

Asst. Prof. Ayşegül ERDEMİR ÜSTÜNDAĞ

Personal Information

Web: <https://avesis.yildiz.edu.tr/aerdemir>

Education Information

Post Doctorate, Massachusetts Institute Of Technology, Koch Institute For Integrative Cancer Research, United States Of America 2015 - 2016

Doctorate, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Biyomühendislik, Turkey 2010 - 2014

Post Graduate, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Biyomühendislik, Turkey 2008 - 2010

Under Graduate, Ege University, Fen Fakültesi, Biyoloji, Turkey 2004 - 2008

Dissertations

Doctorate, İntrakraniyal anevrizma ile ilişkili gen polimorfizmlerinin Türk hastalarda incelenmesi, Yıldız Teknik Üniversitesi, Biyomühendislik, Biyomühendislik, 2014

Post Graduate, Theileria annulata'nın laktat dehidrogenaz enzimini kodlayan genin ilaç tasarım çalışmalarında kullanılmak üzere izolasyonu, klonlanması ve analizi, Yıldız Teknik Üniversitesi, Biyomühendislik, Biyomühendislik, 2010

Research Areas

Life Sciences, Molecular Biology and Genetics, Genetic Engineering, Molecular Biology of Cancer, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Molecular Biology And Genetics, 2017 - Continues

Expert PhD, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Bioengineering, 2012 - 2017

Researcher, Massachusetts Institute of Technology, The Koch Institute For Integrative Cancer Research, The Koch Institute For Integrative Cancer Research, 2015 - 2016

Courses

Cancer Biology, Under Graduate, 2018 - 2019

Cancer Genetics and Intracellular Transduction Pathways, Doctorate, 2017 - 2018, 2018 - 2019

Advising Theses

Erdemir Üstündağ A., Kolon kanser hücre hattında kuersetin ve kafeik asit fenetil ester yüklü nanopartiküllerin

