

## Asst. Prof. ZEYNEP TOKCAER KESKİN

### Personal Information

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### International Researcher IDs

ScholarID: 0ABHvJ8AAAAJ

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Publons / Web Of Science ResearcherID: I-5158-2018

Yoksis Researcher ID: 239828

### Education Information

Doctorate, Ihsan Dogramaci Bilkent University, Institute Of Engineering And Natural Sciences, Moleküler Biyoloji Ve Genetik (Dr), Turkey 2005 - 2010

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biyoloji (YI) (Tezli), Turkey 2001 - 2003

Undergraduate, Middle East Technical University, Fen-Edebiyat Fakültesi, Biyolojik Bilimler Bölümü, Turkey 1997 - 2001

### Dissertations

Doctorate, Contribution of mesenchymal stem cells in cell based therapies, Ihsan Dogramaci Bilkent University, Mühendislik Ve Fen Bilimleri Enstitüsü, Moleküler Biyoloji Ve Genetik (Dr), 2010

Postgraduate, Response surface optimization of Bacillus thuringiensis israelensis fermentation, Middle East Technical University, Fen Bilimleri Enstitüsü, Biyoloji (YI) (Tezli), 2003

### Research Areas

Animal Tissue Culture, Genetic Disorders, Genetic Engineering, Molecular Biology of Cancer

### Academic Titles / Tasks

Assistant Professor, Acibadem Mehmet Ali Aydınlar University, Faculty of Humanities and Social Sciences, Molecular Biology And Genetics, 2015 - Continues

Research Assistant, Ankara University, Ankara Tıp Fakültesi, Ankara Tıp Pr., 2013 - 2015

Research Assistant, New York University, Medical School, Microbiology, 2012 - 2013

Research Assistant, New York University, Medical School, Neurosurgery, 2011 - 2012

### Academic and Administrative Experience

Eğitim ve Müfredat Kurulu üyesi, Acibadem Mehmet Ali Aydınlar University, Faculty Of Engineering And Natural Sciences, Molecular Biology And Genetics, 2022 - Continues

Bölüm Stratejik Plan Komisyonu Üyesi, Acibadem Mehmet Ali Aydınlar University, Faculty Of Engineering and Natural

Sciences, Moleküler Biyoloji ve Genetik, 2018 - Continues

Deputy Head of Department, Acibadem Mehmet Ali Aydınlar University, Faculty Of Engineering And Natural Sciences, Molecular Biology And Genetics, 2021 - 2023

Head of Department, Acibadem Mehmet Ali Aydınlar University, Molecular Biology And Genetics, 2020 - 2021

Staj Koordinatörü, Acibadem Mehmet Ali Aydınlar University, Faculty of Humanities and Social Sciences, Molecular Biology And Genetics, 2018 - 2021

Birim Kalite Komisyonu Üyesi, Acibadem Mehmet Ali Aydınlar University, Faculty of Humanities and Social Sciences, Molecular Biology And Genetics, 2018 - 2021

## **Courses**

Kök Hücre ve Hücreyel Tedaviler, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

General Biology 2, Undergraduate, 2023 - 2024

Gelişim Biyolojisi, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2015 - 2016

Research Methods and Ethics in Molecular Biology and Genetics, Postgraduate, 2023 - 2024

Seminar, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Biyoteknoloji ve genetik mühendisliği, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

Seminar, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Molecular and Cellular Biology 1, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022

Orientation, Undergraduate, 2023 - 2024, 2022 - 2023

General Biology I, Undergraduate, 2023 - 2024

Senior Project 2, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Thesis, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Introduction to Molecular and Translational Biomedicine, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Senior Project 1, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Research Techniques and Etics in Natural Sciences, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Thesis, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Molecular and Translational Biomedicine, Postgraduate, 2021 - 2022, 2019 - 2020, 2018 - 2019, 2017 - 2018

Genetics, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

Stem Cells and Regenerative Applications, Postgraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018

Biyokimya ve Genetik Araştırma Teknikleri, Undergraduate, 2015 - 2016

Genetik, Undergraduate, 2015 - 2016

## **Jury Memberships**

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Gebze Teknik Üniversitesi, September, 2023

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Gebze Teknik Üniversitesi, January, 2023

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

- I. Overexpression of CXCL17 increases migration and invasion of A549 lung adenocarcinoma cells**  
Koni E., Congur I., Tokcaer Keskin Z.

