Sara Pahlavan

Royan Institute for Stem Cell Biology and Technology
16635-148, Tehran
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PERSONAL DETAILS

Gender: Female
Birthdate: 15th of July 1981
Birthplace: Damavand, Iran
Marital status: Single
Present citizenship: Iranian

EDUCATION AND CAREER

1995-1999 High School Diploma in Biological Science, Tehran, Iran

1999-2003 B.Sc. In Biology, University of Agricultural Sciences of Gorgan, Golestan, Iran

2003-2005 M.Sc. in Animal physiology, Shiraz University, Shiraz, Iran

2009-2012 Ph.D., Saarland University, Homburg (Saar), Germany

2012-2014 Postdoctoral fellow, Medical University of South Carolina, USA

2015-2017 Postdoctoral fellow, Royan Institute for Stem Cell Biology and Technology, Iran

2017-now Assistant Professor, Royan Institute for Stem Cell Biology and Technology, Iran

2019-now Co-founder of NamaTasvirAroosha Co. for Medical Equipment (Fluorescent Angiography)

AWARDs AND GRANTs

2012 **DAAD** Scholarship to study ion currents in Gq/G11 knockout mice

2015-2017 **Iran National Elite Federation** Research grant for drug screening on patient-specific iPSC-derived cardiomyocytes

2017 **Iran National Science Foundation** Grant for preclinical studies of regenerative potential of mesenchymal stem cells in cardiovascular disorders

2019 **National Institute for Medical Research and Development (NIMAD)** Grant for studying sex-related differences in cardiac hypertrophic response using human pluripotent stem cells-derived cardiomyocytes

2021 **Iran National Science Foundation** Grant for Studying the effect of human pluripotent stem cells-derived cardiomyocytes' secretome on growth and invasion of cancer cells

2023 **Iran National Science Foundation** Grant for the study of non-coding RNAs involved in the maturation of human pluripotent stem cells-derived cardiomyocytes through cell cycle arrest

2023 **Mehrabian Charity for musculoskeletal disorders** Grant for the study of the expression of three key microRNAs (29a,128,15-family) in the cardiomyocyte cell cycle arrest

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PATENT

National Patent for Intraoperative Fluorescent Angiography

PUBLICATIONS

2012 Tian, Q., **Pahlavan, S.**, Oleinikow, K., Jung, J., Ruppenthal, S., Scholz, A., Schumann, C., Kraegeloh, A., Oberhofer, M., Lipp, P., Kaestner, L. Functional and morphological preservation of adult ventricular myocytes in culture by sub-micromolar cytochalasin D supplement. ***J Mol Cell Cardiol***. 2012 Jan;52(1):113-24

2012 **Pahlavan, S.,** Oberhofer, M., Sauer, B., Ruppenthal, S., Tian, Q., Scholz, A., Kaestner, L., Lipp, L. Gαq and Gα11 contribute to the maintenance of cellular electrophysiology and $Ca2+$ handling in ventricular cardiomyocytes. ***Cardiovasc Res.*** 2012 Jul 1;95(1):48-58

2012 Blaich, A., **Pahlavan, S.,**Tian, Q., Oberhofer, M., Poomvanicha, M., Lenhardt, P., Domes, K., Wegener, JW., Moosmang, S., Ruppenthal, S., Scholz, A., Lipp, P., Hofmann, F. Mutation of the CaV1.2 IQ Motif to CaV1.2 EQ induces dilated Cardiomyopathy and Death. ***J Biol Chem.*** 2012 Jun 29;287(27):22616-25

2015 Shabani P, Ghazizadeh Z, **Pahlavan S**, Hashemizadeh S, Baharvand H, Aghdami N, Doosti M. Exogenous treatment with eicosapentaenoic acid supports maturation of cardiomyocytes derived from embryonic stem cells. ***Biochem Biophys Res Commun.*** 2015 May 29;461(2):281-6

