

## CV

**1 .Name**  
**Surname** : Ayberk Akat

**2. Date of Birth** :17.03.1986

**3. Title** :Ph.D.

### 4.Education

#### History

Degree	Subject	University	Year
Bachelors	Biology	Trakya University	2004-2008
Masters	Bioengineering	Yıldız Technical University	2009-2011
PhD	Bioengineering	Yıldız Technical University	2011-2018

**Master's Thesis:** Isolation, Cloning and Analysis of the Gene Encoding Enolase Enzyme from *Theileria annulata* for Medicine and Vaccine Design Studies

Mentor: Prof. Dr. Dilek Balik

**Ph.D. Thesis:** Investigation of polymorphisms on certain genes which are associated with bronchopulmonary dysplasia among Turkish population

Mentor: Prof. Dr. Dilek Balik

### 5. Academic Awards.

Assistant Proffessor (Asst. Prof.)

### 6. Masters and PhD Dissertations (Theses).

#### 6.1 Master Theses.

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#### 6.2 PhD Theses.

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### 7. Publications.

#### 7.1 International journals and published articles.

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- Ersoy R, Akat A, Karaöz E (2025) Successful Mesenchymal Stem Cell Therapy in a Patient with Ciprofloxacin Sensitivity. *Clin Med Rev Case Rep* 12:466. doi.org/10.23937/2378-3656/1410466
  - Hüzmeli, H., Akat, A., Özkara, A., Ceylan, E., Özenç, E., Karaöz, E. Extracellular Vesicle-Enhanced Stem Cell Therapy in Acute Myocardial Infarction: A Case Report of Cardiac Regeneration from a Bypass Surgery. *Stem Cell Rev and Rep* (2025). <https://doi.org/10.1007/s12015-025-10910-y>
  - Girgin, M., Akat, A., Akgül, B., Nalbant, N., Karaçetin, D., Abamor, E., Uğurel, O. & Turgut-Balik, D. (2024). An in vitro assessment of ionizing radiation impact on the efficacy of radiotherapy for breast cancer. *Turkish Journal of Biochemistry*. <https://doi.org/10.1515/tjb-2024-0172>
  - Akat, A., Karaöz, E. A systematic review of cell therapy modalities and outcomes in cerebral palsy. *Mol Cell Biochem* (2024). <https://doi.org/10.1007/s11010-024-05072-3>
  - Akat, A., Karaöz, E., 2023. Cell Therapy Strategies on Duchenne Muscular Dystrophy: A Systematic Review of Clinical Applications. *Stem Cell Rev and Rep* (2023). <https://doi.org/10.1007/s12015-023-10653-8>
  - Akat A, Karaöz E, 2023. “Cell therapies for autism spectrum disorder: a systematic review of clinical applications”, *Middle East Current Psychiatry*; <https://doi.org/10.1186/s43045-023-00363-9>
  - Bozkurt MF, Bhaya MN, Dibekoğlu C, Akat A, Ateş U, Erbaş O, 2022. “Mesenchymal stem cells have ameliorative effect on the colitis model via Nrf2/HO-1 pathway”, *Acta Cir Bras*. 2022;37(07):e370704; <https://doi.org/10.1590/acb370704>
  - Akat A, Semerci SY, Uğurel OM, Erdemir A, Danhaive O, Çetinkaya M, Turgut-Balık D 2021. “Bronchopulmonary dysplasia and wnt pathway-associated single nucleotide polymorphisms”, *Pediatric Research*; <https://doi.org/10.1038/s41390-021-01851-6>
  - Cayir E, Erdemir A, Ozkan E, Topuzogullari M, Bolat ZB, Akat A, Turgut-Balik D. “Cloning of intron-removed enolase gene and expression, purification, kinetic characterization of the enzyme from *Theileria annulata*”. *Mol Biotechnol*. 2014 Aug; 56(8):689-96. doi: 10.1007/s12033-014-9747-z.
  - N. Erçelen, B. Öztürk, H. Cömert, M. Diken, M. Gültomruk, H. Coşkun, A. Akat, "Allelic Frequencies of Mutations in Blood Coagulation Factor Genes (Factor V, Factor II) and Methylenetetrahydrofolate Reductase (MTHFR) in 201 Turkish Patients with Venous Thrombosis Complications", *Molecular and Genetic Medicine* , "8:1", 1-5 pp., Şubat-2014, DOI: 10.4172/1747-0862.1000093