FRONTIERS IN PHARMACOLOGY, vol.1, no.1, pp.1-9, 2024 (SCI-Expanded)

- II. **Meta-analysis of commonly mutated genes in leptomeningeal carcinomatosis**  
Congur I, Koni E, Onat O. E., Keskin Z.  
PeerJ, vol.11, 2023 (SCI-Expanded)
- III. **MTHFR C677T mutation affects adipogenic differentiation abilities of human bone marrow-derived mesenchymal stem cells**  
Vural R, Çelik D, Peker E. B., Köni E., Kulaç A. A., TOKCAER KESKİN Z.  
Turkish Journal of Biology, vol.46, no.5, pp.375-387, 2022 (SCI-Expanded)
- IV. **Induced Pluripotent Stem Cells in Disease Modelling and Regeneration.**  
Talug B., Tokcaer-Keskin Z.  
Advances in experimental medicine and biology, vol.1144, pp.91-99, 2019 (SCI-Expanded)
- V. **Increased free Zn<sup>2+</sup> correlates induction of sarco(endo)plasmic reticulum stress via altered expression levels of Zn<sup>2+</sup>-transporters in heart failure**  
OLĞAR Y., DURAK A., TUNCAY E., BİTİRİM C. V., ÖZÇINAR E., İNAN M. B., TOKCAER KESKİN Z., AKÇALI K. C., AKAR A. R., Turan B.  
JOURNAL OF CELLULAR AND MOLECULAR MEDICINE, vol.22, no.3, pp.1944-1956, 2018 (SCI-Expanded)
- VI. **Comparative FAIRE-seq Analysis Reveals Distinguishing Features of the Chromatin Structure of Ground State- and Primed-Pluripotent Cells**  
Murtha M., Strino F., Tokcaer-Keskin Z., Bayin N. S., Shalabi D., Xi X., Kluger Y., Dailey L.  
STEM CELLS, vol.33, no.2, pp.378-391, 2015 (SCI-Expanded)
- VII. **FIREWACH: high-throughput functional detection of transcriptional regulatory modules in mammalian cells**  
Murtha M., Tokcaer-Keskin Z., Tang Z., Strino F., Chen X., Wang Y., Xi X., Basilico C., Brown S., Bonneau R., et al.  
NATURE METHODS, vol.11, no.5, pp.559-565, 2014 (SCI-Expanded)
- VIII. **The Effect of Estrogen on Bone Marrow-Derived Rat Mesenchymal Stem Cell Maintenance: Inhibiting Apoptosis Through the Expression of Bcl-x(L) and Bcl-2**  
Ayaloglu-Butun F., Terzioglu-Kara E., TOKCAER KESKİN Z., AKÇALI K. C.  
STEM CELL REVIEWS AND REPORTS, vol.8, no.2, pp.393-401, 2012 (SCI-Expanded)
- IX. **The Effect of Telomerase Template Antagonist GRN163L on Bone-Marrow-Derived Rat Mesenchymal Stem Cells is Reversible and Associated with Altered Expression of Cyclin d1, cdk4 and cdk6**  
TOKCAER KESKİN Z., DİKMEN Z. G., Ayaloglu-Butun F., Gultekin S., Gryaznov S. M., AKÇALI K. C.  
STEM CELL REVIEWS AND REPORTS, vol.6, no.2, pp.224-233, 2010 (SCI-Expanded)
- X. **Timing of induction of cardiomyocyte differentiation for in vitro cultured mesenchymal stem cells: a perspective for emergencies**  
Tokcaer-Keskin Z., AKAR A. R., Ayaloglu-Butun F., Terzioglu-Kara E., Durdu S., Ozyurda U., UĞUR M., Akcali K. C.  
CANADIAN JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY, vol.87, no.2, pp.143-150, 2009 (SCI-Expanded)
- XI. **Cloning and expression profile of FLT3 gene during progenitor cell-dependent liver regeneration**  
Aydin I. T., Tokcaer Z., Dalgic A., Konu O., Akcali K. C.  
JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY, vol.22, no.12, pp.2181-2188, 2007 (SCI-Expanded)
- XII. **Response surface optimization of antidipteran delta-endotoxin production by Bacillus thuringiensis subsp israelensis HD 500**  
Tokcaer Z., Bayraktar E., Mehmetoglu U., Ozcengiz G., Alaeddinoglu N.  
PROCESS BIOCHEMISTRY, vol.41, no.2, pp.350-355, 2006 (SCI-Expanded)