2015 Talkhabi M, **Pahlavan S**, Aghdami N, Baharvand H. Ascorbic acid promotes the direct conversion of mouse fibroblasts into beating cardiomyocytes. ***Biochem Biophys Res Commun.*** 2015 Aug 7;463(4):699-705

2015 Fonoudi H, Ansari H, Abbasalizadeh S, Rezaei Larijani M, Kiani S, Hashemizadeh S, Sharifi Zarchi A, Bosman A, Blue G.M, **Pahlavan S**, Perry M, Orr Y, Mayorchak Y, Vandenberg J, Talkhabi M, Winlaw D.S, Harvey R.P, Aghdami N, Baharvand H. A Universal and Robust Integrated Platform for the Scalable Production of Human Cardiomyocytes from Pluripotent Stem Cells. ***Stem Cells Translational Medicine.*** 2015 Dec;4(12):1482-94

2017 **Pahlavan S**, Morad M. Total internal reflectance fluorescence imaging of genetically engineered ryanodine receptor-targeted Ca2+ probes in rat ventricular myocytes. ***Cell Calcium.*** 2017 Sep;66:98-110

2017 Meyfour A, Ansari H, **Pahlavan S**, Mirshahvaladi S, Rezaei-Tavirani M, Gourabi H, Baharvand H, Salekdeh GH. Y Chromosome Missing Protein, TBL1Y, May Play an Important Role in Cardiac Differentiation. ***J Proteome Res.*** 2017 Dec 1;16(12):4391-4402

2017 Meyfour A, Pooyan P, **Pahlavan S**, Rezaei-Tavirani M, Gourabi H, Baharvand H, Salekdeh GH. Chromosome-Centric Human Proteome Project Allies with Developmental Biology: A Case Study of the Role of Y Chromosome Genes in Organ Development. ***J Proteome Res.*** 2017 Dec 1;16(12):4259-4272

2017 Sarah Rajabi, **Sara Pahlavan**, Mohammad Kazemi Ashtiani, Hassan Ansari, Saeed Abbasalizadeh, Forough Azam Sayahpour, Fahimeh Varzideh, Sawa Kostin, Nasser Aghdami, Thomas Braun, Hossein Baharvand. Human embryonic stem cell-derived cardiovascular progenitor cells efficiently colonize in bFGF-tethered natural matrix to construct contracting humanized rat hearts. ***Biomaterials.*** 2018 Feb;154:99-112

2017 **Pahlavan S**, Tousi MS, Ayyari M, Alirezalu A, Ansari H, Saric T, Baharvand H. Effects of hawthorn (*Crataegus pentagyna*) leaf extract on electrophysiologic properties of cardiomyocytes derived from human cardiac arrhythmia-specific induced pluripotent stem cells. ***FASEB J.*** 2018 Mar;32(3):1440-1451

2018 Meyfour A, **Pahlavan S**, Sobhanian H, Salekdeh GH. 17th Chromosome-Centric Human Proteome Project Symposium in Tehran. ***Proteomics.*** 2018 Apr;18(7):e1800012

2018 Parisa Ghiasi, Saman Hosseinkhani, Hassan Ansari, Nasser Aghdami, Saeed Balalaei, **Sara Pahlavan**, Hossein Baharvand. Reversible Permeabilization of the Mitochondrial Membrane Promotes Human Cardiomyocyte Differentiation from Embryonic Stem Cells. ***J. Cell. Physiol.*** 2018 Jan;234(1):521-536

2018 Sadaf Vahdat, **Sara Pahlavan**, Nasser Aghdami, Behnaz Bakhshandeh, Hossein Baharvand. Establishment of A Protocol for in Vitro Culture of Cardiogenic Mesodermal Cells Derived from Human Embryonic Stem Cells. ***Cell J.*** 2019 Jan;20(4):496-504

