Assoc. Prof. SERAP DURKUT

Personal Information

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International Researcher IDs
ORCID: 0000-0001-8431-694X
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Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Kimya (Dr), Turkey 2001 - 2008
Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Kimya (Yl) (Tezli), Turkey 1998 - 2001
Undergraduate, Ankara University, Fen Fakültesi, Kimya Bölümü, Turkey 1993 - 1997

Dissertations

Doctorate, Primer sıçan karaciğer hücrelerinin hidrojel yapılı kitosan ve alginat gibi polimerlerde enkapsülasyonu ve ın vıtro ortamda bazı özelliklerinin incelenmesi, Ankara University, Fen Bilimleri Enstitüsü, Kimya (Dr), 2008
Postgraduate, Kitosana-dayalı hidrojellerin bazı biyotıp uygulamalarının incelenmesi, Ankara University, Fen Bilimleri Enstitüsü, Kimya (Yl) (Tezli), 2001

Research Areas

Tissue Engineering, Stem Cell Engineering, Chemistry, Biochemistry, Natural Sciences

Academic Titles / Tasks

Associate Professor, Ankara University, Fen Fakültesi, Kimya Bölümü, 2021 - Continues
Assistant Professor, Ankara University, Fen Fakültesi, Kimya Bölümü, 2014 - Continues
Research Assistant, Ankara University, Fen Fakültesi, Kimya Bölümü, 2001 - Continues

Courses

Biochemistry II, Undergraduate, 2022 - 2023, 2021 - 2022
Biyolojik zarların yapısı ve işlevleri, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021
Araştırma Yöntemleri, Postgraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022
Biochemistry I, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022
STRUCTURE AND FUNCTIONS OF BIOLOGICAL MEMBRANES, Undergraduate, 2023 - 2024, 2020 - 2021
Biyolojik Zarların Yapı ve İşlevleri, Doctorate, 2022 - 2023, 2021 - 2022, 2020 - 2021
Kozmetik Kimyası, Postgraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021
Biyokimya Laboratuvarı, Undergraduate, 2022 - 2023, 2021 - 2022, 2016 - 2017, 2015 - 2016

General chemistry, Undergraduate, 2022 - 2023
Temel Kimya, Undergraduate, 2023 - 2024, 2022 - 2023
Special subject, Undergraduate, 2023 - 2024, 2020 - 2021
GENERAL CHEMISTRY, Undergraduate, 2023 - 2024, 2022 - 2023
Özel Konu, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022
KİM 0319-KİM 0320-Biyokimya 1-2, Undergraduate, 2021 - 2022, 2019 - 2020
BES 103-BES 104 Temel Kimya 1-2, Undergraduate, 2020 - 2021, 2018 - 2019, 2014 - 2015
BES 104 Temel Kimya 2, Undergraduate, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Fe3O4 magnetic nanoparticles-loaded thermoresponsive poly(N-vinylcaprolactam)-g-galactosylated chitosan microparticles: investigation of physicochemical, morphological and magnetic properties**
DURKUT S.
JOURNAL OF MACROMOLECULAR SCIENCE PART A-PURE AND APPLIED CHEMISTRY, vol.60, no.3, pp.181-191, 2023 (SCI-Expanded)

II. **Synthesis and Characterization of Thermosensitive Poly(N-Vinyl Caprolactam)-Grafted-Aminated Alginate Hydrogels**
DURKUT S., ELÇİN Y. M.
MACROMOLECULAR CHEMISTRY AND PHYSICS, vol.221, no.2, 2020 (SCI-Expanded)

III. **Thermoresponsive poly (N-vinylcaprolactam)-g-galactosylated chitosan hydrogel: synthesis, characterization, and controlled release properties**
DURKUT S.
INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS, vol.68, no.17, pp.1034-1047, 2019 (SCI-Expanded)

IV. **Clinical Applications of Injectable Biomaterials**
Ercan H., Durkut S., Koç Demir A., Elçin A. E., Elçin Y. M.
NOVEL BIOMATERIALS FOR REGENERATIVE MEDICINE, vol.1077, pp.163-182, 2018 (SCI-Expanded)

V. **Synthesis and characterization of thermosensitive poly(N-vinylcaprolactam)-g-collagen**
Durkut S., Elçin Y. M.
Artificial Cells, Nanomedicine and Biotechnology, vol.45, no.8, pp.1665-1674, 2017 (SCI-Expanded)

