

## Curriculum Vitae



### Personal Information

**Name:** Deniz BALCI  
**Date of Birth:** 29 October 1983  
**Nationality:** Turkish  
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+90 (532) 307 3757 (TC)  
**E-mail:** denizbalci@yahoo.com  
**Home Address:** Girne/KKTC  
**Languages:**  
*Native:* **Turkish**  
*Foreign:* **English** (Professional working proficiency)  
**Spanish** (Beginner level)

### Education

2000-2004 (Bachelor Degree) University Of Ankara Biology Department, TURKEY  
*Degree:* 84.07/100  
2006-2009 (Masters of Science Degree) University Of Ankara Biotechnology  
Institute, TURKEY. *Dissertation:* “The assessment of the controlled  
cryopreservation conditions of human umbilical cord stroma with a  
potential usage for stem cell transplantations”.  
*Degree:* 87/100 *Supervisor:* Prof. Dr. Alp CAN  
2009-2013 (PhD Degree) University Of Ankara Biotechnology Institute, TURKEY.  
*Dissertation:* Human Umbilical Cord-Derived Stem Cells From Four  
Different Tissue subcompartments Having Distinct Stemness Properties  
Retain Their Characteristics.  
*Degree:* 92.6/100 *Supervisor:* Prof. Dr. Alp CAN

## Work Experience

- 2006-2008 Research Scientist at University of Ankara, Biotechnology Institute
- 2008-2013 Research Scientist at Ankara University School of Medicine, Department of Histology and Embryology, Ankara, Turkey
- 2010-2012 R&D Manager at Korpus Biotechnological Research, Product Development Training, Counseling, Health Services and Trade Co.Ltd.Sti, Ankara, Turkey
- 2012-2014 Research Scientist at Ankara University Scientific Research Project No: 12B3330010
- 2014-2015 Postdoc Research Scientist at Dokuz Eylul University Izmir Biomedicine and Genome Center (iBG-izmir)
- 2015-2018 Faculty Member (Part time instructor) at Eastern Mediterranean University, Department of Biological Sciences
- 2018-2019 Faculty Member at Near East University, Faculty of Pharmacy
- 2019- Faculty Member at Eastern Mediterranean University, Department of Biological Sciences

## Publications

### *SCI Articles*

1. S. Karahuseyinoglu, C. Kocaeefe, **D. Balci**, E. Erdemli, A. Can. "Functional structure of adipocytes differentiated from human umbilical cord stroma-derived stem cells." Stem Cells. 2008 Mar;26(3):682-91.
2. C. Kocaeefe, **D. Balci**, B. Balci Hayta, A. Can. "Reprogramming of human umbilical cord stromal mesenchymal stem cells for myogenic differentiation and muscle repair." Stem Cell Rev. 2010 Dec;6(4):512-22.
3. P. Oktar, S. Yildirim, **D. Balci**, A. Can. "Continual Expression Throughout the Cell Cycle and Downregulation upon Adipogenic Differentiation Makes Nucleostemin a Vital Human MSC Proliferation Marker." Stem Cell Reviews and Reports. 2011 Jun;7(2):413-24.
4. S. Durdu, GC. Deniz, **D. Balci**, C. Zaim, A. Dogan, A. Can, KC. Akcali, AR. Akar. "Apoptotic Vascular Smooth Muscle Cell Depletion via BCL2 Family of Proteins in Human Ascending Aortic Aneurysm and Dissection" Cardiovascular therapeutics. 2012 Dec;30(6):308-16.
5. **D. Balci**, A. Can. "The assessment of cryopreservation conditions for human umbilical cord stroma-derived mesenchymal stem cells towards a potential use for stem cell banking." Curr Stem Cell Res Ther. 2012 Dec 24.

6. Topal F, Özkavukçu S, **Balci D**, Kılıçoğlu S, Erdemli E. "Mouse ovarian tissue vitrification on copper electron microscope grids versus slow freezing: a comparative ultrastructural study" Reprod Fertil Dev. Accepted 19 February 2014. RD13262.

## Books

7. Can, A. and **D. Balci** (2011). "Isolation, culture, and characterization of human umbilical cord stroma-derived mesenchymal stem cells." Methods Mol Biol **698**: 51-62.

## Others

8. S. Yıldırım, **D Balci**, P. Akpınar, A. Can. "Differentiation potentials of two stroma-resident tissue-specific stem cells." Niche. 2012 1: 1-7.