2019 Varzideh F, **Pahlavan S**, Ansari H, Halvaei M, Kostin S, Feiz MS, Latifi H, Aghdami N, Braun T, Baharvand H. Human cardiomyocytes undergo enhanced maturation in embryonic stem cell-derived organoid transplants. ***Biomaterials.*** 2019 Feb;192:537-550

2019 Zeinab Golgooni, Sara Mirsadeghi, Mahdieh Soleymani Baghshah, Pedram Ataee, Hossein Baharvand, **Sara Pahlavan**, Hamid R. Rabiee. Deep learning-based proarrhythmia analysis using field potentials recorded from human pluripotent stem cells derived cardiomyocytes. **IEEE Journal of Translational Engineering in Health and Medicine**

2019 Varzideh F, Mahmoudi E, **Pahlavan S.** Co-culture with non-cardiac cells promoted maturation of human stem cell derived cardiomyocyte microtissues. ***Journal of Cellular Biochemistry.*** DOI: 10.1002/jcb.28926

2019 Fatemeh Radmanesh, Hamid Sadeghi Abandansari, **Sara Pahlavan**, Mehdi Alikhani, Mahdi Karimi, Sarah Rajabi, Bahram Kazemi Demneh, Hossein Baharvand. Optimization of miRNA Delivery by using a Polymeric Conjugate based on Deoxycholic Acid-Modified Polyethylenimine. ***International Journal of Pharmacology***

2019 Anna Meyfour, Mahya Hosseini, Hamid Sobhanian, **Sara Pahlavan**. Iran's Contribution to Human Proteomic Research. ***Cell J.*** Volume 21, Number 3, Autumn 2019, Serial Number: 83- Pages

2019 Meyfour A, **Pahlavan S**, et. al., Down-Regulation of a Male-Specific H3K4 Demethylase, *KDM5D*, Impairs Cardiomyocyte Differentiation. J Proteome Res. 2019 Oct 9. doi: 10.1021/acs.jproteome.9b00395.

2019 Vahdat S, **Pahlavan S**, et. al., Expansion of Human Pluripotent Stem Cell-derived Early Cardiovascular Progenitor Cells by a Cocktail of Signaling Factors. ***Sci Rep.*** 2019 Nov 5;9(1):16006. doi: 10.1038/s41598-019-52516-8.

2020 Firoozi S, **Pahlavan S**, Ghanian MH, Rabbani S, Tavakol S, Barekat M, Yakhkeshi S, Mahmoudi E, Soleymani M, Baharvand H. A Cell-Free SDKP-Conjugated Self-Assembling Peptide Hydrogel Sufficient for Improvement of Myocardial Infarction. ***Biomolecules.*** 2020 Jan 30;10(2). pii: E205. doi: 10.3390/biom10020205.

2020 Baei P, Hosseini M, Baharvand H, **Pahlavan S**. Electrically conductive materials for in vitro cardiac microtissue engineering. ***J Biomed Mater Res A.*** 2020 May;108(5):1203-1213. doi: 10.1002/jbm.a.36894.

2020 Firoozi S, **Pahlavan S**, Ghanian MH, Rabbani S, Barekat M, Nazari A, Pakzad M, Shekari F, Hassani SN, Moslem F, Lahrood FN, Soleimani M, Baharvand H. Mesenchymal stem cell-derived extracellular vesicles alone or in conjunction with a SDKP-conjugated self-assembling peptide improve a rat model of myocardial infarction. ***Biochem Biophys Res Commun.*** 2020 Apr 16;524(4):903-909. doi: 10.1016/j.bbrc.2020.02.009.

2020 Sobhanian H, **Pahlavan S**, Meyfour A. How does proteomics target plant environmental stresses in a semi-arid area? ***Mol Biol Rep.*** 2020 Apr;47(4):3181-3194. doi: 10.1007/s11033-020-05406-6.

