





**PERSONAL INFORMATION****Raheleh Farahzadi**  
Associate Professor

 Hematology and Oncology Research Center, Tabriz University of Medical Sciences, Tabriz, East Azarbaijan Province, Iran.  
 +989120122495; +989354424872

 farahzadir@tbzmed.ac.ir; Farahzadi.tbzmed@yahoo.com  
 Google Scholar profile: <https://scholar.google.com/citations?user=P66JrxQAAAAJ&hl=en&oi=ao>  
Scopus profile: <https://www.scopus.com/authid/detail.uri?authorId=49663296700>  
Linkedin profile: <https://www.linkedin.com/in/raheleh-farahzadi-3150a7250/>

Date of birth 27/06/1984

• Citations	2311
• H-Index	30
• i-10 Index	47

**Research Interests**

My background and research interest are stem cell biology, stem cell therapy, and regenerative medicine. My research investigates the development of cell therapies for hematologic malignancies using different kind of hydrogels as well as differentiation of hematopoietic and mesenchymal stem cells.

**WORK EXPERIENCE**

Aug. 2024-Present

**Associate Professor**Tabriz University of Medical Sciences, Tabriz, Iran

Feb. 2017-Aug. 2024

**Assistant Professor**Tabriz University of Medical Sciences, Tabriz, Iran**Responsibilities and Achievements**

- Supervision and mentor of postgraduate/undergraduate students
- Lecturer and lab demonstrator for more than 100 undergraduate and postgraduate students
- International collaboration as co-investigator in Iran-Austria Joint Projects
- Contribution as Principal and Co-investigator in a number of national research projects
- Preparation of research proposals for fundamental and interdisciplinary grants.
- Successful applications for a number of research grants
- Published **69** high-impact articles

Mar. 2022-Present

**Scientific Vice-Chancellor**Hematology and Oncology Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

Feb. 2022-Present

**Member of the Research Council**Hematology and Oncology Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

Feb. 2023-Present

**Member of the Research Council**Philosophy and History of Medicine Research Center**EDUCATION**

Sep. 2011 – Jan. 2016	<b>PhD, Clinical Biochemistry</b> <u>Tarbiat Modares University, Tehran, Iran</u> (One of the highest ranked University in Iran)
Thesis Topic	Investigation of the Zinc and L-carnitin effects on promoter methylation status of human telomerase reverse transcriptase (hTERT) gene and its expression and telomere length in human adipose-driven mesenchymal stem cells
Outcome Supervisors	<ul style="list-style-type: none"><li>• <b>Two</b> research academic papers</li><li>• Dr. Seyed Alireza Mesbah-Namin</li></ul>
Sep. 2008- Feb. 2010	<b>Master's degree (M.Sc.), Biochemistry</b> <u>Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran</u> (highest QS World ranked University in Iran)
Thesis Topic	<ul style="list-style-type: none"><li>• Study on the effect of Selenium ions on Acetylcholinesterase under extremely low frequency (ELF) electromagnetic field</li></ul>
Outcome	<ul style="list-style-type: none"><li>• One research academic paper</li></ul>
Sep. 2004- July. 2008	<b>Bachelor's degree (B.Sc.), Cellular &amp; Molecular Biology-Cellular &amp; Molecular Sciences</b> <u>Islamic Azad University, Tehran Medical Branch, Tehran, Iran</u>

## PERSONAL SKILLS

Communication skills	<ul style="list-style-type: none"><li>▪ Good communication skills gained through experience as researcher and participant in conferences.</li></ul>
Organisational skills	<ul style="list-style-type: none"><li>▪ Lecturer in some courses such as Clinical Biochemistry, Hormonology, and Stem cell biology</li><li>▪ Leadership (Responsible for several research teams)</li><li>▪ Supervision of undergraduate and postgraduate students</li><li>▪ Scientific secretary and lecturer in several workshops</li><li>▪ Talented membership in Young Researchers and Elite Club for 5 consecutive years (From 17.02.2015 till 17.02.2020)</li><li>▪ Proposal writing (Successful grant applications)</li></ul>
Job-related skills	<ul style="list-style-type: none"><li>▪ Stem cell isolation and characterization</li><li>▪ Differentiation of mesenchymal stem cells derived bone marrow, adipose tissue into cardiac and neurons</li><li>▪ Differentiation of hematopoietic stem cells into some blood lineage such as NK cells and granulocytes</li><li>▪ Using scaffold in differentiation of stem cells</li><li>▪ In-vitro and In-vivo Bioassays (Biocompatibility and Cell Viability)</li></ul>

## RECEIVED SCHOLARSHIPS and GRANTS

Awarded National Research Grant as <b>Principal Investigator (PI)</b>	<ol style="list-style-type: none"><li>1. <a href="#"><u>Investigation of the Differentiation Potency of C-kit+ hematopoietic stem cell towards Natural Killer Cell Line-Invited Collaborative Research Program in National Institute for Medical Research Development (Nimad)</u></a> Grant No. 972433 Dec 2018-17 Oct 2021 <b>10444.312 AUD</b></li><li>2. <a href="#"><u>The effect of secreted factors from mesenchymal stem cells on CD34+ leukemic stem cells aiming to investigate signaling pathways related to EMT-Grant for Young Assistant Professor-Ministry of Health and Medical Education</u></a> Grant No. 73395 Nov 2023-Present</li></ol>
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**34814.375 AUD**

3. [Investigating the effect of Alginate-Gelatin hydrogel on cardiomyogenic differentiation of CD117+ hematopoietic stem cells](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 73124  
Nov 2023-Present  
**17407.187 AUD**
4. [Evaluation of the L-carnitine effect on the aging of CD44+ breast cancer stem cells](#)- *Deputy of Research and Technology of Tabriz University of Medical Sciences*  
Grant No. 70141  
Jun 2022-25 Dec 2023  
**3481.437 AUD**
5. [Evaluation of cytokines secreted by mesenchymal stem cells on the survival rate of CD34+ leukemia stem cells](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 70020  
Jun 2022- Jan 2024  
**7308.91 AUD**
6. [The effect of mesenchymal stem cells on telomere length reduction of acute myeloid leukemia cancer stem cells](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 68752  
Nov 2021-01 Jun 2023  
**5568.693 AUD**
7. [Investigating the role of cytokines secreted from mesenchymal stem cells on apoptosis induction in neuroblastoma cell line](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 68202  
Sep 2021-24 May 2023  
**8701.083 AUD**
8. [Investigation of anti-cancer effects of L-carnitin on CD24+ cancer stem cells from breast cancer MDA-MB-468 cell line](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 65757  
Aug 2020-25 Nov 2022  
**6264.78 AUD**
9. [Investigation of cytotoxic and apoptotic effects of secreted factors from mesenchymal stem cells on acute myeloblastic leukemia cells \(KG1\)](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 65494  
Jul 2020-02 Apr 2022  
**4524.563 AUD**
10. [Isolation, identification and study of optimal culture condition for the proliferation of bone marrow-derived c-kit+ hematopoietic stem cells in a rat animal model](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 63634  
Aug 2019-15 Apr 2021  
**4176.52 AUD**
11. [Investigating telomere length changes and expression of cancer biomarkers CD33 and CD34 in acute myeloid leukemia \(KG-1\) following co-culture with bone marrow-derived mesenchymal stem cells](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 62911  
Apr 2019-23 May 2021  
**5220.65 AUD**
12. [Investigation of promoter methylation status of TDT following the co-culture of bone marrow-derived mesenchymal stem cells with acute lymphoblastic leukemia cell line \(Molt-4\)](#)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 62366  
20 Feb 2019-09 May 2021  
**4176.52 AUD**

