Personal Information:

Surname: **Farokhi** First name: **Mehdi**

Nationality: **Iranian** Date of birth: **Jan 15, 1983**

Place of Birth: **Tehran, Iran**

E-mail: M_farokhi@pasteur.ac.ir

Position: Assistant Professor of Tissue engineering

Office address: National Cell Bank of Iran, Pasteur Institute of Iran, Tehran, Iran

Office Number: (+ 98) 02164112358

Educational background:

Degree	Major	Location	Date	Average Grade
Ph.D.	**Tissue Engineering**	**Department of Tissue Engineering, University of Thran, Tehran, Iran.**	**2009-2012**	**17.90 out of 20**
M.Sc	**Anatomy**	**Department of Anatomy and Histology, Qazvin University, Qazvin, Iran.**	**2005-2008**	**18.58 out of 20**
B.Sc	**Radiology**	**Shahid Beheshti University, Tehran, Iran.**	**2003-2005**	**16.4 out of 20**

Dissertation title of M.Sc

Isolation, characterisation of human osteoblast cells and biocompatiblity evaluation of them next to bone nano-composite.

Dissertation title of Ph.D.

Evaluation the effect of endothelial, endometrial stem cell and angiogenic factors on osteoblast cell function seeded on nano-structured Silk/PLGA construct.

Languages:

English

Persian: Native

Thesis:

Ph.D Advisor

(2015)

1. Design and construction of novel nano-bioglass/Collagen type I conduit loaded with Nerve Growth Factor (NGF) and implant of designed structure for repair of the sciatic nerve in rats.

(2015)

2. Evaluation the effect of Silk/Cap based scaffold containing cobalt ions on osteogenesis and angiogenesis.

(2015)

3. Electrospinning of silk containing rosuvastatin for bone tissue engineering application.

MSc Supervisor:

(2015)

1. Transfecting BMP2 gene into human Adipose-derived stem cell and monitoring its differentiation and osteogenic behavior on 3D silk/alumina scaffold.

(2015)

2. Evaluation the release of VEGF and PDGF from chitosan nanoparticles embedded in silk fibroin based scaffold on endothelial cells function.

(2015)

3. Angiogenesis evaluation of silk nanoparticles incorporated with VEGF and PDGF.

(2015)

4. Calcium phosphate preparation on silk/carrageenan scaffold in order to enhance bone regeneration.

(2015)

5. Evaluation the release of copper from chitosan/silk scaffold on endothelial cells function.

(2015)

6. Surface modification of MMT nano-clay using fibronectin for bone tissue engineering.

(2015)

7. Surface modification of silk fibroin nanoparticle by fibronectin in order to control released of VEGF.

MSc Advisor:

(2015-Ongoing)

1. Preparation an electrospun scaffold based on Silk/Aloe vera incorporated with nanoparticles containing E vitamin for skin tissue engineering.

(2015)

2. Preparation and evaluation of scaffold based on Carboxymethylcellulose/Silk incorporated with chitosan nanoparticles containing C vitamin for bone tissue engineering.

Projects Leader

2013-2014

1. Evaluation the effect of mesenchymal stem cells for lung airway treatment in rat model (Feasible study)

2014-2015

2. Evaluation the Effect of Fibronectin on Physicochemical and Biocompatibility Properties of Single Wall Carbon Nanotube.

2015

3. Design and fabrication of bone scaffold containing vancomycin loaded nanoparticles in order to osteomyelitis treatment.

Projects Collaboration:

2011-2013

1. Differentiation of mesenchymal stem cells into osteoblast by means of mechanical loadings, growth factors and electromagnetic fields and repair of bone damage in Rat.

2012-2013

2. Effect of cyclic hydrostatic pressure on proliferation and chondrogenic differentiation of mesenchymal stem cells, and regeneration of cartilage tissue in rabbit.

2012-2014

3. Design and fabrication of biohybrid Silk/SWCNT coated aligned fibronectin nanofiber scaffolds to evaluate Schwann cells derived from rat.

2015

4. Formulation of adjuvanted hepatitis B vaccine based on AlPO4/MPL and evaluation its efficacy in vivo.

2015

6. Design and fabrication of nano-adjuvant based on silk (***In progress***).

2015
7. Fabrication of silk nanoparticles for delivering gemcitabine to lung tumors

2015
8. Single wall carbon nanotube protein coronal

2015

9. The Effect of Platelet-rich Plasmon on the Osteogenesis of Human Adiposed Stem Cells and Angeogenesis of Silk Fibroin Nano Fiber-Natural polymerCalcium Phosphate Composite.