2020 Hosseini M, Ayyari M, Meyfour A, Piacente S, Cerulli A, Crawford A, **Pahlavan S.** Cardenolide-rich fraction of Pergularia tomentosa as a novel Antiangiogenic agent mainly targeting endothelial cell migration. ***Daru.*** 2020 Dec;28(2):533-543. doi: 10.1007/s40199-020-00356-7

2020 Meyfour A, **Pahlavan S**, Mirzaei M, Krijgsveld J, Baharvand H, Salekdeh GH. The quest of cell surface markers for stem cell therapy. ***Cell Mol Life Sci.*** 2020 Jul 24. doi: 10.1007/s00018-020-03602-y.

2020 Montazeri L, Sobat M, Kowsari-Esfahan R, Rabbani S, Ansari H, Barekat M, Firoozi S, Rajabi S, Vahdat S, Baharvand H, **Pahlavan S.** Vascular endothelial growth factor sustained delivery augmented cell therapy outcomes of cardiac progenitor cells for myocardial infarction. J Tissue Eng Regen Med. 2020 Dec;14(12):1939-1944. doi: 10.1002/term.3125.

2020 Kolahdouzmohammadi M, Totonchi M, **Pahlavan S.** The Role of iPSC Modeling Toward Projection of Autophagy Pathway in Disease Pathogenesis: Leader or Follower. ***Stem Cell Rev Rep.*** 2020 Nov 27. doi: 10.1007/s12015-020-10077-8.

2021 Montazeri L, Kowsari-Esfahan R, **Pahlavan S,** et. al. Oxygen-rich Environment Ameliorates Cell Therapy Outcomes of Cardiac Progenitor Cells for Myocardial Infarction. ***Materials Science and Engineering: C*** 121, 111836

2021 Sara Mashalchi, **Sara Pahlavan**, Marjaneh Hejazi. A novel fluorescent cardiac imaging system for preclinical intraoperative angiography. ***BMC Med Imaging*** 2021 Feb 25;21(1):37. doi: 10.1186/s12880-021-00562-y.

2021 **Sara Pahlavan**, Sahand Abrishami**.** Upgrading treatment strategies of cardiovascular diseases using biotechnology: Are we still there? ***J Cardiovasc Thorac Res*** 2021;13(1):90-91. doi: 10.34172/jcvtr.2021.19. Epub 2021 Feb 16.

2021 Shiva Ahmadvand, Ali Osia, Anna Meyfour, **Sara Pahlavan**. Gender-specific characteristics of hypertrophic response in cardiomyocytes derived from human embryonic stem cells. ***J Cardiovasc Thorac Res*** 13(2). 146-155

2021 Melika Parchehbaf-Kashani, Hassan Ansari, Elena Mahmoudi, Maryam Barekat, Mohammadmajid Sepantafar, Sarah Rajabi, **Sara Pahlavan**. Heart Repair Induced by Cardiac Progenitor Cell Delivery within Polypyrrole-Loaded Cardiogel Post-ischemia. ***ACS Applied Bio Materials.*** 4, 6, 4849–4861

2021 Radmanesh F, Sadeghi Abandansari H, Ghanian MH, **Pahlavan S**, Varzideh F, Yakhkeshi S, Alikhani M, Moradi S, Braun T, Baharvand H. Hydrogel-mediated delivery of microRNA-92a inhibitor polyplex nanoparticles induces localized angiogenesis. ***Angiogenesis.*** 2021 Aug;24(3):657-676. doi: 10.1007/s10456-021-09778-6

2022 Hesaraki M, Bora U, **Pahlavan S**, Salehi N, Mousavi SA, Barekat M, Rasouli SJ, Baharvand H, Ozhan G, Totonchi M. A Novel Missense Variant in Actin Binding Domain of *MYH7* Is Associated With Left Ventricular Noncompaction. ***Front Cardiovasc Med.*** 2022 Apr 8;9:839862. doi: 10.3389/fcvm.2022.839862

2022 Etezadi F, Le MNT, Shahsavarani H, Alipour A, Moazzezy N, Samani S, Amanzadeh A, **Pahlavan S**, Bonakdar S, Shokrgozar MA, Hasegawa K. Optimization of a PDMS-Based Cell Culture Substrate for High-Density Human-Induced Pluripotent Stem Cell Adhesion and Long-Term Differentiation into Cardiomyocytes under a Xeno-Free Condition. ***ACS Biomater Sci Eng.*** 2022 May 9;8(5):2040-2052. doi: 10.1021/acsbiomaterials.2c00162.

