

Saeideh Jafarinejad Farsangi

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Employment

8/2018– Present

Assistant Professor | Research manager at Physiology Research Center, Kerman University of Medical Sciences, Kerman, Iran

EDUCATION

2015

University of Tehran | Tehran, Iran

PhD: Molecular and Cell Biology

Supervisors: Dr. Ali Farazmand, Dr. Ahmadreza Jamshidi, Dr. Mahdi Mahmoudi, Farshid Noorbakhsh

Thesis Title: [Investigation of microRNAs signature in dermal fibroblast associated with pathogenesis (with impact on pro-and anti-fibrotic, apoptotic and cell survival genes) of systemic sclerosis]

2009

University of Tehran | Tehran, Iran

MSc: Molecular and Cell Biology

Thesis Title: [Proteome analysis of rat hippocampus in morphine induced state-dependent learning]

2004

University of Tehran | Tehran, Iran

BSc: Molecular and Cell Biology

SCIENTIFIC PUBLICATIONS

- 1) **Jafarinejad-Farsangi S**, Farazmand A, Rezayof A, Darbandi N. Proteome analysis of rat hippocampus following morphine-induced amnesia and state- dependent learning. Iranian journal of pharmaceutical research (IJPR). 2015.
- 2) **Jafarinejad-Farsangi S**, Farazmand A, Gharibdoost F, Mahmoudi M, Karimizadeh E, Noorbakhsh F, Faridani H, Jamshidi AR. MicroRNA-29 Induces Apoptosis via Increasing the Bax/Bcl2 Ratio in Fibroblasts of Systemic Sclerosis. Autoimmunity. 2015 Sep;48(6):369-78.
- 3) Mohamadkhani A, Rastgar Jazii F, Sayehmiri K, **Jafari Nejad S**, Montaser-Kouhsari L, Poustchi H, Montazeri Gh. (2011) Plasma Myeloperoxidase Activity and Apolipoprotein A-1 Expression in Chronic Hepatitis B Patients. Arch Iran Med. 2011 Jul;14(4):254-8. doi: 0011144/AIM.006.
- 4) Karimizadeh E, Gharibdoost F, Motamed N, **Jafarinejad-Farsangi S**, Jamshidi A, Mahmoudi M, c-Abl silencing reduced the inhibitory effects of TGF- β 1 on apoptosis in systemic sclerosis dermal fibroblasts. Mol Cell Biochem. 2015 Jul;405(1-2):169-76. doi: 10.1007/s11010-015-2408-0.