## Articles Published in Other Journals

- I. **ADMINISTRATION OF BONE MARROW DERIVED MESENCHYMAL STEM CELLS MODULATE TLR EXPRESSION DURING LIVER REGENERATION**  
Koçak H., Tokcaer Keskin Z., İnsal B., Gürsel İ., Akçalı K. C.  
Trakya University Journal of Natural Sciences, vol.20, no.1, pp.1-10, 2019 (ESCI)

## Books & Book Chapters

- I. **Genetic Identification of Human Embryonic Stem Cell-Derived Neural Cell Types Using Bacterial Artificial Chromosomes**  
Tokcaer Keskin Z., Placantonakis D. G.  
in: Stem Cells and Cancer Stem Cells, M. A. Hayat, Editor, Springer, London/Berlin , Dordrecht, pp.125-136, 2013
- II. **Mesenchymal Stem Cells: Possibilities of New Treatment Options**  
Tokcaer Keskin Z., Koçak H., Gürsel İ., Akçalı K. C.  
in: Adult and Embryonic Stem Cells, Kursad Turksen, Editor, Springer, London/Berlin , New-York, pp.59-67, 2012

## Refereed Congress / Symposium Publications in Proceedings

- I. **Investigating the effects of 5,10 methylenetetrahydrofolate reductase C677T polymorphism on differentiation of human mesenchymal stem cells**  
VURAL R., ÇELİK D., PEKER E. B., KÖNİ E., KULAÇ A. A., TOKCAER KESKİN Z.  
INTERNATIONAL SOCIETY FOR STEM CELL RESEARCH 2021 ANNUAL MEETING, VIRTUAL, United States Of America, 21 June 2021
- II. **Investigating the Effects of 5,10-Methylenetetrahydrofolate Reductase C677T Polymorphism on Mesenchymal Stem Cells by Using CRISPR/Cas9 System as a Gene Editing Tool**  
Taluğ B., Deniz E., Tokcaer Keskin Z.  
Organelle Biogenesis and Function in Cell physiology and in Disease conference, İstanbul, Turkey, 27 - 28 May 2019, pp.52
- III. **Investigating the Effects of 5,10-Methylenetetrahydrofolate Reductase C677T Polymorphism on Mesenchymal Stem Cells by Using CRISPR/Cas9 System as a Gene Editing Tool**  
Taluğ B., Deniz E., Tokcaer Keskin Z.  
International Molecular Medicine Symposium by the Bosphorus, İstanbul, Turkey, 16 - 18 May 2019, pp.74
- IV. **Investigating the Effects of 5,10-Methylenetetrahydrofolate Reductase C677T Polymorphism on Mesenchymal Stem Cells by Using CRISPR/Cas9 System as a Gene Editing Tool**  
Taluğ B., Deniz E., Tokcaer Keskin Z.  
Fifth International Congress of the Molecular Biology Association of Turkey, İstanbul, Turkey, 8 - 10 September 2017, pp.187
- V. **Editing of Long Noncoding RNA DANCR Gene Locus Using Genetic Engineering Tools**  
Baran G., Taluğ B., Keskin N., TOKCAER KESKİN Z., ERMAN M. B., Deniz E.  
21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017
- VI. **NO PATHWAY AND EPIGENETIC ALTERATIONS MAY BE NEW POSSIBLE TARGETS FOR METABOLIC SYNDROME**  
Çiçek F., Tokcaer Keskin Z., Akçalı K. C., Turan B.  
EUROPEAN SECTION MEETING OF THE INTERNATIONAL ACADEMY OF CARDIOVASCULAR SCIENCES, Zalaegerszeg, Hungary, 08 October 2014, pp.1
- VII. **FLT3 MAY FUNCTION AS A LINK BETWEEN LIVER REGENERATION AND HEPATOCELLULAR CARCINOGENESIS**  
Bayın N. S., Tokcaer Keskin Z., Acun T., Yakicier M. C., Akçalı K. C.  
EASL SIGNALING IN THE LIVER, Amsterdam, Netherlands, 18 February 2010
- VIII. **THE IN VITRO EFFECTS OF TELOMERASE INHIBITION ON BONE MARROW DERIVED RAT MESENCHYMAL STEM CELLS**  
Tokcaer Keskin Z., Dikmen Z. G., Gryaznov S., Akçalı K. C.  
INTERNATIONAL SOCIETY FOR STEM CELL RESEARCH 7TH ANNUAL MEETING, Barcelona, Spain, 08 July 2009, pp.7
- IX. **Role of estrogen in mesenchymal stem cell biology**  
AKÇALI K. C., AYALOĞLU BÜTÜN F., TOKCAER KESKİN Z.