## Citation Index

Citations 285

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## Congress And Presentations

- II. Current Concepts in Stem Cell Biology and Clinical Applications Symposium, Sept. 7, 2006, Istanbul.
- Ankara Biotechnology Days, 15-17 November 2006, Ankara, Turkey.
- III. Current Concepts in Stem Cell Biology and Clinical Applications Symposium, Oct. 5, 2007, Ankara.
- **Balci D**. "RNA Interference" University of Ankara Medi
- Ankara Biotechnology Days, 15-16 November 2007, Ankara.
- Karahuseyinoglu S, Kocafe C, **Balci D**, Erdemli E, Can A. "Functional structure of adipocytes differentiated from human umbilical cord stroma-derived stem cells" IX. National Congress of Histology and Embryology, 20-23 May, Adana, Turkey.
- National Cellular Therapy and Regenerative Medicine Congress, 5 March 2009, Cappadocia, Turkey.
- **Balci D**, Kocafe O, Kelly F, Campbell A. "The assessment of the controlled cryopreservation conditions of human umbilical cord stroma with a potential usage for stem cell transplantations" TUBA IV. Stem Cell Symposium, 26-27 June 2009, Ankara, Turkey.
- Kocafe C, **Balci D**, Hayta B, Can A. "Reprogramming Of Human Umbilical Cord Stromal Stem Cells For Muscle Regeneration" EMBO, 2009, August 29-September 1, Amsterdam, The Netherlands.

- Mesenchymal Stem Cell Symposium, 5 to 6 February 2010, Eskisehir, Turkey.
- **Balci D**, “The assessment of the controlled cryopreservation conditions of human umbilical cord stroma with a potential usage for stem cell transplantations” X. National Congress of Histology and Embryology, 17-20 May, Cesme, Turkey.
- Topal F, Erdemli E, Özkavukçu S, **Balci D**, Çınar Ö, Kılıçoğlu S. “Vitrifiye edilmiş ve yavaş dondurma ile saklanmış fare ovaryum dokusunun karşılaştırılması” X. Ulusal Histoloji ve Embriyoloji Kongresi, 17-20 May 2010, İzmir, Turkey.
- **Balci D**, Can A. “The Assessment of Cryopreservation Conditions for Human Umbilical Cord Stromal Stem Cells Towards A Potential Use For Stem Cell Banking. The 1<sup>st</sup> International Congress on Controversies in Cryopreservation of Stem Cells, Reproductive Cells, Tissue and Organs (CRYO)”, 27-30 May, in Valencia, Spain.
- Topal F, Erdemli E, Özkavukçu S, **Balci D**, Serin S, Sönmezer M. “Vitrification of mouse ovarian tissue on electron microscope grids and comparison with slow freezing technique” The 1<sup>st</sup> International Congress on Controversies in Cryopreservation of Stem Cells, Reproductive Cells, Tissue and Organs (CRYO)”, 27-30 Mayıs 2011, in Valencia, Spain.
- Durdu S, Çubukçuoğlu G, Zaim Ç, Doğan A, **Balci D**, Can A, Akçalı C, Akar R “Involvement of Bcl-2 Family of Proteins in Vascular Smooth Muscle Cell Apoptosis in Patients with Ascending Aortic Aneurysm and Dissection” International Symposium On New Approaches In Cardiovascular Disorders, 04-08 May 2011, Ankara, Turkey.
- Karadağ A, **Balci D**, Çubukçuoğlu G, Durdu S, Özdağ H, Sunguroğlu A, Akar R, Can A “Spontaneous Fusion of Human Umbilical Cord Mesenchymal Stem Cells and Murine Cardiomyocytes (HL-1) in vitro” International Symposium On New Approaches In Cardiovascular Disorders, 04-08 May 2011, Ankara, Turkey.
- **Balci D**, Can A. “The Assessment Of Controlled Cryopreservation Conditions Of Human Umbilical Cord Stromal Tissue For The Potential Usage Of MSCs For Stem Cell Transplantations And Banking” ISSCR 9th Annual Meeting, 15-18 June, Toronto.
- Topal F, Erdemli E, Özkavukçu S, **Balci D**, Kılıçoğlu S. “Vitrifiye edilmiş ve yavaş dondurma ile saklanmış fare ovaryum dokusunun ince yapı düzeyinde incelenerek karşılaştırılması” 20. Ulusal Elektron Mikroskopi Kongresi, 25-28 October, 2011, Kemer-Antalya, Turkey.
- Durdu S, Karadağ A, Çubukçuoğlu G, **Balci D**, Davidson M, Ferit Avcu, Uğur M, Can A, Akar R. “İnsan Mezenkimal Kök Hücrelerinin Kardiyomiyojenik Farklılaşması (Ex vivo deneysel çalışma)” Türk Kalp ve Damar Cerrahisi Derneği 12. Ulusal Kongresi, 8 – 11 November 2012, Antalya, Turkey.
- Karadağ A, **Balci D**, Çubukçuoğlu G, Durdu S, Özdağ H, Sunguroğlu A, Akar R, Can A. “In Vitro Fusion of Murine Cardiomyocytes (HL-1) and Human Umbilical Cord Mesenchymal Stem Cells” 17th International Symposium on Biomedical Science and Technology BIOMED, 23-25 November 2011, Ankara, Turkey. \*Poster award
- Dastouri M, Karadağ A, **Balci D**, Çubukçuoğlu G, Durdu S, Doğan A, Can A, Akar