13. Effect of Mesenchymal Stem Cell on Differentiation of Rat Bone Marrow Mononuclear Cells toward Granulocytes Cell Line- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 61489  
13 Dec 2018-01 Jan 2020  
**1392.173 AUD**
14. Investigation of signaling pathways involved in bone-marrow stem cells effects on telomere length, telomerase activity and hTERT gene expression in chronic myeloid leukemia cell line (K562)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 59238  
25 Dec 2017-16 Apr 2019  
**3480.433 AUD**
15. Investigation of angiogenic factors and cardiomyogenic potential of C-Kit+ bone marrow cells in the presence of infarcted cardiomyocyte in rat animal model- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 58387  
20 Nov 2017-17 Apr 2022  
**1740.217 AUD**
16. Investigation effect of secreted cytokines from rat bone marrow mesenchymal stem cells on neuroblastoma cell line (B65) through MAPK/ERK signaling pathway- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
Grant No. 58313  
01 May 2018-11 Nov 2019  
**1392.173 AUD**

Principal Co-  
Investigator in  
International  
Research Grant

1. The Feasibility of granulocyte differentiation potency of C-Kit+ hematopoietic stem cells using bone marrow mesenchymal stem cells as a novel approach in cell-based therapy- *Invited Collaborative Research Program (ICRP) Iran-Austria.*  
Grant No: 1187  
3Jan 2021-24 Jun 2023  
13.000.00 \$ USA
2. Effect of mesenchymal stem cells on hippocampus neural cells via investigation of genes promoter methylation status of Wnt/ $\beta$ -catenin pathway in Alzheimer's animal model- *The IMPULSE Iran-Austria program of the OeAD-GmbH and Ministry of Science, Research and Technology of the Islamic Republic of Iran*  
Grant No: 4/11773  
21 Apr 2018-28 Dec 2019  
10.000.00 \$ USA

Principal Co-  
Investigator in  
National Research  
Grant

1. The role of GSK3- $\beta$  and ERK1/2 signalling pathways in the expression of caspases 8 and 9 on acute lymphoid leukaemia cell line after co-culture with MSCs- *Vice-Chancellor in Research Affairs - University of Tabriz*  
July 2019-22 July 2021
2. The role of caspase apoptotic pathway in the effect of rat bone marrow mesenchymal stem cells on chronic myeloid leukemic cell line- *Vice-Chancellor in Research Affairs - University of Tabriz*  
May 2018-07 July 2019
3. Approach to the role and effect of cytokines and factors secreted from rat bone marrow mesenchymal stem cells on chronic myeloid leukemic cell line- *Vice-Chancellor in Research Affairs - University of Tabriz*  
Oct 2017-05 May 2018
4. Isolation, identification, differentiation and molecular investigation of mesenchymal stem cell surface markers derived from heart and disease in zebrafish animal model- *Vice-Chancellor in Research Affairs -*

*University of Tabriz*  
12 Jan 2017-30 Aug 2017

5. Investigating effective signalling pathways in osteogenesis of rat mesenchymal stem cells in the presence of zinc sulphate and electromagnetic field- *Vice-Chancellor in Research Affairs - University of Tabriz*  
Feb 2016-21 Jan 2017
6. Investigating the effect of L-carnitine on neurogenic differentiation, expression of neurofilament Nestin and some nerve growth factors in mesenchymal stem cells derived from rat adipose tissue- *Vice-Chancellor in Research Affairs - University of Tabriz*  
22 Dec 2014-12 Sep 2015
7. Investigating the effect of very low frequency electromagnetic fields on the expression of telomerase reverse transcriptase gene in mesenchymal stem cells derived from rat adipose tissue in the presence of zinc sulphate. *Vice-Chancellor in Research Affairs - University of Tabriz*  
Nov 2013-10 Jan 2015
8. Investigating the changes of acute phase proteins in ketosis and retained placental during the postpartum period and evaluating them as indicators of clinical diagnosis in dairy cows. *Vice-Chancellor in Research Affairs - University of Tabriz*  
06 Oct 2011-06 Oct 2012
9. Investigation of anti-cancer and anti-apoptotic effects of L-carnitin on acute lymphoblastic leukemia cell line Molt-4- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
03 Feb 2021-19 Mar 2023
10. Investigation of Telomer length and cell cycle changes on cardiomyogenesis of rat bone marrow derived-mesenchymal stem cells in the presence of silver nanoparticle- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
08 Sep 2019-19 Dec 2023
11. Investigation of silver nanoparticles induction on cardiomyogenic differentiation of rat bone marrow derived-mesenchymal stem cells (an In Vitro study)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
08 Sep 2019-15 Mar 2022
12. Effect of the telomerase and mitochondria inhibition on breast cancer stem cells and in combination therapy with NK cells- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
21 July 2019-04 Sep 2023
13. Investigation of apoptosis induction in acute lymphoblastic leukemia cell line (Molt-4) following co-culture with mesenchymal stem cells- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
11 Dec 2019-01 Dec 2021
14. Investigation of gene expression level of the hTERT gene and telomer length changes in acute lymphoblastic leukemia cell line (Molt-4) following co-culture with mesenchymal stem cells- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
11 Dec 2019-12 Mar 2023
15. Evaluation of bone marrow stem cell surveillance after death- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
03 Jun 2019-15 May 2023
16. Telomerase and mitochondrial inhibition effect on Acute myeloid leukemia cancer stem cell- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
13 Nov 2018- 28 Nov 2023
17. Evaluating the effects of mesenchymal stem cells-conditioned medium (MSC-CM) and Shilajit on breast cancer cells proliferation, apoptosis and metastasis- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
21 Dec 2022-Present
18. Evaluation of synergistic anticancer effects of green synthesis silver nanoprticle on radiotherapy in breast cancer cells (TNBC)- *Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences*  
13 Nov 2022-Present
19. Engineering of hyaluronic acid coated PLGA-PEG nanoparticles for targeted delivery of acriflavine to triple

negative breast cancer cells- Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences  
19 Jan 2022-Present

