

## Asst. Prof. DAMLA ÇETİN ALTINDAL

### Personal Information

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### International Researcher IDs

ORCID: 0000-0001-9437-0931

ScopusID: 57194754485

Yoksis Researcher ID: 170584

### Education Information

Doctorate, Hacettepe University, Fen Fakültesi, Kimya Mühendisliği, Turkey 2010 - 2017

Postgraduate, Hacettepe University, Fen Fakültesi, Kimya Mühendisliği, Turkey 2008 - 2014

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Kemik doku mühendisliği yaklaşımında melatoninin rolü: İn vitro çalışmalar, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr), 2017

Postgraduate, Poli(2-hidroksietil metakrilat) bazlı süpergözenekli doku iskeleleri ile kemik rejenerasyonu, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (YI) (Tezli), 2010

### Research Areas

Life Sciences, Biotechnology, Biomaterial, Natural Sciences

### Academic Titles / Tasks

Assistant Professor, Hacettepe University, Fen Bilimleri Enstitüsü, Biyomühendislik A.B.D., 2019 - Continues

Research Assistant, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2009 - 2019

### Courses

Tissue Engineering, Doctorate, 2022 - 2023

Controlled Release and Targeting Techniques, Doctorate, 2022 - 2023

Transport Processes in Biological Systems, Doctorate, 2020 - 2021

ENGINEERING THERMODYNAMICS, Postgraduate, 2020 - 2021  
Materials Science and Technology III, Undergraduate, 2017 - 2018

## Advising Theses

Gümüşderelioğlu M., Çetin Altındal D., KARBON ELYAF DOLGULU POLİETERİMİD KOMPOZİTLERİN ÜRETİMİ VE KARAKTERİZASYONU, Postgraduate, A.TATLIDİLLİ(Student), 2020

Gümüşderelioğlu M., Çetin Altındal D., Effectiveness of single and dual release of melatonin and BMP-2 in bone homeostasis, Postgraduate, H.JARRAR(Student), 2019

## Jury Memberships

Doctorate, Doctorate, Hacettepe Üniversitesi, August, 2024

Post Graduate, Post Graduate, Hacettepe Üniversitesi, September, 2023

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Hacettepe Üniversitesi, July, 2023

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Hacettepe Üniversitesi, January, 2023

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Hacettepe Üniversitesi, June, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Hacettepe Üniversitesi, January, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Hacettepe Üniversitesi, May, 2021

Doctoral Examination, Doctoral Examination, Hacettepe Üniversitesi, January, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Hacettepe Üniversitesi, January, 2021

Post Graduate, Post Graduate, Hacettepe Üniversitesi, October, 2020

Post Graduate, Post Graduate, Hacettepe Üniversitesi, October, 2020

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Therapeutic potential of boron-based nanoparticles for enhanced glioblastoma treatment**  
Çetin Altındal D.  
JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY, vol.99, pp.105936-105951, 2024 (SCI-Expanded)
- II. **In-vitro effectiveness of poly-β-alanine reinforced poly(3-hydroxybutyrate) fibrous scaffolds for skeletal muscle regeneration**  
Konuk E., Çetin Altındal D., Akdere Ö. E., Gümüşderelioğlu M.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.131, pp.1-15, 2021 (SCI-Expanded)
- III. **Effects of carbon fiber type and resin ratio on thermal and mechanical lifetime of polyetherimide composites**  
Tatidilli A., Çetin Altındal D., Gümüşderelioğlu M.  
POLYMER COMPOSITES, vol.42, no.6, pp.2920-2932, 2021 (SCI-Expanded)
- IV. **Scaffold-based osteogenic dual delivery system with melatonin and BMP-2 releasing PLGA microparticles**  
Jarrar H., Altındal D., Gümüşderelioğlu M.  
INTERNATIONAL JOURNAL OF PHARMACEUTICS, vol.600, 2021 (SCI-Expanded)

