

Mohammad Reza Dastouri

Biotechnology Institute Central laboratory, Biotechnology and Stem Cell Institute
Ankara university-06110
Besevler-Ankara-TURKEY

PERSONAL INFORMATION

Name: Mohammad Reza Dastouri
Present affiliation: Academic Member of Biotechnology and Stem Cell Institute Ankara university-TURKEY
Address: Biotechnology Institute Central laboratory, Biotechnology and Stem Cell Institute Ankara university-06110- Besevler-Ankara-TURKEY
E-mail: mrdastouri@ankara.edu.tr , rezastemcell@gmail.com

EDUCATION

Biotechnology Institute Ankara University, Turkey	2008-2016
PhD in Biotechnology (stem cell)	
Azad University of Shabestar	1999-2001
Master of Science in Biology (Animal Science)	
Azad University of Shabestar	1991-1995
Bachelor of Science in Biology (Animal Science)	

PhD Thesis Title: In Vitro Generation of endothelial progenitor and mural cells differentiated from mouse Induced Pluripotent Stem Cells

Supervisor: Professor Ahmet Ruchan AKAR

WORK HISTORY

- Academic staff of Biotechnology Institute Ankara University –Human stem cell(Turkey) 2015- continues
- Faculty member of Azad University of Shabestar (Iran) 2004- 2015
- Lecturer at Azad University of Sarab(Iran) 2004-2005
- Lecturer at Applied and Technology University in Urmia (Iran) 2002-2004

RESEARCH EXPERIENCE

University of Ankara

School of Medicine, medical biology central laboratory

- Differentiation of two types of mouse induced pluripotent stem cells (iPSc) into functional self-beating cardiomyocytes. (<https://www.youtube.com/watch?v=bevTuS9RC9E>) 2012-2016
- In Vitro Generation of endothelial progenitor and mural cells differentiated from mouse Induced Pluripotent Stem Cells 2009-2014
- Investigation of angiogenic effects of endothelial progenitor cells derived iPS cells in mouse acute hind limb ischemia 2009-2014
- Genomic alterations in stem/progenitor cells with cardiomyogenic differentiation potential during differentiation process at proteomic and transcriptomic levels (*Ex vivo* experimental study) 2009-2013

- Cell Fusion Following Cardiomyocyte and Mesenchymal Stem Cell Co-Culture and Functional Evaluation of Cellular Changes 2008-2013
- Isolation and in vitro characterization of human cardiac stem cells 2012- 2016

University of Ankara

School of Medicine Department of Histology and Embryology central labs

- Isolation, Culture, and Characterization of Human Umbilical Cord Stromal-derived Mesenchyme Stem Cells 2008-2013

Azad University of Shabestar

Microbiology and Physiology Central Laboratories

- Evaluating antibacterial and anti-cancer activity of the honey bee products through MIC method on some dermal and intestinal pathogenic bacteria 2001-2007

SELECTED SKILLS

Molecular Techniques

- PCR and qRT-PCR
- Electrophoresis techniques(agarose, PAGE, SDS-PAGE)
- Microarray (Affymetrix)
- DNA and RNA isolation from Human and animal tissue,

Cell culture techniques

- Primary cell culture cell culture from human and animal tissue
- Culture of different types of Embryonic stem cell, iPS Cells, cancer cells, progenitor cells and Mesenchyme stem cell,....)
- Stem cell differentiation techniques
- Cell inactivation techniques
- Cell fusion techniques
- Electroporation technique

Proteomics analysis

- Immunohistochemical staining techniques
- Western Blot

Imaging techniques

- Inverted, Fluorescence and confocal microscopy
- Flow cytometry
- Magnetic-activated cell sorting (MACS)
- Live cell imaging techniques

Microbiological Tests:

- Microbial cultures
- Antibacterial evaluation methods (MIC, MBC)

Work on animal models

- Experience in working with animal models

Computer Skills:

- Microsoft Windows
- Microsoft Office (Word, Power Point, Excel)
- Adobe Photoshop
- Communication: Oral and Poster presentation, Technical Reports