- R. “Uyarılmış Pluripotent Kök Hücrelerin (Upkh) Flk1+ Öncül Hücrelere Farklılaştırılması Aşamasında Optimum Zamanlama” Türk Kalp ve Damar Cerrahisi Derneği 12. Ulusal Kongresi, 8 – 11 November 2012, Antalya, Turkey.
- Dastouri M, Karadağ A, **Balcı D**, Çubukçuoğlu G, Durdu S, Doğan A, Akar R, Can A. “Uyarılmış Pluripotent Kök (iPS) Hücrelerinin Flk1+ Öncü Hücrelere Farklılaştırılması ve Tanımlanması” 3. Kök Hücre Sempozyumu 30 November– 1 December 2012, İstanbul, Turkey.
  - **Balcı D**, Can A. “Human umbilical cord stroma-derived stem cells from four different tissue subcompartments having distinct stemness properties retain their characteristics when isolated using explant cultures” ISSCR 11<sup>th</sup> Annual Meeting, 12-15 June 2013, Boston
  - Erdemli E, Topal F, Özkavukçu S, **Balcı D**, Kılıçoğlu S. “Ultrastructural study on vitrification and slow freezing of the ovarian tissue” MC, 25-30 August 2013, Regensburg.
  - Dastouri M, Karadağ A, **Balcı D**, Çubukçuoğlu G, Durdu S, Doğan A, Akar R, Can A. “In Vitro Differentiation of Endothelial Progenitor Cells Generated From Mouse Induced Pluripotent Stem Cells” The Termis Americas Annual Conference & Exposition, 10-13 November, Atlanta.
  - Dastouri M, Karadağ A, **Balcı D**, Çubukçuoğlu G, Durdu S, Doğan A, Can A, Akar R, Uyarılmış pluripotent kök hücrelerinden anjiyogenez ve revaskülarizasyonda rol oynayan endotelial öncül ve düz kas hücrelerin in-vitro koşullarda üretilmesi. 30 Ekim- 2 Kasım 2014 13. Türk Kalp Ve Damar Cerrahisi Kongresi. Antalya. Turkish Journal Of Thoracic And Cardiovascular Surgery Cilt / Volume 22 Supplementum 1 Ekim / October ISSN - 1301 – 5680.
  - **Balcı D**, Akbari S, Önder T, Erdal E. “R-Spondin-1 Promotes Definitive Endoderm Generation from Human Induced Pluripotent Stem Cells” II. International Congress on Stem Cell and Cellular Therapies (ICSCCT), 15-18 October 2015, Antalya.

## Awards

- X. National Congress of Histology and Embryology, Third Prize for Scientific Research THED. **Balcı D**, Can A. “The assessment of cryopreservation conditions for human umbilical cord stroma mesenchymal stem cells towards a potential use for stem cell banking” 17-20 May, Çeşme, Turkey.
- 17th International Symposium on Biomedical Science and Technology BIOMED. 1<sup>st</sup> Prize for Poster Presentation. Karadağ A, **Balcı D**, Çubukçuoğlu G, Durdu S, Özdağ H, Sunguroğlu A, Akar R, Can A. “In Vitro Fusion of Murine Cardiomyocytes (HL-1) and Human Umbilical Cord Mesenchymal Stem Cells”, 23-25 November 2011, Ankara.

- 12. National Congress of Turkish Society of Cardiovascular Surgery, Experimental Oral Presentation Award. Durdu S, Karadağ A, Çubukçuoğlu G, **Balci D**, Davidson M, Ferit Avcu, Uğur M, Can A, Akar R. “Cardio myogenic differentiation of human mesenchymal stem cells (ex vivo experimental work)” 8 – 11 November 2012, Antalya.
- II. International Congress on Stem Cell and Cellular Therapies (ICSCCT), 1<sup>st</sup> Poster Presentation Prize. Balci D, Akbari S, Önder T, Erdal E. “R-Spondin-1 Promotes Definitive Endoderm Generation from Human Induced Pluripotent Stem Cells” 15-18 October 2015, Antalya.

## Patents

Our group has successfully carried out a stepwise freezing protocol for cryopreserving the umbilical cord tissue stroma (controlled slow freezing) and the necessary compositions. Patent application has been registered (# 2010-05578) in 2017.