- V. **Synergistic effect of fabrication and stabilization methods on physicochemical and biological properties of chitosan scaffolds**  
Gultan T, Bektas Tercan S, Çetin Altındal D, Gümüşderelioğlu M.  
INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS, vol.70, no.6, pp.371-382, 2021 (SCI-Expanded)
- VI. **Effect of melatonin/BMP-2 co-delivery scaffolds on the osteoclast activity**  
Jarrar H., Çetin Altındal D., Gümüşderelioğlu M.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE, vol.32, no.4, 2021 (SCI-Expanded)
- VII. **P(HEMA)-based SPH vehicles for high molecular weight protein delivery**  
ÇETİN ALTINDAL D., Turkyilmaz P., GÜMÜŞDERELİOĞLU M.  
INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS, vol.69, no.12, pp.773-785, 2020 (SCI-Expanded)
- VIII. **The inhibitory effect of melatonin on osteoclastogenesis of RAW 264.7 cells in low concentrations of RANKL and MCSF**  
Jarrar H., Çetin Altındal D., Gümüşderelioğlu M.  
TURKISH JOURNAL OF BIOLOGY, vol.44, no.6, pp.427-436, 2020 (SCI-Expanded)
- IX. **Dual-functional melatonin releasing device loaded with PLGA microparticles and cyclodextrin inclusion complex for osteosarcoma therapy**  
Çetin Altındal D., Gumusderelioglu M.  
Journal of Drug Delivery Science and Technology, vol.52, pp.586-596, 2019 (SCI-Expanded)
- X. **Melatonin-induced osteogenesis with methanol-annealed silk materials**  
ÇETİN ALTINDAL D., James E. N., Kaplan D. L., GÜMÜŞDERELİOĞLU M.  
JOURNAL OF BIOACTIVE AND COMPATIBLE POLYMERS, vol.34, no.3, pp.291-305, 2019 (SCI-Expanded)
- XI. **Melatonin releasing PLGA micro/nanoparticles and their effect on osteosarcoma cells**  
Altındal D., Gümüşderelioğlu M.  
JOURNAL OF MICROENCAPSULATION, vol.33, no.1, pp.53-63, 2016 (SCI-Expanded)
- XII. **Melatonin/HP beta CD complex: Microwave synthesis, integration with chitosan scaffolds and inhibitory effects on MG-63 CELLS**  
Topal B., Altındal D. C., GÜMÜŞDERELİOĞLU M.  
INTERNATIONAL JOURNAL OF PHARMACEUTICS, vol.496, no.2, pp.801-811, 2015 (SCI-Expanded)
- XIII. **Sustained Release of 17 beta-Estradiol Stimulates Osteogenic Differentiation of Adipose Tissue-Derived Mesenchymal Stem Cells on Chitosan-Hydroxyapatite Scaffolds**  
Irmak G., Demirtas T. T., Altındal D. C., ÇALIŞ M., GÜMÜŞDERELİOĞLU M.  
CELLS TISSUES ORGANS, vol.199, no.1, pp.37-50, 2014 (SCI-Expanded)
- XIV. **Novel pHEMA-gelatin SPHs as bone scaffolds in dynamic cultures**  
Cetin D., Kahraman A. S., GÜMÜŞDERELİOĞLU M.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE, vol.23, no.11, pp.2803-2812, 2012 (SCI-Expanded)
- XV. **Novel Scaffolds Based on Poly(2-hydroxyethyl methacrylate) Superporous Hydrogels for Bone Tissue Engineering**  
Cetin D., Kahraman A. S., GÜMÜŞDERELİOĞLU M.  
JOURNAL OF BIOMATERIALS SCIENCE-POLYMER EDITION, vol.22, no.9, pp.1157-1178, 2011 (SCI-Expanded)