20. Evaluation the role of P53 signaling pathway in the anti-cancer effect of silver nano-particles on MDA-MB 231 breast cancer epithelial cells- Vice-Chancellor in Research Affairs - Tabriz University of Medical Sciences  
05 Dec 2021-Present

## PUBLICATIONS

Original Articles  
(ISI journal)

\* Corresponding Author

2024

1. Montazersaheb S, **Farahzadi R**, Fathi E, Alizadeh M, Amir SA, Ardakan AK, Jafari S. [Investigation the apoptotic effect of silver nanoparticles \(Ag-NPs\) on MDA-MB 231 breast cancer epithelial cells via signaling pathways](#). *Heliyon*. 2024 Mar 15;10(5).
2. Mazloumi Z, Rafat A, Asl KD, Karimipour M, Shanehbandi D, Talebi M, Montazer M, Movassaghpour AA, Dehnad A, **Farahzadi R**, Charoudeh HN. [Telomerase and mitochondria inhibition promote apoptosis and TET2 and ANMT3a expression in triple negative breast cancer cell lines](#). *cancer*. 2024; 22:23.

2023

3. **Farahzadi R**, Fathi E\*, Mesbah-Namin SA, Vietor I. [Granulocyte differentiation of rat bone marrow resident C-kit+ hematopoietic stem cells induced by mesenchymal stem cells could be considered as new option in cell-based therapy](#). *Regenerative Therapy*, (**JCR, IF: 4.3, Q2**). 2023 Jun 1; 23:94-101. <https://doi.org/10.1016/j.reth.2023.04.004>
4. **Farahzadi R**, Sanaat Z, Movassaghpour-Akbari AA, Fathi E, Montazersaheb S. [Investigation of L-carnitine effects on CD44+ cancer stem cells from MDA-MB-231 breast cancer cell line as anti-cancer therapy](#). *Regenerative Therapy* (**JCR, IF: 4.3, Q2**). 2023 Dec 1; 24:219-26. <https://doi.org/10.1016/j.reth.2023.06.014>
5. Fathi E, Montazersaheb S, Vandghanooni S, **Farahzadi R\***, Vietor I. [Adipose Tissue-Mesenchymal Stem Cells Caused to Change the Methylation Status of hTERT Gene Promoter CpG Islands of Molt-4 Leukaemia Cells as Cell-based Therapy](#). *Current Molecular Medicine*, (**JCR, IF: 2.61, Q3**). 2023 Mar 1;23(3):266-74. <https://doi.org/10.2174/1566524022666220118103136>
6. **Farahzadi R**, Valipour B, Anakok OF, Fathi E\*, Montazersaheb S. [The effects of encapsulation on NK cell differentiation potency of C-kit+ hematopoietic stem cells via identifying cytokine profiles](#). *Transplant Immunology*, (**JCR, IF: 1.5, Q3**). 2023 Apr 1; 77:101797. <https://doi.org/10.1016/j.trim.2023.101797>
7. Jafari S, Dabiri S, Mehdizadeh Aghdam E, Fathi E, Saeedi N, Montazersaheb S, **Farahzadi R\***. [Synergistic effect of chrysin and radiotherapy against triple-negative breast cancer \(TNBC\) cell lines](#). *Clinical and Translational Oncology* (**JCR, IF: 3.34, Q3**). 2023 Mar 25:1-0. <https://doi.org/10.1007/s12094-023-03141-5>
8. Fathi E, Montazersaheb S, Sanaat Z, Nakhilband A, Vandghanooni S, **Farahzadi R\***, Vietor I. [L-carnitine reduced cellular aging of bone marrow resident C-kit+ hematopoietic stem cells through telomere dependent pathways](#). *Current Stem Cell Research & Therapy*, (**JCR, IF: 2.7, Q3**). 2023 Feb 1;18(2):231-6. <https://doi.org/10.2174/1574888x17666220511141123>
9. **Farahzadi R**, Valipour B, Sanaat Z, Movassaghpour-Akbari AA, Fathi E\*, Montazersaheb S. [Investigation of the Apoptotic Effects of Mesenchymal Stem Cells on KG-1 Leukemic Cell Line](#). *Pharmaceutical Sciences*, (**JCR, IF:1.70, Q2**). 2023 29; 4. <https://doi.org/10.34172/PS.2022.48>
10. Daneshrad T, Fathi E, **Farahzadi R\***. [L-Carnitine Promotes Cardiomyogenic Differentiation of C-Kit+ Bone Marrow Progenitor Cells via MAPK-ERK Signalling Pathway](#). *Acta Medica Iranica* (**ISC, Q2, Scopus, Q4**). 2023 Apr 1;61(4). DOI: <https://doi.org/10.18502/acta.v61i4.13172>
11. Valipour B, Davari S, **Farahzadi R**, Pourrasol S, Mehran N, Dizaji Asl K, Altaha SM, Hojjati Z, Nozad Charoudeh H. [Inhibition of mitochondria induces apoptosis and reduces telomere length and activity in acute myeloid leukemia stem cells](#). *Cell Biochemistry and Function* (**JCR, IF: 3.6, Q3**). 2023 Nov 28. <https://doi.org/10.1002/cbf.3888>

2022

12. Fathi E, Mesbah-Namin SA, Vietor I, **Farahzadi R\***. [Mesenchymal stem cells cause induction of granulocyte differentiation of rat bone marrow C-kit<sup>+</sup> hematopoietic stem cells through JAK3/STAT3, ERK, and PI3K signalling pathways](#). Iranian Journal of Basic Medical Sciences (**JCR, IF: 2.2, Q3**). 2022 Oct 1;25(10). <https://doi.org/10.22038/ijbms.2022.66737.14633>
13. Fathi E, Azarbad S, **Farahzadi R\***, Javanmardi S, Vietor I. [Effect of Rat Bone Marrow Derived-Mesenchymal Stem Cells on Granulocyte Differentiation of Mononuclear Cells as Preclinical Agent in Cell based Therapy](#). Current Gene Therapy, (**JCR, IF: 3.60, Q2**). 2022 Apr 1; 22(2):152-61. <https://doi.org/10.2174/1566523221666210519111933>
14. Fathi E, **Farahzadi R\***. [Mesenchymal Stem Cells as a Cell-Based Therapeutic Strategy Targeting the Telomerase Activity of KG1 Acute Myeloid leukaemia Cells](#). Acta Medica Iranica, (**ISC, Q2, Scopus, Q4**). 2022; 60(2):71.
15. Rafat A, Asl KD, Mazloumi Z, Movassaghpour AA, Talebi M, Shانهbandi D, **Farahzadi R**, Nejati B, Charoudeh HN. [Telomerase inhibition on acute myeloid leukemia stem cell induced apoptosis with both intrinsic and extrinsic pathways](#). Life Sciences (**JCR, IF: 6.1, Q1; Top 10% based on SNIP**). 2022 Apr 15; 295:120402. <https://doi.org/10.1016/j.lfs.2022.120402>
16. Rafat A, Asl KD, Mazloumi Z, Samadirad B, Ashrafiyanbonab F, **Farahzadi R**, Charoudeh HN. [Bone marrow CD34 positive cells may be suitable for collection after death](#). Transfusion and Apheresis Science (**JCR, IF: 2.59, Q4**). 2022 Dec 1;61(6):103452.