2022 Kolahdouzmohammadi M, **Pahlavan S**, Tahamtani Y, Sotoodehnejadnematalahi F, Totonchi M. Step by Step Design of Popular and Common Vectors in Genetic Manipulation Using CRISPR/Cas9 System. ***Scientific Journal of Kurdistan University of Medical Sciences.*** 2022; 27(4); 93-109

2023 Sadeghi H, Masoudi M, Torabi P, Rezaeiani S, Movahedi F, **Pahlavan S**, Moradi S. Conditioned media from human pluripotent stem cell-derived cardiomyocytes inhibit the growth and migration of lung cancer cells. ***Journal of Cellular Biochemistry.*** 2023; 124(3):446–458

2023 Kolahdouzmohammadi M, **Pahlavan S**, Sotoodehnejadnematalahi F, Tahamtani Y, Totonchi M. Activation of AMPK promotes cardiac differentiation by stimulating the autophagy pathway. ***Journal of Cell Communication and Signaling.*** 2023

2023 Roshanravan N, Ghaffari S, Bastani S, **Pahlavan S**, Asghari S, Doustvandi MA, Jalilzadeh-Razin S, Dastouri M. Human cardiac organoids: A recent revolution in disease modeling and regenerative medicine. ***J Cardiovasc Thorac Res*** 2023;15(2):68-72

2023 Roshanravan N, Tarighat F, **Pahlavan S**, Parvizi M, Banisefid E, Abolhasani S, Hadi A, Parvizi R. Novel Aortic Valve Replacement Technique for Reducing Complete Heart Block. ***J Tehran Heart Cent*** 2023 Jul;18(3):177-182. doi: 10.18502/jthc.v18i3.14112.

2023 Ghorbani N, Yaghubi R, Davoodi J, **Pahlavan S**. How does caspases regulation play role in cell decisions? apoptosis and beyond. ***Mol Cell Biochem.*** 2023 Nov 17. doi: 10.1007/s11010-023-04870-5.

2024 Zarkesh I, Movahedi F, Sadeghi-Abandansari H, **Pahlavan S**, Soleimani M, Baharvand H. ROS scavenging activity of polydopamine nanoparticle-loaded supramolecular gelatin-based hydrogel promoted cardiomyocyte proliferation. ***Int J Biol Macromol.*** 2024 Feb;259(Pt 2):129228. doi: 10.1016/j.ijbiomac.2024.129228.

2024 Yaghoobi A, Rezaee M, Behnoush AH, Khalaji A, Mafi A, Kazemzadeh Houjaghan A, Masoudkabir F, **Pahlavan S**. Role of long noncoding RNAs in pathological cardiac remodeling after myocardial infarction: An emerging insight into molecular mechanisms and therapeutic potential. ***Biomed Pharmacother.*** 2024 Mar:172:116248. doi: 10.1016/j.biopha.2024.116248.

CONFERENCE ABSTRACTS AND ORAL PRESENTATIONS

2010 Hammer, K., Scholz, A., Tian, Q., **Pahlavan, S.**, Ruppenthal, S., Oberhofer, M., Kaestner, L., Lipp, P. Influence of Cytochalasin D on Morphology and Physiology of Rat Cardiac Myocytes. 2010, *Acta Physiologica*, Vol. 198, Supplement 677: P-SUN-87