INTERNATIONAL SOCIETY FOR STEM CELL RESEARCH 6TH ANNUAL MEETING, PHILADELPHIA, United States Of America, 11 June 2008

X. **The Effects of estrogen on the cell cycle regulators in mesenchymal stem cells**

TOKCAER KESKİN Z., AYALOĞLU BÜTÜN F., AKÇALI K. C.

Eurostemcell summer school 2007: Stem cells and Regenerative Medicine, HYDRA, Greece, 14 September 2007

XI. **Bacillus thuringiensis subspecies israelensis fermentasyonu için tepki yüzey optimizasyonu**

TOKCAER KESKİN Z., ÖZCENGİZ G., ALAEDDİNOĞLU N.

13. Biyoteknoloji Kongresi, Çanakkale, Turkey, 25 August 2003

## Supported Projects

Tokcaer Keskin Z., Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Leptomeningeal Karsinomada artan SLPI ve CXCL17 gen ifadelerinin A549 hücre hattı üzerindeki etkilerinin araştırılması, 2022 - 2023  
Güneşer M. B., Özdemir Ş., Altınova İ. S., Tokcaer Keskin Z., Project Supported by Higher Education Institutions, Kitosan Nanopartikülü Eklenmiş Mineral Trioksit Agregatın Fiziksel, Mekanik ve Sitotoksik Özelliklerinin Değerlendirilmesi, 2021 - 2022

İnan E. A., Tokcaer Keskin Z., Terzi O. S., TUBITAK Project, Linagliptin ve Empagliflozin tedavilerinin STZ diabetik sıçan kalbinde olası etkilerinin miRNA'lar üzerinden karşılaştırmalı olarak değerlendirilmesi, 2019 - 2022

Tokcaer Keskin Z., TUBITAK Project, İnsan Mezenkimal Kök Hücrelerinde 5,10- Metilentetrahidrofolat Redüktaz C677T Polimorfizm Etkisinin Farklılaşma Üzerine Etkisinin İncelenmesi, 2019 - 2020

DENİZ E., Erman B., TOKCAER KESKİN Z., YAKICIER M. C., TUBITAK Project, Kanser Tedavilerinde Sitotoksik İlaçlara Karşı Gelişen Direnç Mekanizmalarının Crispr/Cas9 Teknolojisi Kullanılarak Genom Düzeyinde Taranması Ve Modellenmesi, 2017 - 2020

Tokcaer Keskin Z., Tuncay E., TUBITAK Project, Zn<sup>2+</sup>-taşıyıcısı ZnT6'nın hücre iç serbest Zn<sup>2+</sup> düzenlenmesindeki rolünün H9c2 hücrelerinde hiperglisemik koşullarda incelenmesi, 2018 - 2019

Tokcaer Keskin Z., Project Supported by Higher Education Institutions, İnsan Mezenkimal Kök Hücrelerinde CRISPR/Cas9 Genom Düzenleme Yönetimi ile 5,10-Metilentetrahidrofolat redüktaz C677T Polimorfizm Etkisinin Araştırılması, 2017 - 2018

Tokcaer Keskin Z., Project Supported by Higher Education Institutions, Kanagliflozinin İnsan Uyarılmış Pluripotent Kök Hücrelerinden Farklılaştırılan Kardiyomyositler Kullanılarak İnsan Kardiyomyositlerindeki Etkisinin Belirlenmesi, 2016 - 2017

Tokcaer Keskin Z., Project Supported by Higher Education Institutions, İnsan Uyarılmış Pluripotent Kök Hücrelerinden Limbal Epitel Kök Hücre Farklılaştırılmasının Geliştirilerek Optimizasyonu, 2016 - 2017