## Courses

- RNA Interference Applied Course, 5 to 6 November 2007, Ankara University Biotechnology Institute, Ankara, Turkey.
- Advanced Light Microscopy Techniques Course, 1 to 2 December 2007, Ankara University Biotechnology Institute, Ankara, Turkey.
- PCR-Based Genetic Analysis Course, 15-17 October 2007, Ankara University Biotechnology Institute, Ankara, Turkey.
- Microarray and Bioinformatics Analysis Course, 22-24 October 2007, Ankara University Biotechnology Institute, Ankara, Turkey.
- Applied Mesenchymal Stem Cell Course, March 5, 2009, Erciyes University School of Medicine / Cellular Therapy and Regenerative Medicine Association, Erciyes, Turkey.
- Applied Ovisit micromanipulation and microinjection (ICSI-Suzi) Course, 4-5 April 2009, Ankara University Faculty of Medicine, Histology and Embryology, Ankara, Turkey.
- Mesenchymal Stem Cell Course, I. Mesenchymal Stem Cell Symposium 5 to 6 February 2010, Eskisehir, Turkey.
- Mesenchymal Stem Cell Flow Cytometer Course, I. Mesenchymal Stem Cell Symposium 5 to 6 February 2010, Eskisehir, Turkey.

## Scientific Projects

- “The assessment of the controlled cryopreservation conditions of human umbilical cord stroma with a potential usage for stem cell transplantations” SANTEZ Projects 00139.STZ.2007/2 Ministry of Industry, 2007-2009
- “Compare preservation of vitrified and slow freezed ovarium tissue” University of Ankara BAP 10B3330003, 2009-2010
- “Genomic Alterations in Stem/Progenitor Cells with Cardiomyogenic Differentiation Potential During Differentiation Process at Proteomic and Transcriptomic Levels (*Ex vivo* experimental study)” TUBITAK Projects SBAG-109S454, 2010-2013
- “Induced pluripotent stem cells in investigation of the angiogenic Effects in acute leg ischemia” University of Ankara BAP 10B0216001, 2011-2013
- “Molecular Characterization And Immortalizing Process Of Human Umbilical Cord Mesenchymal Stem Cells” (hTERT transduction) University of Ankara BAP 12B3330010, 2012-2014
- “Development of technologies for the generation and differentiation of Induced pluripotent stem cells (iPSCs) and their applications to cell-based therapies” 1003 TUBITAK Projects SBAG-213S182, 2014

## Applied Laboratory Techniques

- Cell isolation, culture and differentiation techniques
  - IPS
  - Mesenchymal stem cells; Human umbilical cord stromal/blood, cardiac, adipose, bone marrow, dental pulp
  - Cancer cell lines; MCF-7, HELA
  - Cardiac cell lines; AC 16, H9C2, HL-1
  - Others; VERO, HUVEC
- Cryopreservation techniques (Tissue and cell cryopreservation)
  - Tissue; Human umbilical cord tissue, Ovarian tissue, Parathyroid tissue
  - Cells; HUCSCs, HUCBSCs, BMMSCs, DPSCs, CSCs
- Flow cytometry
- Immunocytochemistry
- Confocal microscopy studies
- Light microscopy for tissue dissection, detection and monitoring procedures, staining, imaging and analysis.
- Gene transfer (Transduction and Transfection)
- Isolation and purification of DNA, RNA and Protein.
- Horizontal and vertical electrophoresis types (agarose and polyacrilamide)
- Various types of polymerase chain reaction (RT-PCR, qPCR)

- Microarray analysis
- Western Blot analysis

### Undergraduate and Graduate Lectures Given

Academic Year	Term	Course Code/Course Title
2015-16-17-18		BIOL124 Introduction to Molecular Biology and Genetics (EMU- Pharmacy)
2015-16		BIOL111 Tibbi Biyoloji ve Genetik (EMU-Beslenme ve Diyetetik)
2015-16-17-18		MDCN 142 Histology (EMU-Pharmacy)
2016-17-18		BIOL412 Immunology (EMU-Pharmacy/ Molecular Biology & Genetics)
2016-17		BIOL214 Physiology (EMU-Molecular Biology & Genetics)
2018		BIOL216 Cellular and Molecular Physiology (EMU-Molecular Biology & Genetics)
2018		NEPHAR116 Histology (NEU-Pharmacy)
2019		NEPHAR108 Medical & Molecular Biology (NEU-Pharmacy)
2018-19		PHA501 Graduation Project (NEU-Pharmacy)
2019		NEPHAR E618 Stem Cells & Clinical Applications (NEU-Pharmacy)
2018		DTB100 Fizyoloji (NEU-Dış Hekimliği)
2019		DHHİS214 Histology (NEU-Dentistry)
2019		DTC100 Physiology (NEU-Dentistry)
2018		HIST101 Histology (NEU-Nursing)

### It Skills

- Microsoft Office Applications
- Adobe Applications
- IceCube Series Applications (Cryopreservation of tissue and cells)
- LSM 510, Confocal Imaging

### Membership of Professional Societies

International Society for Stem Cell Research (ISSCR) member