2021

17. Fathi E, **Farahzadi R\***, Valipour B. [Alginate/gelatin encapsulation promotes NK cells differentiation potential of bone marrow resident C-kit<sup>+</sup> hematopoietic stem cells \(Highly Cited Paper in May/June 2022 according to Web of Science record\)](#). International Journal of Biological Macromolecules (**JCR, IF: 8.2, Q1; Top 10% based on SNIP**). 2021 Apr 30; 177:317-27. <https://doi.org/10.1016/j.ijbiomac.2021.02.131>
18. Adibkia K, Ehsani A, Jodaei A, Fathi E, **Farahzadi R\***, Barzegar-Jalali M. [Silver nanoparticles induce the cardiomyogenic differentiation of bone marrow derived mesenchymal stem cells via telomere length extension \(Highly Cited Paper\)](#). Beilstein Journal of Nanotechnology, (**JCR, IF: 3.1, Q2**). 2021 Aug 2; 12(1):786-97. <https://doi.org/10.3762/bjnano.12.62>
19. Fathi E, Vandghanooni S, Montazersaheb S, **Farahzadi R\***. [Mesenchymal stem cells promote caspase-3 expression of SH-SY5Y neuroblastoma cells via reducing telomerase activity and telomere length](#). Iranian Journal of Basic Medical Sciences, (**JCR, IF: 2.2, Q3**). 2021 Nov; 24(11):1583. <https://doi.org/10.22038/ijbms.2021.59400.13187>
20. Fathi E, Pashutan MK, **Farahzadi R\***, Charoudeh HN. [L-carnitine in a certain concentration increases expression of cell surface marker CD34 and apoptosis in the rat bone marrow CD34<sup>+</sup> hematopoietic stem cells](#). Iranian Journal of Veterinary Research, (**JCR, IF: 1.23, Q3**). 2021; 22(4):264. <https://doi.org/10.22099/ijvr.2021.39045.5677>
21. Rasouliyan F, Eskandani M, Jaymand M, Nakhjavani SA, **Farahzadi R**, Vandghanooni S, Eskandani M. [Preparation, physicochemical characterization, and anti-proliferative properties of Lawsonia-loaded solid lipid nanoparticles](#). Chemistry and physics of lipids (**JCR, IF: 3.4, Q2**). 2021 Sep 1; 239:105123.
22. Heidari HR, Fathi E, Montazersaheb S, Mamandi A, **Farahzadi R\***, Zalavi S, Charoudeh HN. [Mesenchymal stem cells cause telomere length reduction of molt-4 cells via caspase-3, BAD and P53 apoptotic pathway](#). International Journal of Molecular and Cellular Medicine, (**Scopus, Q3**). 2021; 10(2):113. <https://doi.org/10.22088/ijmcm.bums.10.2.113>

2020

23. **Farahzadi R**, Fathi E, Vietor I. [Mesenchymal stem cells could be considered as a candidate for further studies in cell-based therapy of Alzheimer's disease via targeting the signalling pathways](#). ACS chemical neuroscience, (**JCR, IF: 5, Q2**). 2020 Apr 20; 11(10):1424-35. <https://doi.org/10.1021/acscchemneuro.0c00052>
24. Fathi E, **Farahzadi R\***, Javanmardi S, Vietor I. [L-carnitine extends the telomere length of the cardiac differentiated CD117<sup>+</sup>-expressing stem cells](#). Tissue and Cell, (**JCR, IF: 2.6, Q1**). 2020 Dec 1; 67:101429. <https://doi.org/10.1016/j.tice.2020.101429>
25. Fathi E, **Farahzadi R\***, Vietor I, Javanmardi S. [Cardiac differentiation of bone-marrow-resident c-kit<sup>+</sup> stem cells by L-carnitine increases through secretion of VEGF, IL6, IGF-1, and TGF- \$\beta\$  as clinical agents](#)