Tokcaer Keskin Z., Turan B., TUBITAK Project, İndüklenmiş pluripotent kök hücrelerden farklılaştırılan kardiyomyositlerde kimyasal ajanlar ve hipoksi ile oluşturulan hipertrofiye β adrenerjik reseptörlerin rolü, 2014 - 2016

Akçalı K. C., TUBITAK Project, KARACIĞER FİBROZİSİNDE FLT3 GENİNİN ETKİSİ VE BU ETKİNİN MOLEKÜLER MEKANİZMASI, 2012 - 2015

Akçalı K. C., TUBITAK Project, HİPOKSİNİN MEZENKİMAL KÖK HÜCRELERİ ÜZERİNDEKİ ETKİSİNDE ÖSTROJENİN ROLÜ VE ETKİ MEKANİZMASI, 2009 - 2010

Akçalı K. C., TUBITAK Project, ÖSTROJENİN DENEYSEL HAYVAN MODELİ KULLANILARAK MEZENKİMAL KÖK HÜCRE ÇOĞALMASI, FARKLIŞMASI VE HASARLI DOKUYA ULAŞMASINDAKİ ROLÜNÜN TANIMLANMASI, 2006 - 2008

## Activities in Scientific Journals

Acıbadem Üniversitesi Sağlık Bilimleri Dergisi, Assistant Editor/Section Editor, 2019 - Continues

## Memberships / Tasks in Scientific Organizations

European Association for Cancer Research, Member, 2024 - Continues, England  
Moleküler Kanser Arařtırmaları Derneđi, Member, 2023 - Continues, Turkey  
Tıbbi Biyoloji ve Genetik Derneđi, Member, 2019 - Continues, Turkey  
Moleküler Biyoloji Derneđi, Member, 2016 - Continues, Turkey  
International Society of Stem Cell Research, Member, 2008 - 2022, United States Of America

## **Scientific Refereeing**

SAGE Open Medicine, Journal Indexed in ESCI, March 2024  
GENE, SCI Journal, September 2023  
BALKAN MEDICAL JOURNAL, Journal Indexed in SCI-E, June 2023  
BALKAN MEDICAL JOURNAL, Journal Indexed in SCI-E, February 2023  
TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Acibadem Mehmet Ali Aydınlar University, Turkey, June 2022  
Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Acibadem Mehmet Ali Aydınlar University, Turkey, May 2022  
Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Acibadem Mehmet Ali Aydınlar University, Turkey, April 2022  
Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Acibadem Mehmet Ali Aydınlar University, Turkey, April 2022  
Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Acibadem Mehmet Ali Aydınlar University, Turkey, March 2022  
TUBITAK Project, 1002 - Quick Support Program, Acibadem Mehmet Ali Aydınlar University, Turkey, March 2022

## **Metrics**

Publication: 38  
Citation (WoS): 216  
Citation (Scopus): 225  
H-Index (WoS): 7  
H-Index (Scopus): 7

## **Congress and Symposium Activities**

Molecular Biology Association 2022, Moderator, İstanbul, Turkey, 2022  
Türk Onkoloji Grubu çalıştayı, Attendee, İstanbul, Turkey, 2021  
ISSCR 2021 , Attendee, Massachusetts, United States Of America, 2021  
INTERNATIONAL SYMPOSIUM ON CELLULAR THERAPY IN CARDIOVASCULAR MEDICINE: STEM CELL OPPORTUNITY, Attendee, Ankara, Turkey, 2019  
ISSCR 2015, Attendee, Stockholm, Sweden, 2015  
IACS, Attendee, Budapest, Hungary, 2014  
ISSCR 2009, Attendee, Barcelona, Spain, 2009  
ISSCR 2008, Attendee, Pennsylvania, United States Of America, 2008  
Eurostem cell 2007, Attendee, Athens, Greece, 2007

## **Awards**

Tokcaer Keskin Z., Çiçek F., Akçalı K. C., Turan B., Poster Award, European Section Meeting Of The International Academy

Of Cardiovascular Sciences, October 2014

Tokcaer Keskin Z., Dikmen Z. G., Akçalı K. C., Travel Award, International Society For Stem Cell Research, July 2009