ISI Papers:

1. Reza Mohammadinejad, Hajar Maleki, Eneko Larrañeta, André R Fajardo, Amirala Bakhshian Nik, Amin Shavandi, Amir Sheikhi, Mansour Ghorbanpour, **Mehdi Farokhi**, Praveen Govindh, Etienne Cabane, Susan Azizi, Amir Reza Aref, Masoud Mozafari, Mehdi Mehrali, Sabu Thomas, João F Mano, Yogendra Kumar Mishra, Vijay Kumar Thakur. Status and future scope of plant-based green hydrogels in biomedical engineering. Applied Materials Today.2019**. (IF:8)**

2. **Mehdi Farokhi,** Fatemeh Mottaghitalab, Mohammad Reza Saeb, Sabu Thomas. Functionalized theranostic nanocarriers with bio-inspired polydopamine for tumor imaging and chemo-photothermal therapy.Journal of Controlled Release.2019 .**(IF:7.8)**

3. Saeed Manouchehri, Babak Bagheri, Somayeh Hosseini Rad, Mojtaba Nasiri Nezhad, Yeu Chun Kim, O Ok Park**, Mehdi Farokhi**, Maryam Jouyandeh, Mohammad Reza Ganjali, Mohsen Khodadadi Yazdi, Payam Zarrintaj, Mohammad Reza Saeb. Electroactive bio-epoxy incorporated chitosan-oligoaniline as an advanced hydrogel coating for neural interfaces. Progress in Organic Coatings.2019**.(IF:3.7)**

4. Farzaneh Avani, Sheyda Damoogh, Fatemeh Mottaghitalab, Akbar Karkhaneh, **Mehdi Farokhi**. Vancomycin loaded halloysite nanotubes embedded in silk fibroin hydrogel applicable for bone tissue engineering. International Journal of Polymeric Materials and Polymeric Biomaterials.2019**. (IF:2.2)**

5. Nesa Fani, **Mehdi Farokhi**, Mahmoud Azami, Amir Kamali, Nasrin Lotfi Bakhshaiesh, Somayeh Ebrahimi-Barough, Jafar Ai, Mohamadreza Baghaban Eslaminejad. Endothelial and

Osteoblast Differentiation of Adipose-Derived Mesenchymal Stem Cells Using a Cobalt-Doped CaP/Silk Fibroin Scaffold. ACS Biomaterials Science & Engineering.2019 .**(IF:4.4)**

6. **Mehdi Farokhi**, Fatemeh Mottaghitalab, Yousef Fatahi, Mohammad Reza Saeb, Payam Zarrintaj, Subhas C Kundu, Ali Khademhosseini. Silk fibroin scaffolds for common cartilage injuries: possibilities for future clinical applications. European Polymer Journal.2019**(IF:3.7)**

7. Arefeh Basiri**, Mehdi Farokhi**, Mahmoud Azami, Somayeh Ebrahimi-Barough, Abdolreza Mohamadnia, Morteza Rashtbar, Elham Hasanzadeh, Narges Mahmoodi, Mohamadreza Baghaban Eslaminejad, Jafar Ai.A silk fibroin/decellularized extract of Wharton's jelly hydrogel intended for cartilage tissue engineering. Progress in biomaterials.2019**.**

8. Fatemeh Mottaghitalab**, Mehdi Farokhi**, Yousef Fatahi, Fatemeh Atyabi, Rassoul Dinarvand. New insights into designing hybrid nanoparticles for lung cancer: Diagnosis and treatment. Journal of controlled release.2019**.(IF:7.8)**

9. Negar Hassani Besheli, Sheyda Damoogh, Bahareh Zafar, Fatemeh Mottaghitalab, Hamidreza Motasadizadeh, Fatemeh Rezaei, Mohammad Ali Shokrgozar*, **Mehdi Farokhi***. Preparation of a co-delivery system based on vancomycin/silk scaffold containing silk nanoparticle loaded VEGF. ACS Biomaterials Science and Engineering (2018) in press. **(IF: 4.4)**

10**. Mehdi Farokhi,*** Fatemeh Mottaghitalab, Yousef Fatahi, Ali Khademhosseini, and DavidL.Kaplan. Overview of Silk Fibroin Using Wound Dressings. Trend in biotechnology. In press. 2018. **(IF: 13.3)**

11. **Mehdi Farokhi*,** Fatemeh Mottaghitalab, Saeed Samani, Mohammad Ali Shokrgozar, Subhas C. Kundu, Rui L. Reis, Yousef Fatahi, David L. Kaplan. Silk fibroin/hydroxyapatite composites for bone tissue engineering. Biotechnology Advances 36 (2018) 68–91. **(IF: 11.5)**