## **7.2 Conference Presentations at International Scientific meeting.**

- 3rd International POSWEB Congress 2025, Oral Presentation, “Regenerative Medicine and Cell Therapy: A New Era for Human Well-Being”.
  - Akat A., Aktaş M., Dumanlı N., Turgut-Balık D., “Isolation, Cloning and Nucleotide Sequence
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Analysis of Enolase Gene from *Theileria annulata*". 36th FEBS Congress, Biochemistry for Tomorrow's Medicine, Torino, Italy, 2011

- E Cayir, A Erdemir, E Ozkan, M Topuzogullari, Z Bolat, A Akat, Turgut-Balik D. Kinetic characterization of enolase enzyme from *Theileria annulata*: TUE-442, The Febs Journal, 281, 579-580 2014

### **7.3 International book publications or participation in book chapters.**

- Karaöz E, Günel G and Akat A, 2017. "Stem Cell Approaches in Urooncology", Urooncology Book (2. Edition), Editors: Haluk Özen, Levent Türkeri, Yaşar Bedük, Çağ Çal. Urooncology Association Publications, pages: 113-133, Ankara, 2017.
- Karaoz E, Akat A; "Chapter 11: Umbilical Cord Blood Derived Mesenchymal Stem Cells", Umbilical Cord Blood Applications and Banking for Hematologists, Turkish Hematology Association. February 2016 / 6, 1, ISSN: 2146-6408
- Akat A., Turgut-Balık D., "Bölüm 6: Mutasyonlar", Moleküler Biyoloji, Nobel Yayınevi, Ankara, 2012

### **7.4 Articles published in national journals.**

- Akat A, Semerci SY, Uğurel OM, Erdemir A, Çetinkaya M, Balık DT 2018. "Genotyping and analysis of rs3771150 polymorphism to investigate an association with bronchopulmonary dysplasia incidence in Turkish population", FNG & Bilim Tıp Dergisi 2018;4(1):1-6
- Akat A., Aktaş M., Dumanlı N., Turgut-Balık D. , "Isolation, cloning and sequence analysis of enolase enzyme encoding gene from *Theileria annulata* for assessment of important residues of this enzyme". Kafkas Üniversitesi Veteriner Fakültesi Dergisi, 20 (2): 243-248, 2014 DOI: 10.9775/kvfd.2013.9932

### **7.5 Participations in national published scientific meetings.**

- Akat A., Turgut-Balik D., "Effects of Using Different Enzymes on the Amplification of Enolase Gene from *Theileria annulata* ". 1st National Molecular Biology and Biotechnology Congress, Antalya, Turkey, October, 26-29 2010.
- Erdemir A., Akat A., Turgut-Balik D., "Optimization Studies to Improve Transformation Efficiency During Cloning of Lactate Dehydrogenase Gene from *Theileria annulata*". 1st National Molecular Biology and Biotechnology Congress, Antalya, Turkey, October, 26-29 2010.

### **7.6 Other Publications.**

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### **8. Projects**

- 2025 – On going, Tübitak 1005 – Development of a Hand-held Bioprinter (Bioflux Pen) that Can
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Print Live Cells for Wound Treatment, Counselor

- 2011 – 2016 Yildiz Technical University Scientific Research Projects “Intron removal, Isolation, expression and analysis by site directed mutagenesis of the gene encoding enolase enzyme from *Theileria annulata*. Project no: 2011-0704-kap03, Research personnel”
- 2010 – 2015 Yildiz Technical University Scientific Research Projects “Isolation and cloning of the gene encoding lactate dehydrogenase enzyme from apicomplexa parasites to be used in drug design studies. Project no: 2010-07-04-kap01, Research personnel”

### 9. Administrative Duties.

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### 10. Memberships in Scientific Organizations

Royal Society of Biology

British Society for Gene and Cell Therapy

Clean Room Technologies Association, ICCCS

### 11. Awards.

28th National Neonatology Congress 2020, Clinical Oral Presentation, “Investigating the Role of Genetics in Bronchopulmonary Dysplasia from Five Different SNPs to One Single Gene”. (Best Presentation Award)

### 12 Undergraduate and graduate level courses taught in the last two years.

Academic Year	Term	Course title	Weekly Hours		Number of Students
			Theoretical	Practical	
2024-2025	Fall	Medical Biology and Genetics	2	-	36
2024-2025	Fall	Clinical Biochemistry	2	3	27
2024-2025	Spring	Biochemistry	2	-	145

2024-2025	Spring	Conventional, Advanced Cell and Gene Therapy Products	2	-	25
2024-2025	Spring	Research Methods	2	-	12
2024-2025	Summer	Biochemistry	2	-	1
2024-2025	Summer	Sexual Health	2	-	5
2024-2025	Summer	Conventional, Advanced Cell and Gene Therapy Products	2	-	1