Designed Lessons

Erdemir Üstündağ A., Kanser Biyolojisi, Under Graduate, 2017 - 2018

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

- **Quercetin-loaded nanoparticles enhance cytotoxicity and antioxidant activity on C6 glioma cells**
Ersöz M., Erdemir A., Derman S., Arasoğlu T., Mansuroğlu B.
PHARMACEUTICAL DEVELOPMENT AND TECHNOLOGY, vol.25, pp.757-766, 2020 (Journal Indexed in SCI)
- **Comparative evaluation of hesperetin loaded nanoparticles for anticancer activity against C6 glioma cancer cells**
Ersoz M., Erdemir A., Duranoglu D., Uzunoglu D., Arasoğlu T., Derman S., Mansuroğlu B.
ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY, vol.47, pp.319-329, 2019 (Journal Indexed in SCI)
- **Investigation of anti-cancer activity of hesperetin and hesperetin loaded polymeric nanoparticles on C6 glioma cells**
Ersoz M., Erdemir A., Uzunoglu D., ARASOĞLU T., DERMAN S., MANSUROĞLU B.
FEBS OPEN BIO, vol.8, pp.477, 2018 (Journal Indexed in SCI)
- **Fasting Activates Fatty Acid Oxidation to Enhance Intestinal Stem Cell Function during Homeostasis and Aging.**
Mihaylova M., Cheng C., Cao A., Tripathi S., Mana M., Bauer-Rowe K., Abu-Remaileh M., Clavain L., Erdemir A., Lewis C., et al.
Cell stem cell, vol.22, 2018 (Journal Indexed in SCI Expanded)
- **Functional and structural characterization of the pentapeptide insertion of Theileria annulata lactate dehydrogenase by site-directed mutagenesis, comparative modeling and molecular dynamics simulations**
Erdemir A., Mutlu Ö.
JOURNAL OF MOLECULAR GRAPHICS & MODELLING, vol.74, pp.344-351, 2017 (Journal Indexed in SCI)
- **Biochemical and in silico Characterization of Recombinant L-Lactate Dehydrogenase of Theileria annulata**
Nural B., Erdemir A., MUTLU Ö., YAKARSONMEZ S., DANIŞ Ö., TOPUZOĞULLARI M., TURGUT-BALIK D.
MOLECULAR BIOTECHNOLOGY, vol.58, pp.256-267, 2016 (Journal Indexed in SCI)
- **Cloning, Expression and Characterization of the Gene Encoding the Enolase from Fusobacterium nucleatum**
YAKARSONMEZ S., CAYIR E., MUTLU Ö., Nural B., Sariyer E., TOPUZOĞULLARI M., Milward M. R. , Cooper P. R. , Erdemir A., Turgut-Balik D.
APPLIED BIOCHEMISTRY AND MICROBIOLOGY, vol.52, pp.23-30, 2016 (Journal Indexed in SCI)
- **Cloning of Intron-Removed Enolase Gene and Expression, Purification, Kinetic Characterization of the Enzyme from Theileria annulata**
Cayir E., Erdemir A., OZKAN E., TOPUZOĞULLARI M., BOLAT Z. B. , AKAT A., TURGUT-BALIK D.
MOLECULAR BIOTECHNOLOGY, vol.56, pp.689-696, 2014 (Journal Indexed in SCI)
- **Single Mutation in Shine-Dalgarno-Like Sequence Present in the Amino Terminal of Lactate Dehydrogenase of Plasmodium Effects the Production of an Eukaryotic Protein Expressed in a Prokaryotic System**
ÇİÇEK M., MUTLU Ö., Erdemir A., Ozkan E., Saricay Y., Turgut-Balik D.
MOLECULAR BIOTECHNOLOGY, vol.54, pp.602-608, 2013 (Journal Indexed in SCI)
- **Isolation, cloning and sequence analysis of the lactate dehydrogenase gene from Theileria annulata may lead to design of new antitheilerial drugs**

Articles Published in Other Journals

- **GENOTYPING AND ANALYSIS OF rs27037 POLYMORPHISM FORANKYLOSING SPONDYLITIS**
AKBULUT E., ERDEMİR A., ÖZGEN M., BASKIN Y., YALÇIN GÜLEÇ F., BALIK D.
Sigma Mühendislik ve Fen Bilimleri Dergisi, vol.6, pp.109-116, 2015 (Refereed Journals of Other Institutions)
- **GENOTYPING AND ANALYSIS OF rs7501939 POLYMORPHISM FORPROSTATE CANCER**
AKBULUT E., ERDEMİR A., ÖZGEN M., BASKIN Y., YALÇIN GÜLEÇ F., BALIK D.
Sigma Mühendislik ve Fen Bilimleri Dergisi, vol.6, pp.109-116, 2015 (Refereed Journals of Other Institutions)
- **GENOTYPING AND ANALYSIS OF rs911271 POLYMORPHISM FORINTRACRANIAL ANEURYSM**
AKBULUT E., ERDEMİR A., ÖZGEN M., BASKIN Y., YALÇIN GÜLEÇ F., BALIK D.
Sigma Mühendislik ve Fen Bilimleri Dergisi, vol.6, pp.117-125, 2015 (Refereed Journals of Other Institutions)

Books & Book Chapters

- **Genin Doğası**
BALIK D., ERDEMİR A., OZKAN E., AKBULUT E.
in: Schaum's Outlines Biology, Karataş M., Sadi G., Editor, Nobel Yayın Dağıtım, Ankara, pp.93-109, 2015
- **DNA Replikasyonu**
BALIK D., ERDEMİR A.
in: Moleküler Biyoloji, Karataş M., Editor, Nobel Yayın Dağıtım, Ankara, pp.87-99, 2012