2011 Kaestner, L., Tian, Q., **Pahlavan, S.**, Oleinikow, K., Ruppenthal, S., Scholz, A., Oberhofer, M., Schumann, C., Kraegeloh, A., Lipp, P. The Differential Action of Cytochalasin D in T-tubular Remodelling of Ventricular Myocytes.2011 Biophysical Society Meeting Abstracts, *Biophys. J*, Vol. 100(3), Supplement, pp.292-3a

2011 Tian, Q., **Pahlavan, S.**, Ruppenthal, S., Scholz, A., Wiesen, K., Oberhofer, M., Kaestner, L., Lipp, P. Alterations of Membrane Currents, Contractility and Calcium Signaling in Gq/G11 Single and Double KO Mice. 2011 Biophysical Society Meeting Abstracts, *Biophys. J*, Vol. 100(3), Supplement, pp.517a

2011 **Pahlavan, S.**, Wiesen, K., Oberhofer, M., Kaestner, L., Lipp, P. The Electrophysiological Effects of Chronic Application of Aldosterone on Ventricular Myocytes of Gq/11 Knockout Mice. 2011, *Acta Physiologica*, Vol. 201, Supplement 682: P021

2012 **Pahlavan, S**., Sauer, B., Wiesen, K., Oberhofer, M., Kaestner, L., Lipp, P., GαQ/Gα11 Modulate Aldosterone Mediated Electrical Remodeling and Ca2+ Handling Alterations in Ventricular Myocytes. 2012 Biophysical Society Meeting Abstracts, *Biophys. J*. Vol. 102(3), Supplement, pp.340a 2

2012 **Pahlavan, S.**, Oberhofer, M., Lipp, P. Excitation-Contraction Coupling Alterations in Ventricular Myocytes of RacET Mice. 2012, *Acta Physiologica*, Vol. 204, Supplement 689: P186

2013 Lipp P, Wiesen K, **Pahlavan S**, Oberhofer M, Kaestner L, Weissgerber P, Freichel M, Flockerzi V. Excision of the Cacnb2 Gene in Mice Results in Augmented SR-Ca Release and Impaired Cardiac Function in Vivo. *Biophys. J*. Volume 104, Issue 2, Supplement 1, p40a, 29 January 2013

2014 **Pahlavan, S**., Yang, Y., Robertson, C., Yamaguchi, N., Cleemann, L., Morad, M. A new Ca2+ probe, Calstabi-Cam, targeted to ryanodine receptors of cardiomyocytes. 2014 Biophysical Society Meeting Abstracts

2016 F Varzideh, H Ansari, **S Pahlavan**, N Aghdami, H Baharvand. The generation of beating multicell-type cardiac organoids by coculture of hPSC-CPCs with HUVECs and hPSC MSCs in 3D culture. 2016, ISSCR and ESGCT joint symposium abstracts, A74

2016 S Gholami, **S Pahlavan**, H Ansari, N Aghdami, H Baharvand. Human induced pluripotent stem cell-derived cardiomyocytes as an in vitro model to study molecular, cellular and functional phenotype of systemic scleroderma in the heart. 2016, ISSCR and ESGCT joint symposium abstracts, A102

2016 **Pahlavan S**, Ayyari M, Alirezalu A, Tousi MS, Ansari H, Baharvand H. Effects of Crataegus pentagyna on cardiomyocytes (CMs) differentiated from CPVT1 patient-derived induced pluripotent stem cells (iPSCs). Planta Med 2016; 82(S 01): S1-S381

2018 **Pahlavan S**, Arrythmic Heart Diseases in A Dish, Sixth Iran National Cardiovascular Congress, Invited Speaker

2018 **Pahlavan S**, The role of human pluripotent stem cells in the regeneration of cardiac conduction system, 3rd national symposium on stem cells, tissue engineering and regenerative medicine in cardiovascular system, Invited speaker

2018 Varzideh F, Ansari H, **Pahlavan S**, Mahmoudi E, Halvaei M, Kostin S, Braun T, Baharvand H, Human Cardiomyocytes Undergo Enhanced Maturation in Embryonic Stem Cell-Derived Organoid Transplants, The Stem Cell Niche Conference 2018