- 5) Karimizadeh E, Motamed N, Mahmoudi M, **Jafarinejad-Farsangi S**, Jamshidi A, Faridani H, Gharibdoost F. Attenuation of fibrosis with selective inhibition of c-Abl by siRNA in systemic sclerosis dermal fibroblasts.
- 6) **Jafarinejad-Farsangi S**, Mahmoudi M, Gharibdoost F, Karimizadeh E, Noorbakhsh F, Faridani H, Jamshidi AR, Farazmand A. Inhibition of miRNA-21 induces apoptosis in dermal fibroblasts of patients with systemic sclerosis. *Int J Dermatol*, 2016.
- 7) Epistatic Interaction of ERAP1 and HLA-B*51 in Iranian Patients with Behçet's Disease. Epistatic Interaction of ERAP1 and HLA-B*51 in Iranian Patients with Behçet's Disease. Mahdi Mahmoudi, Amir Ashraf-Ganjouei, Ali Javinani, Farhad Shahram, Akira Meguro, Nobuhisa Mizuki, Nooshin Ahmadzadeh, **Saeideh Jafarinejad-Farsangi**, Shayan Mostafaei, Hoda Kavosi, Seyedeh Tahereh Faezi, Maassoumeh Akhlaghi, and Fereydoon Davatchi. *Sci Rep*. 2018; 8: 17612.
- 8) Synthesis, characterization and biocompatibility of polypyrrole/Cu(II) metal-organic framework composites. Zeinab Ansari-Asl, Zeinab Neisi, **Saeideh Jafarinejad-Farsangi**, Mojdeh Esmaeili Tarzi, Tahereh Sedaghat, Valiollah Nobakht. *colloids and surfaces B*, Volume 178, 1 June 2019, Pages 365-376.
- 9) Investigating the Effect of Tumor Necrosis Factor Alpha on Placenta and Gene Related Bone Formation of Newborn Mice. Farhad Mortezaazadeh, Fatemeh Fadaei Fathabady, Mohsen Norouzian, Seyed Nouredin Nematollahi-Mahani, Abdollah Amini, **Saeideh Jafarinejad-Farsangi**, Seyede Elmira Yazdi Rouholamini, Abdolreza Babaee, Mohsen Basiri. *Journal of Research in Medical and Dental Science* 6 (5), 133-138.
- 10) MicroRNA-21 and MicroRNA-29a modulate collagen expression in an opposing manner in dermal fibroblasts of patients with systemic sclerosis, **Jafarinejad-Farsangi S**, Farazmand A, Mahmoudi M, Jamshidi Ahmadreza. *Autoimmunity*, 2018, 52(3):108-116.
- 11) Secondary Toxic Effect of Graphene Oxide and Graphene Quantum Dots Alters the Expression of miR-21 and miR-29a in Human Cell Lines. Mahnaz Sadat Hashemi, Sedigheh Gharbi, **Saeideh Jafarinejad-Farsangi***, Zeinab Ansari-Asl*, Amin Shiralizadeh Dezfali. *Toxicol In Vitro*. 2020; 65:104796

Research Grant

- 1) Effect of simultaneous transfection of anti-miR-21 and curcumin using multifunctional Graphene Quantum Dots into MCF-7 cell line on apoptosis of these cells (Grant ID: 95000246; 2016)
- 2) Investigation the antifibrotic effect of microRNA-29a conjugated with Graphene Oxide nanoparticles in human Myofibroblasts (Grant ID: 95000261; 2016)
- 3) Designing UniPlusMedical System for Medical Science Scholars (first phase) (Grant ID: 97000398; 2018)
- 4) Investigating the effect of curcumin- nano graphene conjugate on renal fibrosis in mice (Grant ID: 97000856; 2018)
- 5) Investigating the combination of microRNAs, genes and pathway regulatory networks in systemic sclerosis based on experimental studies and bioinformatics computing tools (Grant ID: 97000404; 2018)
- 6) Investigation the relation between mutant TP53 and estrogen receptor-dependent expression profile in breast cancer based on experimental studies and bioinformatics computing tools (Grant ID: 98001192)
- 7) Investigating the effect of endurance exercise on the expression of long non-coding RNA-H19 and microRNA-29a in the heart of myocardial infarcted rat (Grant ID: 99000181)

- 8) Investigating the effect of quercetin loaded on polyamidoamine with graphene quantum dot core on the induction of programmed death in mammospheres isolated from breast cancer of men (Grant ID: 98000936)