VI. **Differential gene expression profiling of human adipose stem cells differentiating into smooth muscle-like cells by TGF beta 1/BMP4**
Elçin A. E., Parmaksız M., Dogan A., Seker Ş., Durkut S., Dalva K., Elçin Y. M.
EXPERIMENTAL CELL RESEARCH, vol.352, no.2, pp.207-217, 2017 (SCI-Expanded)

VII. **In vitro evaluation of encapsulated primary rat hepatocytes pre- and post-cryopreservation at-80 degrees C and in liquid nitrogen**
Durkut S., Elçin A. E., Elçin Y. M.
ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY, vol.43, no.1, pp.50-61, 2015 (SCI-Expanded)

VIII. **Engineering of rat articular cartilage on porous sponges: Effects of TGF-β 1 and microgravity bioreactor culture**
Emin N., Koc A., Durkut S., Elcin A. E., Elçin Y. M.
Artificial Cells, Blood Substitutes, and Biotechnology, vol.36, no.2, pp.123-137, 2008 (SCI-Expanded)

IX. **Evaluation of modified CMC and CMC-PVA as miscible polymer blend membranes for hepatocytes**
Koc A., Durkut S., Elcin A. E., Tan E., Elçin Y. M.
Macromolecular Bioscience, vol.7, no.5, pp.681-689, 2007 (SCI-Expanded)

X. **Biodegradation of chitosan-tripolyphosphate beads: In vitro and in vivo studies**
Durkut S., Elçin Y. M., Elçin A. E.
Artificial Cells, Blood Substitutes, and Biotechnology, vol.34, no.2, pp.263-276, 2006 (SCI-Expanded)

Articles Published in Other Journals

I. **Evaluation of Angiogenic Factor Release from Thermosensitive Poly(N-Vinylcaprolactam)-g-Collagen: In Vitro and In Vivo Studies**
DURKUT S.
Hittite Journal of Science Engineering, vol.6, no.1, pp.57-61, 2019 (Peer-Reviewed Journal)

II. **Piezoelectric resonance sensor for the determination of ammonium in aqueous environment**
DURKUT S., ŞEKER Ş.
Communications Faculty Of Science University of Ankara Series B Chemistry and Chemical Engineering, vol.58, no.1.2, pp.1-8, 2016 (Peer-Reviewed Journal)

III. **Alpha-fetoprotein genosensor based on quartz crystal microbalance**
ŞEKER Ş., DURKUT S.
Communications Faculty Of Science University of Ankara Series B Chemistry and Chemical Engineering, vol.58, no.1.2, pp.9-17, 2016 (Peer-Reviewed Journal)

Books & Book Chapters

I. **Clinical Applications of Injectable Biomaterials**
ERCAN H., DURKUT S., KOÇ DEMİR A., ELÇİN A. E., ELÇİN Y. M.
in: Novel Biomaterials for Regenerative Medicine (Advances in Experimental Medicine and Biology 1077), Chun HJ, Park K, Kim C-H, Khang G, Editor, Springer Nature, b, pp.163-182, 2018

II. **Nanotechnology for Tissue Engineering and Regenerative Medicine**
ŞEKER Ş., ARSLAN Y. E., DURKUT S., ELÇİN A. E., ELÇİN Y. M.
in: Nanopatterning andNanoscale Devices forBiological Applications, Šeila Selimovic, Krzysztof Iniewski, Editor, CRC Press, New York, pp.339-367, 2014

III. **Bölüm 10-Lipidler**
DURKUT S.
in: LEHNINGER – BİYOKİMYANIN İLKELERİ – BEŞİNCİ BASKIDAN ÇEVİRİ", Prof. Dr.Y. Elçin YM, Editor, Palme Yayıncılık, Ankara, pp.343-370, 2013

Refereed Congress / Symposium Publications in Proceedings

I. **Thermosensitive Poly(vinyl caprolactam)-g-aminated algınate as scaffold with drug delivery potential**
DURKUT S., ELÇİN Y. M.
24th International Biomedical Science and Technology Symposium (BIOMED2019), 17 - 20 October 2019

