

CURRICULUM-VITAE

Personal details:

Surname: Ebrahimi Barough

First name: Somayeh

Date of birth: 28.12.1982

Place of birth: Ardabil, Iran

Nationality: Iranian

Gender: Female

Marital status: Single

Address:

1. Department of Tissue Engineering, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran

2. Brain and Spinal Injury Research Center, Imam Hospital, Tehran University of Medical Sciences, Tehran, Iran

E-MAIL: s_ebrahimi100@yahoo.com

Web : <http://samt.tums.ac.ir/TissueEngineering/EducatedMembers.aspx>

Educational Background:

Degree	Major	University	Date	Average
B.Sc	Biology	Mohaghegh Ardebili (Ardebil, Iran)	2002-2005	18.25 from 20
M.Sc	Cell and Developmental Biology	Kharazmi uni. (Tehran, Iran)	2006-8	18.75 from 20
Ph.D	Cell and Developmental Biology	Kharazmi uni. (Tehran, Iran)	2008-2013	19.39 from 20
PostDoc Researcher	Tissue engineering	Medical Science uni. (Tehran, Iran)	2013	2014

Honors and achievements:

- The first grade in Ph.D. among total biology students in Faculty of Biological Science, Kharazmi University of Tehran

Research Experience:

- **M. Sc. Thesis Title:** Effect honey bee venom and RA on neural differentiation P19 teratocarcinoma cells.
- **PhD Thesis Title:** Differentiation efficiency of endometrial mesenchymal stem cells into oligodendrocytes in vitro using overexpression miRNA219 and miRNA338
- **Post Doct Thesis Title:** Neural tissue engineering using mesenchymal stem cells differentiation into neurons and glial cells on nanofibrous scaffolds for repair and regeneration spinal cord injury in Sprague-Dawley Rats

Technical Experience:

- **Cell Culture studies:** Three-Dimensional Tissue Culture, Adult mesenchymal stem cells, iPS cells, Neural stem cells, different cell lines (P19-PC12-HL60-U87,...)
- **Molecular biological:** RT-PCR, Real time PCR, Gene Cloning, work with lentiviral vectors(Transfection and Transduction)
- **Immunology:** Immunocytochemistry and Flowcytometry
- **Animals handled:** Rat, Mice, Rabbit
- **Microscopic Technical:** Working with Stereo Microscope, Fluorescence Microscope and Light Microscope.
- **Histological Technical:** Preparing of sample for study light and Electron Microscope(SEM, TEM)

Teaching Experience (Both theories and lab works):

- Tissue engineering, TUMS, Tehran, Iran, 2014
- Biology, Kharazmi University, Tehran, 2010-2011
- Animal biology (lab), Azad university of karaj,2009-2011
- Organogenesis, Kharazmi University, Tehran, 2009-2010
- Developmental biology, Kharazmi University, Tehran, 2009-2010

Workshops:

1. Immunocytochemistry workshop, Department of Tissue Engineering, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, 2012 and 2013
2. 2D and 3D cell culture workshop, Department of Tissue Engineering, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, 2012 and 2013
3. Two Dimensional versus Three Dimensional Cell Culture Methods, Department of Tissue Engineering, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, 2013
4. Advances in Tissue Engineering 2014"short course, , Department of Tissue Engineering, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, 2014

Publications: Full Papers:

1. **Ebrahimi-Barough S**, Hoveizi E, Norouzi Javidan A, Ai J. Investigating the neuroglial differentiation effect of neuroblastoma conditioned medium in human endometrial stem cells cultured on 3D nanofibrous scaffold. *J Biomed Mater Res A*. 2015 Jan 21. doi: 10.1002/jbm.a.3539
2. **Somayeh Ebrahimi-Baroug**, Abbas Norouzi-Javidan, Hoshang Saberi, Mohammad Tghi Joghataei, Esmaeil Mirzaei, Reza Rahbarghazi, Faezeh Faghihi, Sadegh Shirian, Jafar Ai. Evaluation of motor neuron-like cells differentiation ability of hEnSCs on biodegradable PLGA nanofiber scaffolds. *Molecular Neurobiology*, 10/2014
3. Hoveizi E, **Ebrahimi-Barough S**, Tavakol S, Ai J. Differential effect of Activin A and WNT3a on definitive endoderm differentiation on electrospun nanofibrous PCL scaffold. *Cell Biol Int*. 2015 Jan 9. doi: 10.1002/cbin.10430.
4. Elham Hoveizi, Shima Tavakol, **Somayeh Ebrahimi-Barough**. Neuroprotective Effect of Transplanted Neural Precursors Embedded on PLA/CS Scaffold in an Animal Model of Multiple Sclerosis. *Molecular Neurobiology*, 08/2014
5. Faezeh Faghihi, Esmaeil Mirzaei, Arash Sarveazad, Jafar Ai, **Somayeh Ebrahimi-Barough**, Abolfazl Lotfi, Mohammad Taghi Joghataei .Differentiation Potential of Human Bone Marrow Mesenchymal Stem Cells into Motorneuron- like Cells on electrospun Gelatin Membrane. *J Molecular Neuroscience*,10 /2014
6. **Somayeh Ebrahimi-Barough**, Homa Mohseni Kouchesfehiani, Jafar Ai, Mohammad Massumi. Differentiation of endometrial stromal cells into Oligodendrocyte Progenitor Cells (OPCs). *J Molecular Neuroscience*, 2013;51(2): 265-273
7. **Somayeh Ebrahimi-Barough**, Homa Mohseni Kouchesfehiani, Jafar Ai, Mohammad Massumi. Programming of human endometrial stromal cells (hEnSCs)

- into pre-oligodendrocyte cells by overexpression of miR-219. *Neuroscience letter*, 2013; 14;537:65-70
8. **Somayeh Ebrahimi-Barough**, Mohammad Massumi, Homa Mohseni Kouchesfehani, Jafar Ai. Derivation of Pre-oligodendrocytes from Human Endometrial Stromal Cells by Using Overexpression of MicroRNA 338. *J Molecular Neuroscience*, 2013; 51(2):337-343 DOI 10.1007/s12031-013-0101-x
 9. Mahmoud Azami, Jafar Ai, **Somayeh Ebrahimi**, Mehdi Farokhi, Sahar E.Fard. *In vitro* evaluation of biomimetic nanocomposite scaffold using endometrial stem cell derived osteoblast-like cells. *Tissue Cell*, 2013; 45(5):328-37. pii: S0040-8166(13)00050-5. doi: 10.1016/j.tice.2013.05.002
 10. Jafar Ai, **Somayeh Ebrahimi**, Ahad Khoshzaban, Tahereh Sadat Jafarzadeh Kashi, Davood Mehrabani. Tissue engineering in bone regeneration using mineralized bone allograft and bone marrow mesenchymal stem cells. *IRCMJ*, 2012,14(2):96-102
 11. Jafar Ai, **Somayeh Ebrahimi**, Armin Ai, Roya Karimi, Naghmeh Bahrami. Effect of deforolimus and VEGF on angiogenesis in endometrial stromal cells following three-dimensional culture. *Stem cell discovery*. 2013;3(1): 7-13
 12. Zahra Taherian Mobarakeh, Jafar Ai, Farzad Yazdani, Seyed Mahdi Rezayat Sorkhabadi, Zinat Ghanbari, Abbas Noroozi Javidan, Seyed Abdol Reza Mortazavi-Tabatabaei, Mohammad Massumi and **Somayeh Ebrahimi Barough**. Human endometrial stem cells as a new source for programming to neural cells. *Cell Biol. Int. Rep.* 19(1):7-14
 13. Jafar Ai, Ahmad Reza Shahverdi, **Somayeh Ebrahimi Barough**, Homa Mohseni Kouchesfehani, Saeed Heidari, Reza Roozafzoon, Javad Verdi, Ahad Khoshzaban. Derivation of Adipocytes from Human Endometrial Stem Cells (EnSCs). *J Reprod Infertil*. 2012; 13(3):151-157.
 14. Shima Tavakol ,Iraj Ragerdi Kashani , Mahmood Azami ,Ahad Khoshzaban, Behnaz Tavakol , Sharmin Kharrazi ,**Somayeh Ebrahimi**, Seyed Mahdi Rezayat Sorkhabadi. In vitro and in vivo investigations on bone regeneration potential of laminated hydroxyapatite/gelatin nanocomposite scaffold along with DBM. *J Nanopart Res* .2012; 14:1265
 15. Jafar Ai, Ebrahim Azizi, Azam Shamsian, Akram Eslami, Ahad Khoshzaban, **Somayeh Ebrahimi-Barough**, Armin Ai, Aliakbar Alizadeh . The effect of BMP2 on osteogenic differentiation of human endometrial stem cells. *ABM Jornal*, 2013,
 16. Kochesfehani H, Nabiuni M, Parivar K, **Ebrahimi S**. Effect of honey bee venom on differentiation of cholinergic neurons. *J Venom Res*, 2010, Vol 1, 29-36