- [in cardiac regeneration](#). Journal of Biosciences, (**JCR, IF: 2.9, Q2**). 2020 Dec; 45(1):1-1. PMID: 32713855
26. Fathi E, Valipour B, and **Farahzadi R\***. [Targeting the proliferation inhibition of chronic myeloid leukaemia cells by bone marrow derived-mesenchymal stem cells via ERK pathway as a therapeutic strategy](#). Acta Medica Iranica, (**ISC, Q2. Scopus, Q4**). 2020 Aug 10:199-206. <https://doi.org/10.18502/acta.v58i5.3952>
27. Fathi E, Valipour B, Sanaat Z, Charoudeh HN, **Farahzadi R\***. [Interleukin-6, -8, and TGF- \$\beta\$  secreted from mesenchymal stem cells show functional role in reduction of telomerase activity of leukaemia cell via Wnt5a/ \$\beta\$ -catenin and P53 pathways](#). Advanced Pharmaceutical Bulletin, (**JCR, IF: 3.6, Q1; Top 10% based on SNIP**). 2020 Jun; 10(2):307. <https://doi.org/10.34172/apb.2020.037>
28. Fathi E, **Farahzadi R\***, Valipour B, Sanaat Z. [Cytokines secreted from bone marrow derived mesenchymal stem cells promote apoptosis and change cell cycle distribution of K562 cell line as clinical agent in cell transplantation](#). PloS One, (**JCR, IF: 3.7, Q2**). 2019 Apr 22; 14(4): e0215678. <https://doi.org/10.1371/journal.pone.0215678>
29. Fathi E, **Farahzadi R\***, Sheikhzadeh N. [Immunophenotypic characterization, multi-lineage differentiation and aging of zebrafish heart and liver tissue-derived mesenchymal stem cells as a novel approach in stem cell-based therapy](#). Tissue and Cell, (**JCR, IF: 2.6, Q1**). 2019 Apr 1; 57:15-21. <https://doi.org/10.1016/j.tice.2019.01.006>
30. **Farahzadi R**, Fathi E, Mesbah-Namin SA, Zarghami N. [Anti-aging protective effect of L-carnitine as clinical agent in regenerative medicine through increasing telomerase activity and change in the hTERT promoter CpG island methylation status of adipose tissue-derived mesenchymal stem cells](#). Tissue and Cell, (**JCR, IF: 2.6, Q1**). 2018 Oct 1; 54:105-13. <https://doi.org/10.1016/j.tice.2018.08.012>
31. Fathi E, **Farahzadi R\***. [Zinc sulphate mediates the stimulation of cell proliferation of rat adipose tissue-derived mesenchymal stem cells under high intensity of EMF exposure](#). Biological trace element research, (**JCR, IF: 3.9, Q2**). 2018 Aug; 184(2):529-35. <https://doi.org/10.1007/s12011-017-1199-4>
32. Pirmoradi S, Fathi E, **Farahzadi R**, Pilehvar-Soltanahmadi Y, Zarghami N. [Curcumin affects adipose tissue-derived mesenchymal stem cell aging through TERT gene expression](#). Drug Research, (**JCR, IF: 2.2, Q3**). 2018 Apr; 68(04):213-21. <https://doi.org/10.1055/s-0043-119635>
33. Eyvazi M, **Farahzadi R**, Fathi NK, Karimipour M, Rad JS, Montaseri A. [Mummy material can promote differentiation of adipose derived stem cells into osteoblast through enhancement of bone specific transcription factors expression](#). Advanced pharmaceutical bulletin (**JCR, IF: 3.6, Q1; Top 10% based on SNIP**). 2018 Aug;8(3):457. doi: 10.15171/apb.2018.053
34. Fathi E, **Farahzadi R\***. [Enhancement of osteogenic differentiation of rat adipose tissue-derived mesenchymal stem cells by zinc sulphate under electromagnetic field via the PKA, ERK1/2 and Wnt/ \$\beta\$ -catenin signalling pathways](#). PloS one, (**JCR, IF: 3.7, Q2**). 2017 Mar 24; 12(3): e0173877. <https://doi.org/10.1371/journal.pone.0173877>
35. Fathi E, **Farahzadi R\***, Charoudeh HN. [L-carnitine contributes to enhancement of neurogenesis from mesenchymal stem cells through Wnt/ \$\beta\$ -catenin and PKA pathway](#). Experimental Biology and Medicine, (**JCR, IF: 3.2, Q3**). 2017 Mar; 242(5):482-6. <https://doi.org/10.1177/1535370216685432>
36. Mobarak H, Fathi E\*, **Farahzadi R**, Zarghami N, Javanmardi S. [L-carnitine significantly decreased aging of rat adipose tissue-derived mesenchymal stem cells \(Highly Cited Paper\)](#). Veterinary research communications, (**JCR, IF: 2.2, Q1**). 2017 Mar; 41(1):41-7. <https://doi.org/10.1007/s11259-016-9670-9>
37. Fathi E, **Farahzadi R\***, Rahbarghazi R, Kafil HS, Yolmeh R. [Rat adipose-derived mesenchymal stem cells aging reduction by zinc sulphate under extremely low frequency electromagnetic field exposure is associated with increased telomerase reverse transcriptase gene expression](#). Veterinary research forum, (**JCR, IF: 1, Q3**). 2017 (Vol. 8, No. 2, p. 89). <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc5524544/>
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- Review Articles  
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- \* Corresponding Author
- 2024
- 2023
1. **Farahzadi R**, Fathi E, Valipour B, Ghaffary S. [Stem cells-derived exosomes as cardiac regenerative agents.](#) IJC Heart & Vasculature. 2024 Jun 1;52:101399.
2. **Farahzadi R**, Valipour B, Fathi E, Pirmoradi S, Molavi O, Montazersaheb S, Sanaat Z. [Oxidative stress regulation and related metabolic pathways in epithelial–mesenchymal transition of breast cancer stem cells.](#) Stem Cell Research & Therapy (**JCR, IF: 7.5, Q1; Top 5% based on SNIP**). 2023 Nov 28;14(1):342. <https://doi.org/10.1186/s13287-023-03571-6>
3. Parsa Montazersaheba, Vahid Bayrami Jahanic, **Raheleh Farahzadi\***, Soheila Montazersahebe. [Magnetic Nanoparticles-Based Hyperthermia: A New Prospect in Cancer Stem Cells Tracking and Therapy.](#) Life Sciences, (**JCR, IF: 6.1, Q1; Top 10% based on SNIP**). 2023; 121714. <https://doi.org/10.1016/j.lfs.2023.121714>
4. **Raheleh Farahzadi**, Behnaz Valipour, Soheila Montazersaheb, Ezzatollah Fathi\*. [Targeting the stem cell niche micro-environment as therapeutic strategies in aging.](#) Frontiers in Cell and Developmental Biology, (**JCR, IF: 6.08, Q1**). 2023 May 19; 11:1162136. <https://doi.org/10.3389/fcell.2023.1162136>
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2019

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Articles with  
International  
Collaboration

\* Corresponding Author

1. **Farahzadi R**, Fathi E, Vietor I. [Mesenchymal stem cells could be considered as a candidate for further studies in cell-based therapy of Alzheimer's disease via targeting the signalling pathways](#). ACS chemical neuroscience, (JCR, IF: 5, Q2). 2020 Apr 20; 11(10):1424-35. <https://doi.org/10.2174/1566523220666201005111126>
2. Montazersaheb S, Ehsani A, Fathi E, **Farahzadi R\***, Vietor I. [An Overview of Autophagy in Hematopoietic Stem Cell Transplantation](#). Frontiers in Bioengineering and Biotechnology, (JCR, IF: 5.7, Q1). 2022:889. <https://doi.org/10.3389/fbioe.2022.849768>
3. **Farahzadi R**, Fathi E\*, Mesbah-Namin SA, Vietor I. [Granulocyte differentiation of rat bone marrow resident C-kit<sup>+</sup> hematopoietic stem cells induced by mesenchymal stem cells could be considered as new option in cell-based therapy](#). Regenerative Therapy, (JCR, IF: 4.3, Q2). 2023 Jun 1; 23:94-101. <https://doi.org/10.1016/j.reth.2023.04.004>
4. Fathi E, Azarbad S, **Farahzadi R\***, Javanmardi S, Vietor I. [Effect of Rat Bone Marrow Derived-Mesenchymal Stem Cells on Granulocyte Differentiation of Mononuclear Cells as Preclinical Agent in Cell-based Therapy](#). Current Gene Therapy, (JCR, IF: 3.6, Q2). 2022 Apr 1; 22(2):152-61. <https://doi.org/10.2174/1566523221666210519111933>
5. Fathi E, Montazersaheb S, Sanaat Z, Nakhband A, Vandghanooni S, **Farahzadi R\***, Vietor I. [L-carnitine reduced cellular aging of bone marrow resident C-kit<sup>+</sup> hematopoietic stem cells through telomere dependent pathways](#). Current Stem Cell Research & Therapy, (JCR, IF: 2.7, Q4). 2023 Feb 1;18(2):231-6. <https://doi.org/10.2174/1574888x17666220511141123>
6. Fathi E, Montazersaheb S, Vandghanooni S, **Farahzadi R\***, Vietor I. [Adipose Tissue-Mesenchymal Stem Cells Caused to Change the Methylation Status of hTERT Gene Promoter CpG Islands of Molt-4 leukaemia Cells as Cell-based Therapy](#). Current Molecular Medicine, (JCR, IF: 2.5, Q3). 2023 Mar 1;23(3):266-74. <https://doi.org/10.2174/1566524022666220118103136>
7. **Farahzadi R**, Valipour B, Anakok OF, Fathi E, Montazersaheb S. [The effects of encapsulation on NK cell differentiation potency of C-kit<sup>+</sup> hematopoietic stem cells via identifying cytokine profiles](#). Transplant Immunology, (JCR, IF: 1.5, Q3). 2023 Jan 28:101797. <https://doi.org/10.1016/j.trim.2023.101797>
8. Fathi E, Mesbah-Namin SA, Vietor I, **Farahzadi R\***. [Mesenchymal stem cells cause induction of granulocyte differentiation of rat bone marrow C-kit<sup>+</sup> hematopoietic stem cells through JAK3/STAT3, ERK,](#)