II. **Magneto-Sensitive Decellularized Bone Matrix as a Regenerative Biomaterial**
ELÇİN Y. M., PARMAKSIZ M., vurat m. t., LALEGÜL Ö., DURKUT S., KOÇ DEMİR A., ELÇİN A. E.
Advances in Functional Materials Conference, 19 - 22 August 2019

III. **Grafted Thermosensitive Gelatin Scaffold as Drug Delivery System. Sözlü Sunum. The Ankara Hotel (Ankara,Turkey) June 28-29, 2019.**
DURKUT S.
2nd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2019), Ankara, Turkey, 28 - 29 June 2019, pp.1849-1856

IV. **Development of a Biocompatible Hybrid Hydrogel With Multi-Stimuli-Responsive Properties**
DURKUT S.
International Chemistry Biology Conference'18, 11 - 14 July 2018

V. **Thermosensitive-PNVCL-Based Hybrid Hydrogels for Biomedicinal Applications**
DURKUT S., ELÇİN Y. M., ELÇİN A. E.

12th International Symposium on Pharmaceutical Sciences, 26 - 29 June 2018

VI. **Multi-Responsive Galactosylated Chitosan-g-PNVCL Hydrogels for Drug Delivery and Tissue Engineering**
DURKUT S., ELÇİN A. E., ELÇİN Y. M.
BIOMED 2017 (22nd International Symposium on Biomedical Science and Technology), Ankara, Turkey, 12 - 14 May 2017

VII. **Rheological properties of thermoresponsive poly N vinyl caprolactam g collagen hydrogel**
Durkut S., Elçin A. E., Elçin Y. M.
ICPC 2016: 18th International Conference on Polymer Chemistry, Paris, France, 24 - 25 October 2016

VIII. **Encapsulation of primary rat liver co-cultures in chitosan spheres: in vitro preliminary findings**
DURKUT S., ELÇİN Y. M., ELÇİN A. E.
Xth International Symposium on Biomedical Science Technology (BIOMED X), Girne, Cyprus (Kktc), 10 - 12 October 2003

IX. **Thermoresponsive Poly(N-Vinylcaprolactam)-g-Galactosylated Chitosan: Synthesis and Characterization**
DURKUT S., ELÇİN Y. M., ELÇİN A. E.
17th International Symposium on Biomedical Science and Technology, 23 - 25 November 2011

X. **Thermoresponsive Poly(N-Vinylcaprolactam) Based Hydrogels: In Vitro And In Vivo Studies.**
Durkut S., Elçin A. E., Elçin Y. M.
The 17th Biomedical Science and Technology Symposium (Biomed 2011), Ankara, Turkey, 23 - 25 November 2011

XI. **Thermoresponsive Poly(N-vinylcaprolactam)-g-Collagen: Synthesis, characterization, in vitro cytotoxicity and in vivo biocompatibility evaluation.**
Durkut S., Elçin Y. M.
TERMIS EU 2011 Annual Meeting. Tissue Engineering Regenerative Medicine International Society, Granada, Spain, 7 - 10 June 2011

XII. **Release of Lidocaine From Thermoresponsive Poly(N-vinylcaprolactam)-Based Biopolymers.**
Durkut S., Elçin Y. M.
The 11th International Chemistry Conference and Exhibition in Africa (11 ICCA), Al-Kharijah, Egypt, 20 - 23 November 2010

XIII. **Sıcaklığa Duyarlı Poli(N-Vinilkaprolaktam)-Temelli Biyopolimerlerin Sentezi ve Karakterizasyonu**
Durkut S., Elçin Y. M.
24. Ulusal Kimya Kongresi, Zonguldak, Turkey, 29 June - 02 July 2010

XIV. **Utilization of a Microgravity Bioreactor for Culturing Encapsulated Rat Primary Hepatocytes: Evaluation of Metabolic Function and Encapsulation**
Durkut S., Elçin A. E., Elçin Y. M.
XIIIth International Biomedical Science Technology Symposium (BIOMED 2007), İstanbul, Turkey, 26 - 28 August 2007

XV. **Influence of cryopreservation and encapsulation on the survival and metabolic function of primary rat hepatocytes**
Durkut S., Elçin A. E., Elçin Y. M.
XIIth Biomedical Science Technology Symposium (BIOMED XII), İzmir, Turkey, 20 - 23 September 2005