Statistical analysis

- SPSS

Language

- English
- Turkish
- Persian
- Azerbaijani

AWARDS and HONORS

- TUBITAK (THE SCIENTIFIC AND TECHNOLOGICAL RESEARCH COUNCIL OF TURKEY) **Differentiation, characterization and evaluation of epigenetic memories of self-beating progenitor cardiomyocytes from induced heart and skin derived pluripotent stem cells** 2017.
- The Project supported by TUBITAK: **Cell Fusion Following Cardiomyocyte and Mesenchymal Stem Cell Co-Culture and Functional Evaluation of Cellular Changes.** 2010-2013
- The Project supported by BAP (Ankara University scientific Projects) **Investigation of angiogenic effects of endothelial progenitor cells derived iPS cells in mouse acute hind limb ischemia.** 2009-2014
- The Project supported by BAP (Ankara University scientific Projects) **Isolation and in vitro characterization of human cardiac stem cells.** 2014-continues
- **Differentiation of two types of mouse induced pluripotent stem cells (iPSc) into functional self-beating cardiomyocytes.** (<https://www.youtube.com/watch?v=bevTuS9RC9E>)
- **Second prize at the turkey micrograph competition(iPS cell-derived Flk1+)** 2015
- The Project supported by TUBITAK (THE SCIENTIFIC AND TECHNOLOGICAL RESEARCH COUNCIL OF TURKEY) **Genomic alterations in stem/progenitor cells with cardiomyogenic differentiation potential during differentiation process at proteomic and transcriptomic levels.** 2009-2012
- **Scientific and Executive Committee Member of the first student's scientific conference at scientific and apply university urmia** 2002
- **As an Industrial Relations Manager, coordinated and directed the employee relations programs at Azad University of Shabestar.** 2002 - 2004

Membership

- **International Society for Stem Cell Research(ISSCR)**
- **American Academy and Board of Regenerative Medicine (AABRM)**
- **Turkish Biochemical Society (TBD)**

Editorial Activities

- **Turkish Journal of Molecular Biology and Biotechnology**

Teaching Experience

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|---|------------------|
| ▪ Lectured mammalian cell culture, Regenerative Medicine, Cell Reprograming and pluripotency for graduate student in Biotechnology Institute Ankara University (Turkey) | 2015 - continues |
| ▪ Course Instructor: PCR Based Genetic Analysis Approaches. Biotechnology İnstitute Ankara University (Turkey) | 2016- continues |
| ▪ Lectured Biochemistry to undergraduate students, Applied and Technology University in Urmia | 2002-2004 |
| ▪ Lectured Biology to undergraduate students, Azad University of Sarab | 2004-2005 |
| ▪ Lectured Biochemistry, Biology as well as well as physiology to undergraduate students, Azad University of Shabestar, Department of Biology | 2004-2008 |

Relevant Skills & Courses

- Experimental animal care and use in scientific research (80 hour) (certificate)
- ZEN Blue User Training Within the scope of Carl Zeiss LSM800 Confocal Microscope(certificate)
- GLP: Good Laboratory Practice (certificate)
- GMP: Good Manufacturing Practice (Certificate)
- ISO/IEC 17025: Competence of Testing and Calibration Laboratories (Certificate)
- Laboratory Biosafety Training (Certificate)
- Therapeutic Peptides and Antibodies: Design & Manufacturing Workshop
- Project Preparation, Writing and Execution Training
- Network Analysis with Cytoscape 2.8
- New Technologies in Molecular Biology Course
- II. Stem Cell Course (TÜBA)
- Scientific Research and Article Writing Course (Turkish National Cardiovascular Surgery Association)
- Pain Treatment in Peripheral Vascular Disease Course (Turkish National Cardiovascular Surgery Association)
- Echocardiography and Doppler USG Course. (Turkish National Cardiovascular Surgery Association)
- Ventricular Support Devices Course. (Turkish National Cardiovascular Surgery Association)
- Peripheral Arterial Disease Treatment Course. (Turkish National Cardiovascular Surgery Association)