- [and PI3K signalling pathways](#). Iranian Journal of Basic Medical Sciences, (JCR, IF: 2.2, Q4). 2022 Oct 1;25(10). <https://doi.org/10.22038/ijbms.2022.66737.14633>
9. Fathi E, Farahzadi R\*, Vietor I, Javanmardi S. [Cardiac differentiation of bone-marrow-resident c-kit+ stem cells by L-carnitine increases through secretion of VEGF, IL6, IGF-1, and TGF-β as clinical agents in cardiac regeneration](#). Journal of biosciences, (JCR, IF: 2.9, Q2). 2020 Dec; 45(1):1-1. PMID: 32713855
  10. Fathi E, Valipour B, Vietor I, Farahzadi R\*. [An overview of the myocardial regeneration potential of cardiac c-Kit+ progenitor cells via PI3K and MAPK signalling pathways](#). Future Cardiology, (JCR, IF: 1.7, Q3). 2020 May; 16(3):199-209. <https://doi.org/10.2217/fca-2018-0049>
  11. Fathi E, Farahzadi R\*, Sheervalilou R, Sanaat Z, Vietor I. [A general view of CD33+ leukemic stem cells and CAR-T cells as interesting targets in acute myeloblastic leukaemia therapy](#). Blood research, (JCR, IF: 2.2, Q3). 2020 Mar; 55(1):10. <https://doi.org/10.5045/br.2020.55.1.10>
  12. Fathi E, Farahzadi R\*, Javanmardi S, Vietor I. [L-carnitine extends the telomere length of the cardiac differentiated CD117+ -expressing stem cells](#). Tissue and Cell (JCR, IF: 2.6, Q1). 2020 Dec 1; 67:101429. <https://doi.org/10.1016/j.tice.2020.101429>

#### Highly Cited Papers

\* Corresponding Author

1. Fathi E, Farahzadi R\*, Valipour B. [Alginate/gelatin encapsulation promotes NK cells differentiation potential of bone marrow resident C-kit+ hematopoietic stem cells \(Highly Cited Paper in May/June 2022 according to Web of Science record\)](#). International Journal of Biological Macromolecules (JCR, IF: 8.2, Q1; Top 10% based on SNIP). 2021 Apr 30; 177:317-27. <https://doi.org/10.1016/j.ijbiomac.2021.02.131>
2. Montazersaheb S, Hosseiniyan Khatibi SM, Hejazi MS, Tarhriz V, Farjami A, Ghasemian Sorbeni F, Farahzadi R\*, Ghasemnejad T. [COVID-19 infection: An overview on cytokine storm and related interventions \(Highly Cited and Hot Paper\)](#). Virology Journal (JCR, IF: 4.8, Q2). 2022 Dec;19(1):1-5. <https://doi.org/10.1186/s12985-022-01814-1>
3. Adibkia K, Ehsani A, Jodaei A, Fathi E, Farahzadi R\*, Barzegar-Jalali M. [Silver nanoparticles induce the cardiomyogenic differentiation of bone marrow derived mesenchymal stem cells via telomere length extension](#). Beilstein Journal of Nanotechnology, (JCR, IF: 3.1, Q2). 2021 Aug 2; 12(1):786-97. <https://doi.org/10.3762/bjnano.12.62>
4. Mobarak H, Fathi E, Farahzadi R, Zarghami N, Javanmardi S. [L-carnitine significantly decreased aging of rat adipose tissue-derived mesenchymal stem cells](#). Veterinary research communications, (JCR, IF: 2.2, Q1). 2017 Mar; 41(1):41-7. <https://doi.org/10.1007/s11259-016-9670-9>

#### CONTRIBUTION IN RESEARCH

##### International Collaborations

1. **Subject:** International project entitled: [Effect of mesenchymal stem cells on hippocampus neural cells via investigation of genes promoter methylation status of Wnt/β-catenin pathway in Alzheimer's animal model- The IMPULSE Iran-Austria program of the OeAD-GmbH and Ministry of Science, Research and Technology of the Islamic Republic of Iran](#)  
**List of colleagues:** Ezzatollah Fathi, Ilija Vietor, **Raheleh Farahzadi** (As **Principal co-investigator**)  
**Grant No:** 4/11773  
**21 Apr 2018-28 Dec 2019**  
**10.000.00 \$ USA**  
**Achievements:** One research academic paper (**Q2 ISI-Cited Publications, with Impact Factor: 5**): **Farahzadi R, Fathi E, Vietor I. Mesenchymal stem cells could be considered as a candidate for further studies in cell-based therapy of Alzheimer's disease via targeting the signalling pathways.** ACS chemical neuroscience, (JCR, IF: 5, Q2). 2020 Apr 20; 11(10):1424-35. <https://doi.org/10.1021/acscchemneuro.0c00052>
2. **Subject:** International project entitled: [The Feasibility of granulocyte differentiation potency of C-Kit+ hematopoietic stem cells using bone marrow mesenchymal stem cells as a novel approach in cell-based](#)

therapy- Invited Collaborative Research Program (ICRP) Iran-Austria.