Research Assistantship

- 1) Effect of Selenium Nanoparticles on Renal Fibrosis in the Unilateral Ureteral Obstruction Model in Mice
- 2) Investigating the molecular mechanism of anti-metastatic effect of curcumin on miR-33a and miR-29a expression in breast cancer
- 3) Expression analysis of two inflammatory genes MMP and VEGF in coronary artery ectasia patients of southeast of Iran-Kerman
- 4) Investigating the effect of TNF- α on osteogenesis in mouse fetus.
- 5) Investigation of the role of some microRNAs in mediating the effect of Quercetin Berberine and Perillyl alcohol in the heart and lung of rats with experimental pulmonary arterial hypertension
- 6) Effect of Observing Nutrition Principles of Traditional Iranian medicine in eating on some Blood Biochemical Factors in Blood Serum of Students Residing in Dormitories of Kerman University of Medical Sciences
- 7) Evaluation of the effects of Graphene quantum dot-polyethylene glycol-curcumin on the functional factors of heart and the serum levels of klotho and SIRT1 and their heart protein expression in rats with myocardial infarction.
- 8) Isolation, investigation and characterization of Breast Cancer Stem Cells (BCSCs) from male and female Breast Cancer tumor
- 9) Relationship of SORT1, PCSK9 and APOB common gene variants with coronary artery disease and with blood lipid levels
- 10) The effect of Daidzein Phytoestrogen on renal fibrosis in unilateral ureteral obstruction model in ovariectomized female rats: The role of angiotensin AT2R and Mas receptors and effect on some MicroRNAs.
- 11) Study the effect of Daidzein phytoestrogen on renal expression of non-coding RNA H19-MiAT, Rian, GAS5 and miR-17 in renal damage of unilateral ureteral obstruction model in ovariectomized rats
- 12) Investigation of the effect of graphene quantum dot polyethylene glycol-curcumin on the level of necroptosis and the expression of miRNA-21 in the ischemic hearts of rats
- 13) Evaluation of the effects of graphene quantum dot polyethylene glycol-curcumin on the levels of inflammation, fibrosis, autophagy, mTOR and expression of long non-coding RNA H19 in the ischemic hearts of rats
- 14) Assessment of the effects of intra-myocardial administration of bone marrow mesenchymal stem cells or their lysate, alone or along with platelet lysate on cardiac function, inflammation, fibrosis, apoptosis, angiogenesis and myogenesis in the heart with myocardial infarction in rats
- 15) The comparison of Lasso Logistic Regression, Adaptive Lasso Logistic Regression and Elastic Net Logistic Regression in order to determine effective genes of breast cancer in women.

National grant

- 1- Proteome profiling of breast cancer stem cells isolated from breast tumor tissue of men with breast cancer (**NIMAD; Grant no. 984319**)
- 2- Investigation of microRNAs signature in dermal fibroblast associated with pathogenesis (with impact on pro-and anti-fibrotic, apoptotic and cell survival genes) of systemic sclerosis (**INSF; Grant no. 90003566**)

PRESENTATIONS AT PROFESSIONAL CONFERENCES

-15th National and 3rd International Congress on Biology, University of Tehran, 2007

Proteome analysis of rat hippocampus following Morphine induced amnesia and state-dependent learning. Jafarinejad-Fardangi S, Farazmand A, Rezayof A, Darbandi N.

- **7th Annual Congress of Iranian Rheumatology Association. Shiraz University of Medical Sciences, 16-18 October 2013**
 - 1- MicroRNA signature in dermal fibroblasts of systemic sclerosis associated with TGF- β signaling pathway, Jafarinejad-Farsangi S, Farazmand A, Mahmoudi M, Gharibdoost F, Karimizadeh E, Maryam Albaji, Jamshidi Ahmad Reza. Iranian. J .Immunol. Volume 11, Supplement 1, April-May 2014.
 - 2- Establishing Differentiated Myofibroblast in Human Dermal Fibroblast Culture as a Model of Fibrotic condition. Elham Karimizadeh, Farhad Gharibdoost, Nasrin Motamed, Ahmadreza Jamshidi, Saeideh Jafarinejad F, Habibeh Faridani, Mahdi Mahmoudi. Iranian. J .Immunol. Volume 11, Supplement 1, April-May 2014.
 - 3- Transforming growth factor- β 1 induces collagen production and myofibroblast differentiation in dermal skin fibroblasts, Jafarinejad F Saeideh, Gharibdoost Farhad, Farazmand Ali, Mahmoudi Mahdi, Karimizadeh Elham, Narjes Safari, Jamshidi Ahmad Reza. Iranian. J .Immunol. Volume 11, Supplement 1, April-May 2014.
 - 4- Blockade of c-Abl by siRNA reduced TGF- β 1 responses in SSc fibroblasts. Karimizadeh E, Gharibdoost F, Motamed N, Jamshidi AR, Jafarinejad FS, Mahmoudi M. Iranian. J .Immunol. Volume 11, Supplement 1, April-May 2014.
- **12th International Congress of Immunology and Allergy, April 2014**