2019 **Pahlavan S**. Comprehensive in vitro proarrhythmia assay (CiPA) using cardiomyocytes differentiated from pluripotent stem cells, 24th Iranian and 3rd International Congress of Physiology and Pharmacology

2020 **Pahlavan S**. Cell or Cell Products, which would Rescue Cardiovascular Regenerative Medicine, Royan International Twin Congress 2020

2021 Movahedi M, **Pahlavan S**. Expression of a cell cycle regulator, MEIS1, increases during maturation of human embryonic stem cell-derived cardiomyocytes. Royan International Twin Congress, 17th Congress on Stem Cell Biology and Technology

2021 Sadeghi H, Pahlavan S, Moradi S. The secretome of human pluripotent stem cell-derived cardiomyocytes suppresses the growth and invasion of lung cancer cells. Royan International Twin Congress, 17th Congress on Stem Cell Biology and Technology

2022 Kolahdouz Mohammadi M, Pahlavan S, Ostadi L, Sotoodehnejad Nematalahi F, Totonchi M. CRISPR/Cas9 highly popular vectors preparation: recommendations and points. Royan International Twin Congress, 18th Congress on Stem Cell Biology and Technology

2022 Kolahdouz Mohammadi M, Pahlavan S, Salehi N, Sotoodehnejad Nematalahi F, Totonchi M. AMPK activation can promote cardiac differentiation by stimulating autophagy pathway. Royan International Twin Congress, 18th Congress on Stem Cell Biology and Technology

2023 Pourmehran Y, Vahdat S, **Pahlavan S**. The role of long non-coding RNAs in cardiac fibrosis. Royan International Twin Congress, 19th Congress on Stem Cell Biology and Technology

LABORATORY METHOD EXPERIENCES

1. Isolation and primary cell culture (Rat ventricular myocytes, Neonatal mouse cardiomyocytes, Cardiac fibroblast)
2. hESC and iPSC culture and differentiation into cardiovascular lineage cells; Cardiomyocytes, Endothelial cells, Smooth muscle cells
3. Real-time qRT-PCR
4. Immunocytochemistry
5. Flow cytometry
6. Western Blot
7. Histology
8. Ca^{2+} imaging
9. TIRF microscopy
10. Patch clamp
11. Multielectrode array
12. Cloning

TEACHING EXPERIENCES

1-Animal Physiology
4-Medical Physiology
5-Cell biology
6.Advanced techniques in cell biology
6-Signaling pathways
7.Cell signaling in development

WORKSHOPS

2009 Scientific Writing, Graduate Research Program 1326, Homburg (Saar)
2010 Scientific Presentation, GradUS, Saarbrueken
2011 Communicating at Conferences, Graduate Research Program 1326, Homburg
2020 RNAseq and Bioinformatics Analysis, Royan Institute, Tehran

PROFESSIONAL AFFILIATIONS

2005-present Member of Iranian Society of Physiology and Pharmocology
2009-2012 Associate Member of Graduate Research Program 1326, Calcium Signaling and Cellular Nanodomains, Medical Faculty, Saarland University, Homburg (Saar), Germany
2011-2019 Member of Biophysical Society, Maryland, USA
2015-2020 Member of European Society of Gene and Cell Therapy (ESGCT)

COMPUTER SKILLS

Operating System: Windows and Mac
Microsoft Office: Word, Excel, Powerpoint, Adobe: Photoshop, Illustrator
Statistical Software: SPSS, Graphpad Prism, Origin, Signal, IgorPro, Patchmaster, Fitmaster, pCLAMP

REFEREES

Prof. Dr. Martin Morad moradm@musc.edu
Dr. Lars Cleemann cleemann@musc.edu
Prof. Dr. Peter Lipp peter.lipp@uks.de
Prof. Hossein Baharvand baharvand@royaninstitute.org