Publications

Journal Papers:

1. Neda Roshanravan , Reza Mahdavi , Mohammad Asghari Jafarabadi , Effat Alizadeh , Abed Ghavami , Yalda Rahbar Saadat , Naimeh Mesri Alamdari , Mohammad Reza Dastouri , Shahriar Alipour , Alireza Ostadrahimi. The effects of sodium butyrate and high-performance inulin supplementation on the promotion of gut bacterium *Akkermansia muciniphila* growth and alterations in miR-375 and KLF5 expression in type 2 diabetic patients: A randomized, double-blind, placebo-controlled trial. *European Journal of Integrative Medicine* 18 (2018) 1–7
2. Neda Roshanravan , Reza Mahdavi, Effat Alizadeh , Abed Ghavami, Yalda Rahbar Saadat, Naimeh Mesri Alamdari, Shahriar Alipour, Mohammad Reza Dastouri, Alireza Ostadrahimi. The effects of sodium butyrate and inulin supplementation on angiotensin signaling pathway via promotion of *Akkermansia muciniphila* abundance in type 2 diabetes; A randomized, doubleblind, placebo-controlled trial. *J Cardiovasc Thorac Res*, 2017, 9(4), 183-190
3. Durdu S, Deniz GC, Dogan A, Zaim C, Karadag A, Dastouri MR, Akar AR. Stem cell mediated cardiovascular repair. *Can J Physiol Pharmacol*. 2012 Mar; 90(3):337-51. Epub 2012 Mar 6. PMID: 22394394
4. Deniz GC, Durdu S, Karadağ A, Zaim Ç, Dastouri R, Akar AR. Cell Therapy for Peripheral Arterial Disease: Cellular and Molecular Aspect. *Damar Cerrahisi Dergisi (Turkish Journal of Vascular Surgery)* 2012 21(2): 101-9.
5. Mirzaei-Aghsaghali, A., N. Maheri-Sis, A. Mirza-Aghazadeh, Y. Ebrahimnezhad, M. R. Dastouri, and A. Aghajanzadeh-Golshani. 2008. Estimation of methane production in sheep using nutrient composition of the diet. *Journal of Animal and Veterinary Advances*, 7 (6): 765-770.
6. Ebrahimnezhad, Y., N. Maheri-Sis, H. Aghdam Shahriyar, M. R. Dastouri, A. Aghajanzadeh-Golshani, A. Tahvildarzadeh, and K. A. Najafyan. 2008. The effect of combination citric acid and microbial phytase on the egg quality characteristics in laying hens. *Asian Journal of Animal and Veterinary Advances*. 3 (5): 293-297
7. Maheri-Sis, N., A. R. Safaei, A. Mirzaei-Aghsaghali, A. Mirza-Aghazadeh, and M. R. Dastouri. 2007. Use of in vitro gas production technique to compare nutritive value of quackgrass and alfalfa for ruminants. *Journal of Animal and Veterinary Advances*. 6(12): 1351-1356.
8. Dastouri, M. R., K. Fakhimzadeh, J. Shayeg, J. Dolgari-Sharaf, M. R. Valilou, and N. Maheri-Sis. 2008. Evaluating antibacterial activity of the honey through MIC method on some dermal and intestinal pathogenic. *Journal of Animal and Veterinary Advances*. 7(4): 409-412.
9. Dastouri M. R., N. Maheri-Sis, A. Aghajanzadeh-Golshani, and Y. Ebrahimnezhad. 2007. The effect of replacement feeding of some protein sources and colony performance. *Journal of Animal and Veterinary Advances*. 6 (11): 1258-1261.