17. Jafar Ai, Anahita Kiasat-Dolatabadi, **Somayeh Ebrahimi**, Armin Ai, Nasrin Lotfibakhshaesh. Application of tissue engineering in the nervous system: A review. *Archives of Neuroscience*, 2013,1(1):15-20
18. Mona Navaei-Nigjeh , Ghasem Amoabedini, Abbas Noroozi, Mahmoud Azami, Mohammad Nabi Asmani, **Somayeh Ebrahimi Barough**, Hooshang Saberi,Armin Ai, Jafar Ai. Enhancing neuronal growth from human endometrial stem cells derived neurons in three-dimensional fibrin gel for nerve tissue engineering. *Biomedical Material Research Part A*, 2013; Doi: 10.1002/jbm.a.34921.
19. Mohammad Nabi Asmani, Jafar Ai, GhasemAmoabediny, Abbas Noroozi, Mahmoud Azami, Somayeh Ebrahimi-Barough, Mona Navaei-Nigjeh,Armin Ai, Mina Jafarabadi. Study of Three Dimensional Culture of Differentiated Endometrial Stromal Cells to Oligodendrocyte Progenitor Cells (OPCs) in Fibrin Hydrogel . *cell biology international*, 2013, doi:101002/cbin.10171
20. Azadeh Niknamasl, Seyed Nasser Ostad, Mansoureh Soleimani, Mahmoud Azami, Maryam Kabir Salmani, Nasrin Lotfibakhshaesh, **Somayeh Ebrahimi-Barough**, Roya Karimi, Reza Roozafzoon, Jafar Ai . A new approach for pancreatic tissue engineering: human endometrial stem cells encapsulated in fibrin gel can differentiate to pancreatic islet beta-cell. *Cell Biology International* 04/2014
21. **Somayeh Ebrahimi Barough**, Homa Mohseni Kouchesfehani, Jafar Ai, Mohammad Massumi. Isolation and characterization of human endometrial stem cells and evaluation of their differentiation potential. *Experimental animal biology*, 2013, vol 1.no4, 12-28
22. Somayeh Ebrahimi Barough, Kazem Parivar. GSK3 β phosphorylation with DHEA in neural progenitor cells derived from Balb/c mouse embryos brain. *Medical Science Journal of Islamic Azad University, Tehran Medical Branch*, 2013
23. Homa Mohseni Kouchesfehani, Mohammad Nabiuni, Kazem Parivar, **Somayeh Ebrahimi**. Effect honey bee venom and RA on neural differentiation P19 cells. *Iranian J of Biology*,2010, vol23, 141-149
24. Mohammad Nabiuni, **Somayeh Ebrahimi**, Maryam Alavi, Amir Rabiei, Hosein Behbodi, Elham Hoveizi. Effect of 1,3-bis(2-cyanophenyl)triazene on cell proliferation of PC12 and B16F10 cell lines. *J Developmental Biology*, 2011 vol 1.no4, 45-50

Congress:

- 1- **Somayeh Ebrahimi -Barough**, Elham Hoveizi. dehydroepiandrosterone treatment can increase GSK3b phosphorylation in neural progenitor cells. 2014, Cell Journal 16 (1), Royan International Twin Congress. Poster presentation royan
- 2- Elham hoveizi, **Somayeh Ebrahimi-Barough**. Survey of interaction between induced pluripotent stem cells and PLA/Gelatin scaffold. 2014, Cell Journal; 16(1), Royan International Twin Congress. Poster presentation royan
- 3- Elham hoveizi, Shima Tavakol, **Somayeh Ebrahimi-Barough**. The effect of PLA/CS scaffold in improving skin wound healing. 2014, Cell Journal 16 (1), Royan International Twin Congress. Poster presentation royan
- 4- **Somayeh Ebrahimi Barough**, Jafar Ai. Fibrin hydrogel provides a suitable three dimensional scaffold for neural and glial cells differentiation of endometrial stem cells. Frontier in Biomaterials & Tissue Engineering Conference, Budapest. 2013, Oral Presentation
- 5- Jafar Ai, Sarah dehmardeh, **Somayeh Ebrahimi**. Deferolimus decrease angiogenesis in endometrial stem cell. 2012 1st International Students' Stem Cell Congress of Turkey , poster presentation
- 6- **Somayeh Ebrahimi**, Kazem Parivar, Mohammad Nabiuni. Effect of DHEA on neuronal apoptosis. 2011 EFNS European Journal of Neurology 18 (Suppl. 2), 344–620.
- 7- **Somayeh Ebrahimi Barough**, Homa Mohseni Kouchesfehaneh, Jafar Ai, Behnam Yonesi and Mohammad Massumi. Human endometrial stem cells attain oligodendrocyte features in vitro. 2012 EFNS European Journal of Neurology 19 (Suppl. 1), 90–457.
- 8- **Somayeh Ebrahimi Barough**, Homa Mohseni Kouchesfehaneh, Jafar Ai and Mohammad Massumi. Overexpression Of microRNA 219 In Human Endometrial Stem Cells Contribute to Oligodendrocyte Differentiation by Reduction of PDGFR α . 2012 Royan International Twin Congress. Poster presentation
- 9- **Somayeh Ebrahimi-Barough**, Homa Mohseni Kouchesfehaneh, Jafar Ai and Mohammad Massumi. Differentiation of Human Endometrial Stem Cells into Oligodendrocyte using conditioned medium of BE (2)-C cells. 2012 The 17th National&fifth International Conference of biology, Kerman- Iran, poster presentation
- 10- **Somayeh Ebrahimi Barough**, Homa Mohseni Kouchesfehaneh, Jafar Ai and Mohammad Massumi. Differentiation of human endometrial stem cells into oligodendrocyte with overexpression of miRNA338. 2012 Basic and clinical neurosciences congress, Tehran- Iran, oral presentation
- 11- Homa Mohseni Kouchesfehaneh, Mohammad Nabiuni, Kazem Parivar, **Somayeh Ebrahimi**; Effect honey bee venom and RA on neural differentiation P19 cells.

The 15th National&Third International Conference of biology, Tehran- Iran, Aug 2008. Oral presentation