## Articles Published in Other Journals

- I. **MELATONİN DRAKULA HORMONU**  
GÜMÜŞDERELİOĞLU M., ÇETİN ALTINDAL D.  
TÜBİTAK BİLİM VE TEKNİK DERGİSİ, pp.24-27, 2014 (Non Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Kontrollü Melatonin Salımının Kemik Doku Rejenerasyonu Üzerindeki Etkisinin İncelenmesi**  
ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M.  
13. Ulusal Kimya Mühendisliği Kongresi, Turkey, 3 - 06 September 2018
- II. **Silk Films Modified With Melatonin: Characterization and Osteogenic Activity**  
ÇETİN ALTINDAL D., JAMES E. N., KAPLAN D. L., GÜMÜŞDERELİOĞLU M.  
22nd International Biomedical Science and Technology Symposium-BIOMED 2017, 13 - 15 May 2017
- III. **Investigation of Melatonin Cyclodextrin Inclusion Complexes in Bone Tissue Engineering**  
BEDRİYE T., ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M.  
4th International Conference on Tissue Science & Regenerative Medicine, ROMA, Italy, 27 - 29 July 2015
- IV. **Investigation of melatonin beta Cyclodextrin complexes in bone tissue engineering**  
Topal B., ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M.  
4th Int conference on Tissue Science and Regenerative Medicine, Roma, Italy, 27 - 29 July 2015, vol.6
- V. **Release Kinetics of Melatonin from PLGA Micro Nanoparticles and the Effect of Melatonin on Osteosarcoma Cells**  
ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M.  
3rd Belgian Symposium on Tissue Engineering, Leuven, Belgium, 19 - 20 March 2015
- VI. **Osteogenic Differentiation of AdMSCs on 17 Estradiol Releasing Chitosan Hydroxiapatite Scaffolds**  
GÜLSEREN I., TUĞRUL TOLGA D., ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M.  
26th European Conference on Biomaterials, Liverpool, United Kingdom, 31 August - 03 September 2014
- VII. **Poly HEMA Based SPHs For Protein Delivery**  
PINAR T., ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M.  
25th European Conference on Biomaterials, Madrid, Spain, 8 - 12 September 2013
- VIII. **Vascularization Potential of VEGF and or Angiopoietin Immobilized PHEMA Gelatin Scaffold**  
KARAKUŞ E., ÇAPKIN YURTSEVER M., ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M.  
17th International Symposium on Biomedical Science and Technology, Ankara, Turkey, 23 - 25 September 2011
- IX. **Bone Tissue Engineering With Superporous pHEMA Based Scaffolds In Stationary Cultures and Spinner Flasks**  
ÇETİN ALTINDAL D., ANIL SERA K., GÜMÜŞDERELİOĞLU M.  
24th European Conference on Biomaterials, Dublin, Ireland, 4 - 08 September 2011
- X. **Estradiol Yüklü PLGA Nanoküreler Sentez Karakterizasyon ve İn Vitro Salım Kinetiği**  
GÜLSEREN I., ÇETİN ALTINDAL D., TUĞRUL TOLGA D., GÜMÜŞDERELİOĞLU M.  
10. Ulusal Kimya Mühendisliği Kongresi, İstanbul, Turkey, 3 - 06 September 2012
- XI. **Superporous Poly 2 hydroxyethyl methacrylate Based Scaffolds For Bone Regeneration**  
ÇETİN ALTINDAL D., ANIL SERA K., GÜMÜŞDERELİOĞLU M.  
15th International Biomedical Science and Technology Symposium, Güzelyurt, Cyprus (Kktc), 16 - 19 August 2009

## Supported Projects

ÇETİN ALTINDAL D., İLHAN Z., GÜMÜŞDERELİOĞLU M., ŞAHİN S. M., Project Supported by Higher Education Institutions, Klorlanmış Polipropilen-Hematit Fibröz Matriksin Geliştirilmesi ve Metilen Mavisinin Fotokatalitik Oksidasyonundaki Etkinliğinin Araştırılması, 2023 - Continues

Çetin Altındal D., TÜBİTAK Project, MB407 (M: Ca,Mg,Sr) Borat Nanoparçacıklarının Sentezi, Nötron Hassasiyet Ölçümleri ve İlaç Taşıma Kapasiteleri, 2021 - 2023

ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M., KONUK E., Project Supported by Higher Education Institutions, P3HB ve PBA Polimerlerinin İkili Karışımları ile İskelet Kası Doku Mühendisliği: Miyojenik Farklılaşmanın İncelenmesi, 2017 - 2021

GÜMÜŞDERELİOĞLU M., ÇETİN ALTINDAL D., Tathıdilli A., Project Supported by Higher Education Institutions, KARBON ELYAF DOLGULU POLİETERİMİD KOMPOZİTLERİN ÜRETİMİ VE KARAKTERİZASYONU, 2019 - 2020

GÜMÜŞDERELİOĞLU M., ÇETİN ALTINDAL D., Jarrar H., Project Supported by Higher Education Institutions, KEMİK HOMEOSTAZINDA MELATONİN ve BMP2NİN TEKLİ ve İKİLİ SALIMLARININ ETKİNLİĞİ, 2018 - 2019

ÇETİN ALTINDAL D., Gültan T., Bektaş Ş., Project Supported by Higher Education Institutions, Fabrikasyon ve Stabilizasyon İşlemlerinin Kitosan Doku İskelelerinin Morfolojik, Mekanik ve Biyolojik Özellikleri Üzerine Etkisi, 2018 - 2019

ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M., Project Supported by Higher Education Institutions, Melatonin ile Modifiye Edilmiş İpek Filmler: Karakterizasyon ve Osteojenik Aktivite, 2017 - 2017

GÜMÜŞDERELİOĞLU M., ÇETİN ALTINDAL D., Project Supported by Higher Education Institutions, Melatoninin Osteoindüktif ve Antikanserojenik Etkilerinin Kemik Doku Mühendisliği Açısından Değerlendirilmesi İn Vitro Çalışmalar, 2015 - 2017

ÇETİN ALTINDAL D., GÜMÜŞDERELİOĞLU M., Project Supported by Higher Education Institutions, Melatoninin PLGA Mikro/Nanopartiküllerden Salm Kinetiği ve Osteosarkoma Hücreleri Üzerindeki Etkisi, 2015 - 2015

## Metrics

Publication: 27

Citation (WoS): 89

Citation (Scopus): 204

H-Index (WoS): 5

H-Index (Scopus): 7

## Congress and Symposium Activities

Silk Films Modified With Melatonin: Characterization and Osteogenic Activity, Attendee, Ankara, Turkey, 2017

Investigation of Melatonin-  $\beta$  Cyclodextrin Inclusion Complexes in Bone Tissue Engineering, Attendee, Rome, Italy, 2015

Release Kinetics of Melatonin from PLGA Micro/Nanoparticles and the Effect of Melatonin on Osteosarcoma Cells, Attendee, Leuven, Belgium, 2015

Osteogenic Differentiation of AdMSCs on 17 $\beta$ -Estradiol Releasing Chitosan-Hydroxiapatite Scaffolds, 26th European Conference on Biomaterials, Attendee, Liverpool, United Kingdom, 2014

Poly(HEMA)-Based SPHs For Protein Delivery", 25th European Conference on Biomaterials, Attendee, Madrid, Spain, 2013

$\beta$ -Estradiol Yüklü PLGA Nanoküreler: Sentez, Karakterizasyon ve İn Vitro Salm Kinetiği, Attendee, İstanbul, Turkey, 2012

Vascularization Potential of VEGF and/or Angiopoietin Immobilized PHEMA-Gelatin Scaffold, Attendee, Ankara, Turkey, 2011

Bone Tissue Engineering With Superporous pHEMA-Based Scaffolds In Stationary Cultures and Spinner Flasks, Attendee, Dublin, Ireland, 2011

Superporous Poly(2-hydroxyethyl methacrylate)-Based Scaffolds For Bone Regeneration, Attendee, Güzelyurt, Cyprus (Kkct), 2009

## Scholarships

- 2214 Tübitak Yurt Dışı Doktora Sırası Araştırma Bursu, TUBITAK, 2016 - 2016

## Non Academic Experience

HACETTEPE ÜNİVERSİTESİ

Tufts University