Refereed Congress / Symposium Publications in Proceedings

- **Nanobiyoteknolojik bir yaklaşım: Kafeik asit fenetil ester yüklü polimerik nanopartiküller ve meme kanser hücrelerindeki sitotoksik etkisi**
Poyraz F. Ş. , Çolpan R. D. , Derman S., Mansuroğlu B., Erdemir A.
31. Ulusal Kimya Kongresi, İstanbul, Turkey, 10 - 13 September 2019, pp.405
- **Kuersetin-CAPE yüklü PLGA nanopartiküllerin kolon kanser hücre hattında sitotoksik özelliklerinin belirlenmesi**
Çolpan R. D. , Erdemir A.
31. Ulusal Kimya Kongresi , İstanbul, Turkey, 10 - 13 September 2019, pp.404
- **Kolon kanseri tedavisinde kullanılmak üzere kuersetin-cape yüklü nanopartiküllerin hazırlanması ve karakterizasyonu**
Çolpan D., Erdemir A.
5. Biyomalzeme Günleri, İstanbul, Turkey, 22 October 2018, pp.2
- **Cloning and Molecular Analysis of Endemic Brucella abortus Omp25 Gene**
ARASOĞLU T., Atabey T., KURT GÜR G., ORDU E., ERDEMİR ÜSTÜNDAĞ A., Güllüce M.
4th International Congress on Applied Biological Sciences (ICABS), Eskişehir, Turkey, 03 May 2018, pp.169
- **Cloning of Peptidyl Prolyl cis/trans Isomerase from Theileria annulata**
spahi S., ERDEMİR A., yakarsönmez s., SARIYER E., uğurel e., aktaş m., BALIK D.
IVEK 3rd International Convention of Pharmaceuticals and Pharmacies, 26 - 29 April 2017
- **The Activity of Gabra3 in Breast Cancer Cells and Functional Perspective of Drug Repositioning**
Karaosmanoğlu S., Erdemir A., Balık D.
3. International Convention of Pharmaceuticals and Pharmacies, İstanbul, Turkey, 26 - 29 April 2016, vol.1, no.1, pp.1066

● **Homology Modelling of Lactate Dehydrogenase from Theileria annulata**

NURAL B., ERDEMİR A., MUTLU O., TURGUT-BALIK D.

3rd International BAU Drug Design Congress, İstanbul, Turkey, 01 October 2015, pp.177

● **Theileria annulata'nın Laktat Dehidrogenaz Enziminin Optimum pH Deg'erin Belirlenmesi ve Termal Stabilite Analizi**

NURAL B., YAKARSONMEZ S., ERDEMİR A., TURGUT-BALIK D.

4. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, Afyon, Turkey, 21 August 2015, pp.78

● **Türk Populasyonunda Ankilozan Spondilit için İnterlökin 23 Reseptör Polimorfizminin Genotiplenmesi ve Analizi**

AKBULUT E., ERDEMİR A., Özgen M., BASKIN Y., Yalçın Güleç F., TURGUT-BALIK D.

4. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, Afyon, Turkey, 21 August 2015, pp.101

● **Toplumumuzda rs7141529 Polimorfizminin Prostat Kanseri Riski Üzerine Etkisi**

OZKAN E., ERDEMİR A., TORER B. D. , TASCI A. I. , BASKIN Y., Ellidokuz H., TURGUT-BALIK D.

4. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, Afyon, Turkey, 21 August 2015, pp.16

● **rs7743761 associated with disease risk of ankylosing spondylitis in Turkish population**

NURAL B., ERDEMİR A., MUTLU Ö., BALIK D.

40th FEBS Congress, Paris, France, 4 - 09 July 2015

● **Association Analysis between Endoplasmic Reticulum Aminopeptidase 1 ERAP1 Polymorphism with Ankylosing Spondylitis Disease Risk in Turkish Population**

Akbulut E., Erdemir A., Özgen M., Baskin Y., Yalçın F., Balık D.