XVI. **Encapsulation of primary rat hepatocytes in a trilayered alginate-chitosan-alginate membrane system.**
Durkut S., Elçin A. E., Elçin Y. M.
XIth Biomedical Science Technology Symposium (BIOMED XI), Ankara, Turkey, 6 - 10 September 2004

XVII. **Formation of vessel-like structures from human embryonic stem cells in culture: preliminary findings**
Durkut S., Elçin Y. M., Elçin A. E., Koç Demir A.
IXth International Symposium on Biomedical Science Technology, Antalya, Turkey, 19 - 22 September 2002

XVIII. **Biocompatibility and biodegradability of microspheres based on chitosan hydrogels: in vitro and in vivo studies**

DURKUT S., ELÇİN Y. M., ELÇİN A. E.
IXth International Symp. on Biomedical Science Technology (BIOMED IX), Antalya, Turkey, 19 - 22 September 2002

XIX. **Formation of Vessel-like Structures from Human Embryonic Stem Cells in Culture: Preliminary Finding**
Elçin A. E., Polat G., Oğuz Ö., Durkut S., Koç Demir A., Kormalı T., Akbulak G., Çoşkun H., Elçin Y. M.
BIOMED2002, Antalya, Turkey, 19 - 22 September 2002

XX. **Glucose oxidase immobilization in chitosan microspheres: evaluation of optimization parameters and enzyme kinetics**
Durkut S., Elçin Y. M.
IXth International Symposium on Biomedical Science Technology (BIOMED IX), Antalya, Turkey, 19 - 22 September 2002

XXI. **Evaluation of macroporous ethyl- and acetyl-cellulose sponges for tissue engineering applications**
Elçin A. E., Durkut S., Elçin Y. M.
Second Smith and Nephew International Symposium - Tissue Engineering 2000: Advances in Tissue Engineering, Biomaterials and Cell Signalling, York, United Kingdom, 16 - 19 July 2000, pp.7

Supported Projects

Durkut S., Project Supported by Higher Education Institutions, Yavaş Salım Özelliği Gösteren Sıcaklığa Duyarlı Poli(Nvinilkaprolaktam)-g-İpek Fibroin (PNVCL-g-İF) Hibrit Hidrojel Yapı Formlarının Geliştirilmesi, 2022 - 2024
Koç Demir A., Durkut S., Elçin Y. M., TUBITAK Project, Manyetik Duyarlı Biyoaktif Doğal Kemik Matriksi Temelli Nanokompozit Biyomalzeme Geliştirilmesi ve In-Vivo Etkinliğinin Küçük Hayvan Modelinde İncelenmesi, 2017 - 2020
Odabaş S., Durkut S., Elçin Y. M., TUBITAK Project, Manyetik Temelli Doku İskelelerinin Hazirlanmasi Ve Kök Hücre Davranişlari Üzerine Mekanotransdüktif Etkilerinin Kapsamli İncelenmesi, 2015 - 2018
DURKUT S., KOÇ DEMİR A., TUBITAK Project, Kemik Doku Mühendisliğinde Stronsiyum ve Çinko İçeren Kompozit İskelelerin Kullanımı, 2015 - 2016
DURKUT S., Project Supported by Higher Education Institutions, Vaskülerize Doku Oluşturulmasına Yönelik Sıcaklığa Duyarlı Poli N Vinil Kaprolaktam g Kollajen İskele Geliştirilmesi ve Geciktirilmiş Vasküler Endotel Büyüme Faktörü Salım Davranışının İncelenmesi, 2014 - 2016
DURKUT S., TUBITAK Project, Adipoz Mezenkimal Kök Hücrelerle Mekanoaktif Damar Mühendisliği, 2011 - 2013
Durkut S., Universities of Other Countries Supported Project, Modulation of cytochrome P450 metabolism of Augmenter of Liver regeneration (ALR) in human hepatocytes., 2007 - 2007

Scientific Research / Working Group Memberships

Doku Mühendisliği, Biyomalzemeler Ve Nanobiyoteknoloji Laboratuvarı, Ankara University, Türkiye, www.elcinlab.org, 2008 - Continues

Metrics

Publication: 40
Citation (WoS): 152
Citation (Scopus): 159
H-Index (WoS): 9
H-Index (Scopus): 7