Book chapter:

Endothelium: molecular aspects of metabolic disorder

Chapter 4) "**Origin of endothelial progenitor cells and their functions**"

Prof. Dr. Alp CAN (Ankara University, Faculty of Medicine, Department of Histology and Embryology,

Mohammad Reza DASTOURI (Ankara University, Institute of Biotechnology, Ankara, Turkey,

<http://www.scipub.net/medical-science/index.html>

Papers in the process of being published

1. Karadağ A., Deniz G.C., Dastouri M.R., Durdu S., Can A., Akar A.R. Cell Fusion Following Cardiomyocyte and Mesenchymal Stem Cell Co-Culture and Functional Evaluation of Cellular Changes.
2. Dastouri M.R., Karadağ A., Balcı D., Deniz G.C., Durdu S., Can A., Akar A.R. In Vitro Generation of smooth muscle and endothelial progenitor cells differentiated from mouse Induced Pluripotent Stem Cells.
3. Dastouri M.R., Karadağ A., Balcı D., Deniz G.C., Durdu S., Can A., Akar A.R. Investigation of angiogenic effects of endothelial progenitor cells derived iPS cells in mouse acute hind limb ischemia
4. Dastouri M.R., Karadağ A., Akar A.R. Differentiation of two types mouse induced pluripotent stem cells (iPSc) into functional self-beating cardiomyocytes.

SELECTED CONFERENCE PAPERS (International Conference)

1. Third international stem cell symposium. New Approaches to Stem Cell Applications in Patient-Based Therapy. "In vitro Angiogenic Potential of Endothelial Progenitor Cells Derived from Induced Pluripotent Stem cells. Mohammad Reza Dastouri, Aynur Karadağ, Hilal Özdağ, Ahmet Rüçhan Akar, Alp Can. 04-05 May 2017. Manisa
2. 41st FEBS Congress, Molecular and Systems Biology for a Better Life, Ephesus/Kuşadası, Turkey, September 3-8, 2016 Comparative genome wide gene expression analyses of primary MSC and MSC lines A. E. Akpınar, A. Karadağ, G. Deniz Cubukcuoğlu, M. Dastouri, S. Durdu, H. Ozdag, A. Sunguroğlu, A. R. Akar. The FEBS Journal 283 (Suppl. 1) (2016) 129–417 DOI: 10.1111/febs.13808
3. 41st FEBS Congress, Molecular and Systems Biology for a Better Life, Ephesus/Kuşadası, Turkey, September 3-8, 2016 Genome-wide analysis of hypoxic stress response in human cardiomyocytes. A. Karadağ, T. Ozkan, A. E. Akpınar, M. Dastouri, G. Deniz Cubukcuoğlu, S. Durdu, M. M. Davidson, H. Ozdag, A. R. Akar, A. Sunguroğlu. The FEBS Journal 283 (Suppl. 1) (2016) 129–417 DOI: 10.1111/febs.13808
4. 1st FEBS Congress, Molecular and Systems Biology for a Better Life, Ephesus/Kuşadası, Turkey, September 3-8, 2016 Angiogenic potential of endothelial progenitor cells derived from induced pluripotent stem cells. M. R. Dastouri, A. Karadağ, A. Can, A. R. Akar. The FEBS Journal 283 (Suppl. 1) (2016) 129–417 DOI: 10.1111/febs.13808
5. Turkish society of cardiovascular surgery Titanic Deluxe Hotel Convention Center - Belek- Antalya, October 30th and November 2nd 2014. Dastouri M.R., Karadağ A., Balcı D., Deniz G.C., Durdu S., Can A., Akar A.R. In Vitro Generation of smooth muscle and endothelial progenitor cells differentiated from mouse Induced Pluripotent Stem Cells. Turkish Journal Of Thoracic And Cardiovascular Surgery / Volume 22 Supplementum / October ISSN - 1301 – 5680.
6. Turkish society of cardiovascular surgery Titanic Deluxe Hotel Convention Center - Belek- Antalya, October 30th and November 2nd 2014. Karadağ A., Deniz G.C., Dastouri M.R., Durdu S., Can A., Akar A.R. Cell Fusion Following Cardiomyocyte and Mesenchymal Stem Cell Co-Culture and Functional Evaluation of Cellular Changes. Turkish Journal Of Thoracic And Cardiovascular Surgery / Volume 22 Supplementum / October ISSN - 1301 – 5680.
7. TERMIS-AM conference 10-13 November 2013 Atlanta. Mohammad Reza Dastouri, Aynur Karadağ, Deniz Balcı, Günseli Çübükçüoğlu Deniz, Serkan Durdu, Arın Doğan, Alp Can, Ahmet Rüçhan Akar. In Vitro Generation of endothelial progenitor cells differentiated from mouse Induced Pluripotent Stem Cells. (Poster presentation)
8. The FEBS EMBO 2014 Conference 30 August - 4 September 2014. Aynur Karadağ, Günseli Çübükçüoğlu Deniz, Mohammed Reza Dastouri, Serkan Durdu, Yalda Hekmatshoar, Mercy M. Davidson, Mehmet Uğur, Hilal Özdağ, Alp Can, Ahmet Rüçhan Akar, Asuman Sunguroğlu. Cell Fusion Following Cardiomyocyte and Mesenchymal Stem Cell Co-Culture and Functional Evaluation of Cellular Changes. (Poster presentation)
9. 14th Congress of Asian Society for Vascular surgery, Istanbul, Turkey on October 26-29, 2013. Mohammad Reza Dastouri, Aynur Karadağ, Deniz Balcı, Günseli Çübükçüoğlu Deniz, Serkan Durdu, Arın Doğan, Alp Can, Ahmet Rüçhan Akar Endothelial Progenitor Cell Differentiation of Induced Pluripotent Stem Cells in vitro for critical limb ischemia. (Poster presentation)