List of colleagues: Ezzatollah Fathi, Ilja Vietor, Raheleh Farahzadi (As Principal co-investigator), Seyed Alireza Mesbah-Namin

Grant No: 1187

3Jan 2021-24 Jun 2023

13.000.00 \$ USA

Achievements: Two research academic paper (ISI-Cited Publications):

Farahzadi R, **Fathi E\***, Mesbah-Namin SA, Vietor I. [Granulocyte differentiation of rat bone marrow resident C-kit+ hematopoietic stem cells induced by mesenchymal stem cells could be considered as new option in cell-based therapy.](#) Regenerative Therapy, (**JCR, IF: 4.3, Q2**). 2023 Jun 1; 23:94-101. <https://doi.org/10.1016/j.reth.2023.04.004>

**Fathi E**, Mesbah-Namin SA, Vietor I, Farahzadi R. [Mesenchymal stem cells cause induction of granulocyte differentiation of rat bone marrow C-kit+ hematopoietic stem cells through JAK3/STAT3, ERK, and PI3K signalling pathways.](#) Iranian Journal of Basic Medical Sciences (**JCR, IF: 2.2, Q3**). 2022 Oct 1;25(10). <https://doi.org/10.22038/ijbms.2022.66737.14633>

#### Doctorate Supervisor

1. Title of thesis: Investigation of silver nanoparticles induction on cardiomyogenic differentiation of rat bone marrow derived-mesenchymal stem cells (an In Vitro study)- Date of defence: 05 Jan 2022
2. Title of thesis: Investigation of Telomer length and cell cycle changes on cardio myogenesis of rat bone marrow derived-mesenchymal stem cells in the presence of silver nanoparticle- Date of defence: 05 Jan 2022
3. Title of thesis: Investigation of gene expression level of the hTERT gene and telomer length changes in acute lymphoblastic leukaemia cell line (Molt-4) following co-culture with mesenchymal stem cells- Date of defence: 09 Mar 2021
4. Title of thesis: Investigation of apoptosis induction in acute lymphoblastic leukaemia cell line (Molt-4) following co-culture with mesenchymal stem cells- Date of defence: 09 Mar 2021
5. Title of thesis: Effect of Mesenchymal Stem Cell on Differentiation of Rat Bone Marrow Mononuclear Cells toward Granulocytes Cell Line- Date of defence: 13 Nov 2019

#### Doctorate Advisor

6. Title of thesis: Survey on effect of L-carnitine on cell surface marker expression of CD34, SUZ 12 gene expression and apoptosis in rat bone marrow mononuclear cells- Date of defence: 05 Feb 2019
7. Title of thesis: Effect of L-carnitine on cardiomyogenic differentiation of C-Kit+ bone marrow progenitor cells via MAPK-ERK signalling pathway- Date of defence: 21 July 2019
8. Title of thesis: Investigation of rat bone marrow mesenchymal stem cells effect on apoptosis and cell surface markers expression of CD33 and CD34 in chronic myeloid leukaemia- Date of defence: 25 Dec 2017
9. Title of thesis: Investigation of MSCs effect on Wnt/  $\beta$ -catenin signalling pathway and cell surface markers expression of CD13 and CD14 in chronic myeloid leukaemia- Date of defence: 05 Sep 2017

#### Master's degree Advisor

10. Title of thesis: Investigation effect of secreted cytokines from rat bone marrow mesenchymal stem cells on neuroblastoma cell line (B65) through MAPK/ERK signalling pathway- Date of defence: 02 July 2019
11. Title of thesis: Influences of Tigecycline on Apoptotic genes and P53 in Acute myeloid Leukemia stem cells- Date of defence: 09 Jul 2018
12. Title of thesis: Study Effect of mitochondrial targeting on Telomerase activity and telomere length in acute myeloid leukemia stem cells- Date of defence: 05 Jul 2018
13. Title of thesis: Evaluation of Caspase 9 and AHR gene expression following inhibition of mitochondrial activity in Acute myeloid leukemia stem cells- Date of defence: 07 Jul 2018

## ADDITIONAL INFORMATION

Teaching experience

- Cellular and Molecular methods for Ph.D students from January 2021 till now
- Stem cell biology from January 2020 till now
- Isolation and culture of stem cells from January 2020 till now

## SELECTED INVITATIONS

As Journal Editorial Board Member

- [Associate Editor of BiolImpacts](#) (ISI, JCR, IF: 2.6, Q3, Cite Score: 5.3)
- [Editorial Board Member of Pharmaceutical Sciences](#) (ISI, JCR, IF: 1.7, Q2, Cite Score: 2.2)
- [Editorial Board Member of OBM Transplantation](#) (Scopus Indexed; Cite Score:0.7, Q3)

As Journal Reviewer

- Web of Science Researcher as reviewer link date range June 2018-Jun 2024, **233 REVIEWS:** <https://www.webofscience.com/wos/author/record/L-8950-2017>  
The list of Journal with peer review history are:
  - Stem Cell Research & Therapy (IF: 7.5 & Q1; Top 5% based on SNIP) / Number of peer review: 33
  - Cellular Signalling (IF: 4.8 & Q2) / Number of peer review: 10
  - BiolImpacts (IF: 2.6 & Q3) / Number of peer review: 9
  - Biochemistry & Biophysics Reports (IF: 2.7 & Q3) / Number of peer review: 8
  - International Journal of Biological Macromolecules (IF: 8.2 & Q1; Top 10% based on SNIP) / Number of peer review: 8
  - Biochemical Genetics (IF: 2.4 & Q3) / Number of peer review: 7
  - Scientific Reports (IF: 4.6 & Q2) / Number of peer review: 7
  - Tissue & Cell (IF: 2.6 & Q1) / Number of peer review: 6
  - Current Gene Therapy (IF: 3.6 & Q2) / Number of peer review: 4
  - Electromagnetic Biology and Medicine (IF: 1.7 & Q3) / Number of peer review: 4
  - Pharmaceutical Sciences (IF: 1.7) / Number of peer review: 4
  - International Journal of Molecular Sciences (IF: 5.6 & Q1; Top 5% based on SNIP) / Number of peer review: 3
  - Acta Odontologica Scandinavica (IF: 2 & Q3) / Number of peer review: 2
  - Cell Proliferation (IF: 8.5 & Q1) / Number of peer review: 2
  - Cells (IF: 6 & Q2) / Number of peer review: 2
  - Current Issues in Molecular Biology (IF: 3.1 & Q3) / Number of peer review: 2
  - Journal of Integrative Medicine (IF: 4.8 & Q1) / Number of peer review: 2
  - Journal of Orthopaedic Research (IF: 2.8 & Q2) / Number of peer review: 2
  - Journal of Taibah University of Science (IF: 3.3 & Q2) / Number of peer review: 2
  - Medicina (IF: 2.6 & Q3) / Number of peer review: 2
  - Molecular Medicine Reports (IF: 3.4 & Q3) / Number of peer review: 2
  - Ageing Research Reviews (IF: 13 & Q1; Top 5% based on SNIP) / Number of peer review: 1
  - Applied Sciences (IF: 2.7 & Q2) / Number of peer review: 1
  - BMC Medicine (IF: 9.3 & Q1; Top 5% based on SNIP) / Number of peer review: 1
  - Biochemical and Biophysical Research Communication (IF: 3.1 & Q1) / Number of peer review: 1
  - Biochemistry Research International (IF:3) / Number of peer review: 1
  - Biomedical and Environmental Sciences (IF: 3.5 & Q2) / Number of peer review: 1
  - Biomolecules (IF: 5.5 & Q1) / Number of peer review: 1
  - Bioscience Reports (IF: 4 & Q2) / Number of peer review: 1
  - Bulletin of the Korean Chemical Society (IF: 1.7 & Q3) / Number of peer review: 1
  - AND SO ON