- 12- Elham Hoveizi, Mohammad Nabiuni, Sirus Khodadadi, **Somayeh Ebrahimi**; Synergism effect NGF and honey bee venom on neurons differentiation PC12 cells, 16th National and 4th International Conference of Biology, Ferdowsi University of Mashhad, Mashhad, Iran, SEP 2010. Poster presentation
- 13- Mohammad Nabiuni, **Somayeh Ebrahimi**, Maryam Alavi, Amir Rabiei, Hosein Behbodi, Elham Hoveizi. Effect of 1,3-bis(2-cyanophenyl)triazene on cell proliferation of PC12 and B16F10 cell lines. 16th National and 4th International Conference of Biology, Ferdowsi University of Mashhad, Mashhad, Iran, SEP 2010. Poster presentation
- 14- Mohammad Massumi, Behnam Younesi, Mahnaz Azarnia, Jafar Ai, **Somayeh Ebrahimi**. Can human Eye-Derived induced pluripotent stem cells (iPS) efficiently be programmed to oligodendrocyte? 2012 Royan International Twin Congress. Tehran, Iran. Poster presentation
- 15- Jafar Ai, Mona Navaei, Mohammad Asmani, Abbas Norozi, Ghasem Amoabedini, Mahmoud Azami, **Somayeh Ebrahimi** Barough and Roya Karimi. Tissue engineering of spinal cord by 3D culture and differentiated endometrial stem cell to neuron and oligodendrocyte in fibrin gel. 2012 Basic and clinical neurosciences congress, Tehran- Iran, Oral presentation
- 16- Mona Navaei-Nigjeh, Jafar Ai, Ghasem Amoabedini, Abbas Noroozi, Mahmoud Azami, Mohammad Nabi Asmani, **Somayeh Ebrahimi** and Roya Karimi. Characterization of human endometrial stem cells-derived neurons outgrowth in two- and three-dimensional culture systems. 4th National congress on spinal injuries, Tehran, Feb 13-15, 2013, poster presentation

Projects:

- The effect of PI3K/Akt signaling inhibition using LY294002 as a small molecule in motor neuron differentiation of human mesenchymal stem cells cultured on nanofibrous scaffold PCL/Collagen. **Director, Tehran university of medical science, 2015**
- Differentiation of encapsulated mesenchymal stem cells in collagen with shh signaling activator. **Director, Tehran university of medical science, 2015**
- Gonad Tissue Engineering by using Encapsulation of Germ Cells Derived from Endometrial Stem Cells in Fibrinogen. **Colleague, Tehran university of medical science, 2012 till now**
- Comparison of the effects of the neural cells differentiated from the human bone marrow mesenchymal and endometrial stem cells on PCL / collagen scaffold in repair and regeneration of the spinal cord injury in a rat animal model. **Colleague, Tehran university of medical science, 2013 till now**

- An experimental spinal cord injury rat model using fibrin gel encapsulated endometrial stem cell with overexpression mir-219. **Colleague, Tehran university of medical science, 2013 till now**
- The effects of the neural cells differentiated from the human endometrial stem cells treated with 17beta esteradiol on polyurethane scaffold in repair and regeneration of the spinal cord injury in a rat animal model. **Colleague, Tehran university of medical science, 2013 till now**
- Fabrication and comparison of Neural tissue engineered cell constructs using human bone marrow and cord blood mesenchymal stem cells on collagen scaffold for repair and regeneration of spinal cord injury in Sprague Dawley rats. **Colleague, Iran university of medical science, 2013 till now**
- The effect of dihydroepiandrosteron (DHEA) on phosphorylation of GSK3b in neural progenitor cells. **Director, Young research club, Azad university of Ardebil, 2011. Finished**

Book translation:

1. Central Nervous System Tissue Engineering: Current Considerations and Strategies. Somayeh Ebrahimi et al., 2014

Reviewer:

1. Reviewer of Journal of Cell Biology International
2. Reviewer of Journal of Molecular Neuroscience
3. Reviewer of Journal of Molecular Biology Reports
4. Reviewer of Koumesh journal

Scientific Memberships:

- Young Research Club, Azad University, Ardebil

Skills:

- Computer: Excellent knowledge of Office XP (Excel, Word, PowerPoint).
- Internet.

Language capabilities:

- English

References:

1- Professor Jafar Ai. Department of Tissue Engineering and applied cell sciences, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran.

Email: Jafar_ai@tums.ac.ir

2- Professor Kazem Parivar. Department of Animal Biology, Faculty of Biological Science, Kharazmi University (TMU), Tehran, Iran.

Email: Kazem_parivar@yahoo.com

3- Dr. Mohammad Massumi. Induced Pluripotent Stem Cell Biotechnology Team,
Division of Nanobiomaterials and Tissue Engineering, National Institute of Genetic
Engineering and Biotechnology, Tehran, Iran
E-mail: massumi.mohammad@gmail.com