12. M Meskinfam, S Bertoldi, N Albanese, A Cerri, MC Tanzi, R Imani, N Baheiraei, M Farokhi, S Fare. Polyurethane foam/nano hydroxyapatite composite as a suitable scaffold for bone tissue regeneration. Materials Science & Engineering C 82 (2018) 130–140. **(IF: 4.9)**

13. Forouzan Mohamadi, Somayeh Ebrahimi-Barough, Mohammad Reza Nourani, Mohammad Ali Derakhshan, Vahabodin Goodarzi, Mohammad Sadegh Nazockdast, Mehdi Farokhi, Roksana Tajerian, Reza Faridi Majidi, Jafar Ai. Electrospun nerve guide scaffold of poly (ε-caprolactone)/collagen/nanobioglass: an in vitro study in peripheral nerve tissue engineering. J Biomed Mater Res A. 2017;105(7):1960-1972 **(IF: 3.1).**

14. Parvaneh Naserzadeh, Seyed Alireza Mortazavi, Khadijeh Ashtari, Ahmad Salimi, **Mehdi Farokhi**, Jalal Pourahmad. Evaluation of the toxicity effects of silk fibroin on human lymphocytes and monocytes. J Biochem Mol Toxicol. 2018;e22056. **(IF: 2.5)**

15. H Fouladiha, SA Marashi, MA Shokrgozar, M Farokhi, A Atashi. Applications of a metabolic network model of mesenchymal stem cells for controlling cell proliferation and differentiation. Cytotechnology 70 (1), 331-338.2018.**(IF: 1.9)**

16. Fatemeh Mottaghitalab, Melika Kiani**, Mehdi Farokhi**, Subhas C Kundu, Rui L Reis, Mahdi Gholami, Hassan Bardania, Rassoul Dinarvand, Parham Geramifar, Davood Beiki, Fatemeh Atyabi. Targeted delivery system based on gemcitabine loaded silk fibroin nanoparticles for lung cancer therapy. *ACS Applied Materials & Interfaces.* In press. 2017. **(IF: 8.8)**

17. Hassani Besheli, Negar; Mottaghitalab, Fatemeh; Eslami, Masoud; Gholami, Mahdi; Kundu, Subhas; Kaplan, David; **Farokhi, Mehdi***. Sustainable Release of Vancomycin from Silk Fibroin Nanoparticles for Treating Severe Bone Infections in a Rat Tibia Osteomyelitis Model. *ACS Applied Materials & Interfaces*. 2017, 9, 5128−5138 **(IF: 8.8)**

18**. Mehdi Farokhi***, Fatemeh Mottaghitalab, Mohammad Ali Shokrgozar, David L. Kaplan, Hae-Won Kim, Subhas C Kundu. Prospects of peripheral nerve tissue engineering using nerve guide conduits based on silk fibroin protein and other biopolymers. *International Materials Reviews. 62 (7), 367–391* **(IF: 22)**

19. J Nourmohammadi, F Roshanfar, **M Farokhi**, MH Nazarpak. Silk fibroin/kappa-carrageenan composite scaffolds with enhanced biomimetic mineralization for bone regeneration applications. Materials Science and Engineering: C 76, 951-958 **(IF: 5)**

20. Alberto Lagazzo, Fabrizio Barberis, **Mehdi Farokhi**, Elisabetta Finochio, Laura Pastorino. Characterization of alginate-brushite in-situ hydrogel composites. *Materials Science and Engineering: C 67, 502-510.* **(IF:5)**

21. Alberto Lagazzo, Fabrizio Barberis, **Mehdi Farokhi**, Elisabetta Finochio, Laura Pastorino. Letter to editor for supporting "Characterization of alginate-brushite in-situ hydrogel composites". *Materials Science and Engineering C 74 (2017) 410–412*. **(IF:4.9)**

22. Fatemeh Mottaghitalab, Ali Rastegari, **Mehdi Farokhi**, Rassoul Dinarvand, Hossein Hosseinkhani, Keng-Liang Ou, Daniel W Pack, Chuanbin Mao, Meshkat Dinarvand, Yousef Fatahi, Fatemeh Atyabi. Prospects of siRNA applications in regenerative medicine. *International Journal of Pharmaceutics 524 (2017) 312–329.* **(IF:3.6)**

23. Fatemeh Mottaghitalab, **Mehdi Farokhi***, Mohammad Ali Shokrgozar, Fatemeh Atyabi, Hossein Hosseinkhani. Silk fibroin nanoparticle as a novel drug delivery system. *Journal of Controlled Release 206 (2015) 161–176.* **(IF: 8.7)**