Participation in Conferences

- L-carnitine could contribute in NK cell differentiation of C-kit<sup>+</sup> hematopoietic stem cells- *International Congress in Biomedicine, 2020*
- JAK/STAT signaling pathway involved in NK cell differentiation of CD117<sup>+</sup> expressing progenitor cells- *International Congress in Biomedicine, 2020*
- L-carnitine contribute to promote cardiogenesis of C-kit<sup>+</sup> progenitor cells derived bone marrow- *10th Congress Stem Cell Biology, 2019*
- Mesenchymal stem cells induced early apoptosis in B65-neurogenic differentiation cells as in vitro cell line

For Alzheimers disease-10th Congress Stem Cell Biology, 2019

- Stimulatory effect of bone marrow mesenchymal stem cell co-culture on apoptosis and cell cycle arrest-14th International Congress of Royan, 2018
- Influence of cytokines secreted by bone marrow mesenchymal stem cell on cell proliferation of K562 cell line-14th International Congress of Royan, 2018
- Investigation effective signaling pathway on osteogenesis of mesenchymal stem cells in presence of zinc sulphate and electromagnetic field-3th national congress of modern technologies, 2016
- Survey on effect of electromagnetic field on proliferation of mesenchymal stem cells derived from rat adipose tissue-derived mesenchymal stem cells-3th national congress of modern technologies, 2016
- Investigation the effect of l-carnitine on telomerase length of human adipose tissue derived mesenchymal stem cell- The first national and modern technologies Congress, 2015
- Investigation effect of l-carnitin on ngf and bdnf gene expression in neural differentiated mesenchymal stem cell by real time pcr- The first national and modern technologies Congress, 2015
- Effect of zinc sulphate on adipogenic differentiation of rat bone marrow-derived mesenchymal stem cells- The second national congress of modern technologies, 2015
- Effect of l-carnitine on nestin gene expression in neurogenic differentiated mesenchymal stem cells from rat adipose tissue-derived mesenchymal stem cells- The second national congress of modern technologies, 2015
- Survey on Effect of L-carnitine over Human Adipose Tissue-derived Mesenchymal Stem Cells Proliferation- International Congress on Stem Cells and Regenerative Medicine, 2015
- Effect of curcumin on proliferation of mesenchymal stem cells derived from rat adipose tissue-derived mesenchymal stem cells-9th Convention of Iranian Veterinary Clinicians, 2015
- Effect of curcumin on adipogenic and osteogenic expression of rat adipose-derived mesenchymal stem cells by Real time PCR-9th Convention of Iranian Veterinary Clinicians, 2015
- Investigation of growth, proliferation and senescence in rat adipose derived MSCs in the presence of L-Carnitine and its osteogenic and adipogenic potential differentiation-9th Convention of Iranian Veterinary Clinicians, 2015
- Effect of L-carnitine on osteogenic differentiation of rat adipose tissue-derived mesenchymal stem cells-1th National Congress of Iran Biology and Natural Sciences, 2013
- Effect of curcumin on osteocalcin protein expression in osteogenic differentiated mesenchymal stem cells from rat bone marrow- The first national and modern technologies Congress, 2013
- Effect of zinc ion on osteocalcin protein expression in osteogenic differentiated adipose tissue-derived mesenchymal stem cells- International conference on new findings of Agriculture, Natural Resources and Environment, 2013

## Honoraries

- **First top grade in Ph.D** entrance exam (2011)
- **Talented membership in Young Researchers and Elite Club** for 5 consecutive years (From 17.02.2015 till 17.02.2020)
- **20% of top researcher** of the Tabriz University of Medical Sciences (2017)
- **20% of top researcher** of the Tabriz University of Medical Sciences (2018)
- **30% of top researcher** of the Tabriz University of Medical Sciences (2019)
- **30% of top researcher** of the Tabriz University of Medical Sciences (2020)
- **30% of top researcher** of the Tabriz University of Medical Sciences (2021)
- **30% of top researcher** of the Tabriz University of Medical Sciences (2022)
- **30% of top researcher** of the Tabriz University of Medical Sciences (2023)

## Books

- A General Illustrated View: Mesenchymal Stem Cells: From isolation to Utility- Jahad Daneshgahi Tehran Publications, 2018
- Mesenchymal Stem Cells Proceedings of the national & international conferences 11Dec 2014 to 06Aug 2019-Jahad Daneshgahi Tehran Publications, 2018
- Curcumin and Mesenchymal Stem Cells-Sanjesh and Danesh Publications, 2018
- General Principles of Laboratory Testing and Diagnosis-University Reseraches Publications, 2017

**Workshops  
as Lecturer**

- Multi-lineage differentiation of mesenchymal stem cells, *10-14 June 2023*
- Isolation and characterization of mesenchymal stem cells of adipose tissue by explant method, *27-29 May 2023*
- Immunocytochemical method to check cell surface markers, *30 Apr-03 May 2023*
- Types of methods to check the amount of cell apoptosis, *11-13 Mar 2023*
- Isolation and characterization of bone marrow mononuclear cells, *23-25 Nov 2022*
- Identification of mesenchymal stem cells derived from bone marrow, *31 Aug 2022*
- Isolation of mesenchymal stem cells derived from bone marrow, *24 Aug 2022*
- Isolation and identification of mesenchymal stem cells derived from adipose tissue, *26 Jan 2022*
- 2-day workshop on isolation of hematopoietic stem cells with MACS technique, *12-13 Dec 2018*
- Isolation and characterization of bone marrow hematopoietic stem cells, *21-23 Nov 2018*
- Isolation and cultivation of mesenchymal stem cells from adipose tissue, bone marrow and amniotic fluid in an animal model, *28-29 Oct 2015*