10. Tackling Advanced Heart Failure:Mechanical Circulatory Support & Transplantation Istanbul Academy 2013 by TSCVS and ISHLT. İstanbul, TURKEY M.R. Dastouri, A. Karadağ, D. Balcı, G. Çubukçuoğlu Deniz, S. Durdu, A. Can, A.R. Akar. Endothelial progenitor cell differentiation of induced pluripotent stem cells in vitro for advanced heart failure.(Poster presentation) -Turkish Journal of Thoracic and Cardiovascular Surgery 22 (1) 227-228 Ocak 2014.2013
11. Tackling Advanced Heart Failure:Mechanical Circulatory Support & Transplantation Istanbul Academy 2013 by TSCVS and ISHLT. İstanbul, TURKEY A. Karadağ, G. Çubukçuoğlu Deniz, S. Durdu, B. Altınok Zaim, T. Özkan, M.R. Dastouri, M. Uğur, H. Özdağ, A. Can, A. Sunguroğlu, A.R. Akar Cell fusion of cardiomyocytes and mesenchymal stem cells may promote cardiac regeneration in end-stage heart failure Turkish Journal of Thoracic and Cardiovascular Surgery 22 (1) 227-228 Ocak 2014. 2013
12. Second Symposium on Stem Cells. 29 November 2012. Mohammad Reza Dastouri, Aynur Karadağ, Deniz Balcı, Günseli Çübükçuoğlu Deniz, Serkan Durdu, Arın Doğan, Ahmet Rüchan Akar, Alp Can. Characterization of Flk1+ cells derived from iPS cells. (Oral presentation)
13. XII Turkish National Congress of Cardiovascular Surgery, 27-31 October 2012 Antalya / Turkey. Mohammad Reza Dastouri, Aynur Karadağ, Deniz Balcı, Günseli Çübükçuoğlu Deniz, Serkan Durdu, Arın Doğan, Alp Can, Ahmet Rüchan Akar. Flk1+ cells derived from ips cells as a endothelial progenitor cells (oral presentation)
14. The 9Th Asian apiculture Association Conference &Exhibition-AAA CHINA Hangzhou, Zhejiang, CHINA 2008 Mohammad reza Dastouri, Jalil Dolghari Sharaf, Naser Maheri Sis,Jalal Shayegh, Abolfazl Aghajamzadeh Golshani The effect of honey bee larvae with different ages on some bacteria. (Poster presentation)
15. THE FIRST INTERNATIONAL MUGLA BEEKEEPING AND PINE HONEY CONGRESS 2008, 24th – 28th of November in Muğla – Turkey”, Mohammad reza Dastouri, Jalil Dolghari Sharaf, Naser Maheri Sis,Jalal Shayegh. Antibacterial Activity of the Honey Through Gel Diffusion MIC and MBC Method on Some Dermal & Intestinal Pathogenic Bacteria. (Poster presentation)
16. BRA International Conference on Recent Trends in Apicultural Science,10 -14 June 2007, Mikkeli, FINLAND M.R.Dastouri, Mohammad Araghi, The study of variation in queens egg laying, pollen and honey storage with the use of protein resources in honey bee colonies feeding. (poster presentation)
17. M.R.Dastouri, J. Shayeg, J. Dolghari-Shraf, (2006). Antibacterial Synergistic Effects of Some Bee Products (Honey and Propolis) on Several Pathogenic Bacteria. Eighth Asian Apicultural Association conference (AAA) Perth 20th - 24 March, AUSTRALIA (oral presentation).
18. M.R.Dastouri,J.Shayeg,J.Dolghari-Shraf, (2005).Evaluation the antibacterial effect of royal jelly on certain spectrum of pathogenic bacteria. International apiculture congress, November 13-18, Bangalore, INDIA (oral presentation).
19. M.R.Dastouri,J.Shayeg,J.Dolghari-Shraf,(2005).Evaluating antibacterial activity of the honey through MIC method on some dermal & intestinal pathogen. Third German Bee Products and Apitherapy Congress, Expo and Workshop with International Participation, April 01 to 06-th. Passau, GERMANY (oral presentation).
20. M.R.Dastouri,J.Shayeg,J.Dolghari-Shraf, (2005).Evaluating antibacterial activity of the extracts from propolis through MIC method.Third German Bee Products and Apitherapy Congress, Expo and Workshop with International Participation, April 01 to 06th. Passau,GERMANY,(oral presentation).