Fibrosis of the skin in systemic sclerosis: role of microRNA-21, Jafarinejad S, Jamshidi A.R, Farazmand A, Gharibdoost F, Karimizadeh E¹, Mahmoudi M.
- **The 12th International Breast Cancer Congress, 22-24 February, 2017, Tehran, Shahid Beheshti University of Medical Sciences**

Investigating the Stromal cell derived factor-1/ CXC chemokine receptor-4 axis association with prognosis and survival in Iranian patients of breast cancer. Seyede Elmira Yazdi rouholamini, Saeideh Jafarinejad and Mariam Shahrokhi (Farjah).
- **The 3rd International & 15th Iranian Genetic Congress, Tehran, Iran, May 13-15, 2018**

Induction of apoptosis in MCF-7 cell line using curcumin loaded Graphene derivativesMahnaz Sadat Hashemi¹, Sedigheh Gharbi, Mariam Shahrokhi, Zeynab Ansari Asl, Amin Shiralizadeh-Dezfuli, Saeideh Jafarinejad-Farsangi
- **The 3rd National Festival & International Congress on Stem Cell & Regenerative Medicine**

Graphene Oxide Dysregulates MiR-21 Expression in Breast cancer MCF-7 Cell Line. Mahnaz Sadat Hashemi, Saeideh Jafarinejad-Farsangi*, Zeynab Ansari Asl, Amin Shiralizadeh-Dezfuli, Mariam Shahrokhi, Sedigheh Gharbi
- **24th Iranian & 3th International Congress of Physiology and Pharmacology, 30 Oct-01 Nov 2019 Tehran**
 - Computational prediction of microRNA targets for Myocardial Infarction Associated Transcript (MIAT) long non-coding RNA
 - The effect of quercetine on the expression of miR-204 and its targets in monocrotaline induced pulmonary arterial hypertention in rats
 - Perillyle alcohol ameliorates monocrotaline-induced pulmonary arterial hypertention with through PARRP-1 mediated miR-204 and its downstream pathway in rats

- **APLAR 2016, The 18th Asia Pacific League of Associations for Rheumatology Congress (APLAR 2016)**
Location: Shanghai, China, Date: 26-29 September, 2016-Type : Poster, Participant

P Vahidi Manesh, A Farazmand, M.B. Mahmoudi, A Jamshidi, F Gharibdoost, S. Jafarinejad-farsangi, M. Mahmoudi. Evaluation of miRNAs affecting on survivin gene expression in dermal fibroblasts of patients with systemic sclerosis.

- **APLAR 2015, Date: 2015-Type : Poster, Participant, Special Issue: Abstracts of the 17th Congress of the Asia Pacific League of Associations for Rheumatology in conjunction with IRA Annual Congress, 6-9 September 2015, Chennai, India**

MB Mahmoudi, E Farashahi, F Gharibdoost, S Jafarinejad-Frsangi, AR Jamshidi, M Mahmoudi. Survivin is over-expressed in skin fibroblasts of systemic sclerosis patients. *International Journal of Rheumatic Disease* 2015; 18 (suppl. 1): 4-138

ARTICLE REVIEW FOR

- Journal of Kerman University of Medical Sciences (JKMU)
- Iranian Journal of Asthma Allergy and Immunology (IJAAI)
- Rheumatology Research
- Innate Immunity
- Scientific reports
- PLUS ONE

Interests

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- Diseases: Cardiovascular diseases (myocardial infarction), Breast cancer
- Molecular mechanisms: Non-coding RNAs
- Methods: Bioinformatics