40th FEBS Congress, Paris, France, 4 - 09 July 2015

● **Genotyping and analysis of Interleukin 23 Receptor polymorphism for ankylosing spondylitis in Turkish population**

NURAL B., ERDEMİR A., MUTLU Ö., BALIK D.

21. European Congress Clinical Chemistry and Laboratory Medicine, Paris, France, 21 - 25 June 2015

● **Toplumumuzda rs684232 polimorfizminin prostat kanseri riski ile ilişkisinin belirlenmesi**

OZKAN E., ERDEMİR A., TORER B. D. , TASCI A. I. , BASKIN Y., Ellidokuz H., TURGUT-BALIK D.

21. Ulusal Kanser Kongresi, Antalya, Turkey, 22 April 2015, pp.550

● **rs7611694 polimorfizminin prostat kanseri hastalarında Gleason skoru düzeyi ile ilişkilendirilmesi**

OZKAN E., ERDEMİR A., TORER B. D. , TASCI A. I. , BASKIN Y., Ellidokuz H., TURGUT-BALIK D.

21. Ulusal Kanser Kongresi, Antalya, Turkey, 22 April 2015, pp.656

● **Kinetic Analysis of Lactate Dehydrogenase from Theileria annulata**

NURAL B., ERDEMİR A., MUTLU Ö., BALIK D.

International Symposium on Molecular Chemistry, İstanbul, Turkey, 19 December 2014

● **Association of single nucleotide polymorphism rs10896449 on prostate cancer in Turkish population**

ÖZKAN E. M. , Erdemir A., TORER B. D. , TASCI A. I. , Baskin Y., Ellidokuz H., Turgut-Balik D.

FEBS EMBO 2014 Conference, Paris, France, 30 August - 04 September 2014, vol.281, pp.101

● **Theileria annulata Laktat Dehidrogenaz Enziminin Gen Dizisinde Tespit Edilen Mutasyonların Yönlendirilmiş Mutagenез ile Uzaklaştırılarak Aktif Protein Üretimi**

NURAL B., ERDEMİR A., TURGUT-BALIK D.

22. Ulusal Biyoloji Kongresi, Eskişehir, Turkey, 23 June 2014, pp.783

● **Evaluation of SNPs prior to genotyping studies**

Özkan E., Erdemir A., Balık D.

III. International Congress of Molecular Biology and Biotechnology, Banja Luka, Bosnia And Herzegovina, 2 - 06 June 2014

● **Multiple SNP genotyping of intracranial aneurysm patients by MassARRAY iPLEX platform to be used for risk assessment of the disease**

NURAL B., ERDEMİR A., MUTLU Ö., BALIK D.