Attending conferences

1. Stem cell day conference 21 November 2015 Haccetepe university Ankara TURKEY
2. Applied genomic medicine symposium 30 may 2015 Haccetepe university Ankara TURKEY
3. IBG (İzmir Biomedical and genome center) - İZMİR Stem Cell Conference APRIL – 2015
4. XII Turkish National Congress of Cardiovascular Surgery, 27-31 October 2012 Antalya / Turkey. T76
5. BIOMED 2011 –17th International Biomedical science & Technology symposium. NOVEMBER – 2011
6. XII. NATIONAL MEDICAL BIOLOGY AND GENETIC CONGRESS. OCTOBER - 2011
7. Microbial Biotechnology Conference (9th Biotechnology Days) Ankara University-Biotechnology Institute
OCTOBER–2011
8. NACD2011- International Symposium on New Approaches in Cardiovascular Disorders From Genes & Molecules
to Clinical Applications. MAY - 2011
9. II. National cell Therapy and Regenerative Medicine Congress. 2011VI. Kök Hücre Sempozyumu. June 2011
10. Turkish National Cardiovascular Surgery Association 11th National Congress, october 27-31 , 2010

Contact information of references:**Prof. Dr. Aykut Ozkul**

ozkul@ankara.edu.tr

Ankara University-Biotechnology Institute
Central Laboratory-Tandoğan Campus
06110-Beşevler / Ankara TURKEY
Telephone numbers:00905424713353

Prof. Dr.Alp Can

alpcan@medicine.ankara.edu.tr

Ankara University-Medical Cell Biology
Histology Embryology Department
Sihhiye/ Ankara 06100 Turkey
Telephone numbers:00905337136967

Associate professor Dr. Erkan Yilmaz

eyilmaz@ankara.edu.tr

Ankara University-Biotechnology Institute
Central Laboratory-Tandoğan Campus
06110-Beşevler / Ankara TURKEY
Telephone numbers:00905325691839