1

XIV. **STRO-1 sorting of porcine dental germ stem cells for dental stem cell-mediated bone tissue engineering**
GÜREL PEKÖZER G., Ramazanoğlu M., Schlegel K. A., Kök F. N., Köse G.
International Biomedical Science and Technology Symposium - BIOMED, Antalya, Turkey, pp.1

XV. **Co-culture of Rat Bone Marrow Stem Cells and Rat Aortic Endothelial Cells on Electrospun Biocomposite Scaffolds**
GÜREL PEKÖZER G., Köse G., Hasırcı V.
European Conference on Biomaterials, Ireland, pp.1

XVI. **The Domestic Pig: A Useful Model to Study Tooth Germ Stem Cell Driven Craniofacial Regeneration**
Ramazanoğlu M., GÜREL PEKÖZER G., Erçal P., Felszhegy E., Köse G., Schlegel K. A.
Oral and Maxillofacial Surgery Society International Congress, Antalya, Turkey, pp.1

XVII. **STRO-1-sorted human and porcine tooth germ stem cells for osteogenic differentiation**
Erçal P., GÜREL PEKÖZER G., Gümrü O., Köse G., Ramazanoğlu M.
General Session and Exhibition of International Association for Dental Research, United States Of America, pp.1

XVIII. **The Effect of Micropatterned PCLPLLA Films on Cell Behavior**
GÜREL PEKÖZER G., Yılgör P., Köse G., Hasırcı V.
International Biomedical Science and Technology Symposium - BIOMED, Cyprus (Kktc), pp.1

Supported Projects

AKPEK A., GÜREL PEKÖZER G., TRABZON L., Project Supported by Higher Education Institutions, Mikroakışkan bir Çip üstü Miyokard Enfarktüs Platformu Tasarımlanması ve Kalp Krizlerinin In Vitro Olarak Modellenmesi, 2022 - Continues
ÖNDER S., GÜREL PEKÖZER G., AVŞAR T., Project Supported by Higher Education Institutions, Vitamin D Yüklü Kitosan Nanokürelerin Elektroforetik Yöntemle Titanyum Yüzeylere Tutuklanması ve Kemik Hücreleri Üzerindeki Etkilerinin Araştırılması, 2021 - Continues
TUBITAK Project, Doğal malzemeler üzerinde küçük molekülle indüklenmiş sıçan mezenkimal kök hücreleri ile kıkırdak rejenerasyonu, 2017 - Continues

GÜREL PEKÖZER G., TUBITAK Project, Kemik Doku Mühendisliğinde Diş germ Kayaklı Kök Hücreler: Osteo- Odontojenik Potansiyel, 2017 - Continues
AKPEK A., ÖNDER S., DARCAN C., İnal M. S., GÜREL PEKÖZER G., ÖZTÜRK A. B., KIZILKURTLU A. A., Project Supported by Higher Education Institutions, Kardiyovasküler Cerrahide Kullanılmak Üzere Ksenogreft Kalp Kapakçığının Deselülerizasyon Ertesi Altın Nanoparçacıkları ile İmplantasyonu ve Riboflavin/Heparin Kaplanması Sonrasında İnsan Hücreleri ile Reselülerizasyonu, 2021 - 2023
TUBITAK Project, Damarlanmayı arttırıcı çift fazlı doku iskelesi ile kemik doku mühendisliği uygulaması, 2014 - 2017
GÜREL PEKÖZER G., Other International Funding Programs, The Effect of a Biodegradable Polyethylenglycol-Gel (MX10TM) on the Delivery and Osteogenic Differentiation of Autologous Tooth Germ Derived Stem Cells (TGSCs) in a Porcine Model, 2011 - 2013

Patent

Gürel Peközer G., DOĞAL BİYOMATERYALLER İLE KRİYOJELLERİN ÜRETİM YÖNTEMİ VE BU KRİYOJELLERİN YUMUŞAK DOKU İSKELESİ VEYA İLAÇ TAŞIYICI SİSTEM OLARAK KULLANIMI, Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2019/14116 , Standard Registration, 2019
Gürel Peközer G., Köse G., Doku iskelesi oluşturulmasında kullanılan PLGA fiberlerinin üretim yöntemi ve bu yöntemle üretilen PLGA fiberleri, Utility Model, CHAPTER A Human Needs, The Invention Recourse Number: 2017/13470 , Standard Registration, 2017

Memberships / Tasks in Scientific Organizations

Biomaterial and Tissue Engineering Association, Member, 2012 - Continues

Scientific Refereeing

TURKISH JOURNAL OF BIOLOGY, National Scientific Refreed Journal, August 2019
Stem Cell Reviews and Reports, SCI Journal, May 2015

Metrics

Publication: 32
Citation (WoS): 101
Citation (Scopus): 130
H-Index (WoS): 6
H-Index (Scopus): 8

Scholarships

Yurt Dışı Bilimsel Etkinliklere Katılımı Destekleme Programı, TUBITAK, 2016 - Continues
2211 Yurtiçi Doktora Bursu, TUBITAK, 2011 - Continues
2210 Yurtiçi Yüksek Lisans Bursu, TUBITAK, 2009 - Continues

Awards

GÜREL PEKÖZER G., En Başarılı Tez Ödülü, İstanbul Teknik Üniversitesi, June 2018

GÜREL PEKÖZER G., En İyi Poster Ödülü, International Symposium of Materials on Regenerative Medicine, August 2017
GÜREL PEKÖZER G., En İyi Poster Ödülü, Yüz ve Çene Cerrahisi Topluluğu, June 2012