III. International Congress of Molecular Biology and Biotechnology, SARAYBOSNA, Bosnia And Herzegovina, 2 - 06 June 2014

- **Expression and purification of enolase enzyme from Theileria annulata**
NURAL B., ERDEMİR A., BALIK D.
2nd International BAU-Drug Design Congress, İstanbul, Turkey, 17 - 19 April 2014
- **Production of Lactate Dehydrogenase from Theileria annulata in High Purity**
NURAL B., ERDEMİR A., BALIK D.
2nd International BAU-Drug Design Congress, İstanbul, Turkey, 17 - 19 April 2014
- **Evaluation of the lactate dehydrogenase gene sequence of Theileria annulata to find a possible solution for protein being synthesized from inactive to active form**
NURAL B., ERDEMİR A., AKTAS M., DUMANLI N., BALIK D.
2nd International Congress of Molecular Biology Association of Turkey, İstanbul, Turkey, 22 November 2013, pp.77
- **Sequence Analysis of D-Lactate Dehydrogenase from Nontoxigenic and Enterotoxigenic strains of Bacteroides fragilis**
BOLAT Z. B. , CAYIR E., OZKAN E., ERDEMİR A., BALIK D.
2nd International Congress of Molecular Biology Association of Turkey, İstanbul, Turkey, 22 November 2013, pp.22
- **Expression of lactate dehydrogenase gene from Fusobacterium nucleatum**
Sariyer E., Erdemir A., Milward M. R. , COOPER P. R. , ÖZKAN E. M. , Turgut-Balik D.
38th Congress of the Federation-of-European-Biochemical-Societies (FEBS), Saint Peter, Guernsey And Alderney, 6 - 11 July 2013, vol.280, pp.617
- **Cloning of gene encoding Lactate Dehydrogenase Enzyme from Fusobacterium nucleatum**
Erdemir A., Milward M., Cooper P., Ozkan E., BALIK D.
II. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, 01 November 2012
- **Amplification and Cloning of the Gene Encoding Lactate Dehydrogenase Enzyme from Bacteroides fragilis that is Known to be Localized in Colon Cancer Tissues**
Cayir E., Ozkan E., Sears C., Erdemir A., BALIK D.
1st International Congress of the Molecular Biology Association of Turkey, 01 November 2012
- **Removal of an intron from Theileria annulata enolase gene by PCR site directed mutagenesis**
Akat A., Erdemir A., Ozkan E., BALIK D.
II. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, 01 November 2012
- **Removal of introns from Theileria annulata lactate dehydrogenase gene by genetic engineering methods opens a route to the expression of the protein towards design of new anti-theilerial drugs**
Erdemir A., Turgut-Balik D.
22nd IUBMB Congress/37th FEBS Congress, Sevilla, Spain, 4 - 09 September 2012, vol.279, pp.352
- **Aminoacid sequence and protein homology modelling analyses of lactate dehydrogenase gene from Theileria annulata**
Erdemir A., Aktaş M. S. , Dumanlı N., Turgut-Balik D.
36th FEBS Congress of the Biochemistry for Tomorrows Medicine, Torino, Italy, 25 - 30 June 2011, vol.278, pp.156

Supported Projects

- ERDEMİR ÜSTÜNDAĞ A., Meteoğlu İ., Project Supported by Higher Education Institutions, Temozolomid ve farklı flavonoid kombinasyonlarının glioblastoma hücre hattında antiproliferatif ve apoptotik aktivitesinin belirlenmesi, 2019 - Continues
- ERDEMİR ÜSTÜNDAĞ A., MANSUROĞLU B., POYRAZ F. Ş. , Project Supported by Higher Education Institutions, Kafeik Asit Fenetil Ester İçeren Nanopartiküler Sistemlerin Meme Kanseri Hücre Soylarında Hücresel ve Moleküler Mekanizmalarının İncelenmesi, 2018 - Continues
- ERDEMİR ÜSTÜNDAĞ A., Çolpan R. D. , Project Supported by Higher Education Institutions, Kolon kanser hücre hattında nanopartiküler sistemlerin antikanser aktivitesinin incelenmesi, 2019 - 2020
- ERDEMİR ÜSTÜNDAĞ A., TUBITAK Project, İntestinal Tümörögenizde Paneth Hücrelerindeki Kalori Kısıtlaması ve

mTORC1 Aktivitesinin Etkilerinin Belirlenmesi, 2015 - 2016

Scientific Refereeing

Turkish Journal of Biology, National Scientific Refreed Journal, September 2013

Citations

Total Citations (WOS):83

h-index (WOS):4

Scholarships

Yurt Dışı Doktora Sonrası Araştırma Bursu, TUBITAK, 2015 - 2016

Awards

ERDEMİR ÜSTÜNDAĞ A., 22nd IUBMB Congress/37th FEBS Congress Registration Bursary, IUBMB/FEBS/SEBBM, August 2012

ERDEMİR ÜSTÜNDAĞ A., Bilimsel Çalışmalarda İstatistiğin Rolü: Bilinmesi Gereken Yöntemler & Uygulama Alanları Kursu Katılım Bursu, Türk Biyokimya Derneği, March 2012