24. Fatemeh Mottaghitalab, Hossein Hosseinkhani, Mohammad Ali Shokrgozar, ChuanbinMaod, Mingying Yang, **Mehdi Farokhi*.** Silk as a potential candidate for bone tissue engineering. *Journal of Controlled Release 215 (2015) 112–128.* **(IF: 8.7)**

25. **Mehdi Farokhi***, Fatemeh Mottaghitalab, Mohammad Ali Shokrgozar, Keng-Liang Ou, Chuanbin Mao, Hossein Hosseinkhani. Importance of dual delivery systems for bone tissue engineering. *Journal of Controlled Release 225 (2016) 152–169.* **(IF: 8.7)**

26. Mojtaba Koosha, Mohammad Ali Shokrgozar, Hamid Mirzadeh, **Mehdi Farokhi.** Nanoclay-reinforced electrospun chitosan/PVA nanocomposite nanofibers for biomedical applications. *Royal Society of Chemistry 2015, 5, 10479.* **(IF: 3.2)**

27. Fatemeh Mottaghitalab, **Mehdi Farokhi**, Ramin omidvar, Mohammad Ali Shokrgozar, Majid Sadeghizadeh. The effect of fibronectin on structural and biological properties of single walled carbon nanotube. *Applied Surface Science 339 (2015) 85–93.* **(IF: 4.4)**

28. Morteza Mehrjoo, Jafar Javadpour, Mohamad Ali Shokrgozar, **Mehdi Farokhi**, Sayfoddin Javadian, and Shahin Bonakdar. Effect of magnesium substitution on structural and biological properties of synthetic hydroxyapatite powder. *Materials Express 5, 1, 2015.* **(IF: 1.5)**

29. **Mehdi Farokhi**, Fatemeh Mottaghitalab, Mohammad Ali Shokrgozar, Jafar Ai. Bio-hybrid Silk/Calcium Phosphate/PLGA Nanocomposite Scaffold for Controlled Delivery of Vascular Endothelial Growth Factor. *Material Science and Engineering Part c., 2014, 35 401–410.* **(IF: 4.9)**

30. Ali Zarrabi, Mohammad Ali Shokrgozar, Manouchehr Vossoughi, **Mehdi Farokhi**. In vitro biocompatibility evaluations of hyperbranched polyglycerol hybrid nanostructure as a candidate for nanomedicine applications. *Journal of Materials Science: Materials in Medicine, 2014, 25 , 499-506.* **(IF: 2.2)**

31. **Mehdi Farokhi**, Fatemeh Mottaghitalab, Ramin Omidvar, Mohammad Majidi, Amir Amanzadeh, Mohammad Ali Shokrgozar, Jafar Ai. Structural and functional changes of silk fibroin scaffold due to hydrolytic degradation. *Journal of Applied Polymer Science 2013,8(9),1-12.* **(IF: 1.9)**

32. **Mehdi Farokhi**, Fatemeh Mottaghitalab, Jafar Ai, Mohammad Ali Shokrgozar. Sustained release of platelet-derived growth factor and vascular endothelial growth factor from silk/calcium phosphate/PLGA based nanocomposite scaffold. *International Journal of Pharmaceutics, 454 (2013) 216– 225.* **(IF: 3.6)**

33. Fatemeh Mottaghitalab, **Mehdi Farokhi**, Arash Zamini, Fereshteh Mir ahmadi, Mohammad Ali Shokrgozar, Majid Sadeghizadeh. A biosynthetic nerve guide conduit based on Silk/SWNT/fibronectin nanocomposite for peripheral nerve regeneration. *PLOS ONE. 2013, 8 (9), 1-12.* **(IF: 3)**

34. S. Shojaei, **M. Farokhi**, R. Omidvar, F. Mottaghitalab, N. Haghighipour, M.A.Shokrgozar, J. Ai. Essential Functionality of Endometrial and Adipose Stem Cells in Normal and Mechanically Motivated Conditions. *Journal of Biomaterials and Tissue Engineering. 3, 1–7, 2013.* **(IF: 0.7)**

35. Jafar Ai, Mahmoud Azami, Somayeh Ebrahimi, **Mehdi Farokhi**, Sahar E. Fard. In vitro evaluation of biomimetic nanocomposite scaffold using endometrial stem cell derived osteoblast-like cells. *Tissue and Cell 2013;45(5):328-37.* **(IF: 1.4)**

36. **M. Farokhi**, S. Sharifi, Y. Shafieyan, Z. Bagher, F. Mottaghitalab, A. Hatampoor, M. Imani, M.A. Shokrgozar. Porous Crosslinked Poly(-Caprolactone Fumarate)/Nano-Hydroxyapatite Composites for Bone Tissue Engineering. *Journal of Biomedical Materials Research Part A, 1051-1060, 2012.* **(IF: 3.2)**

37. Neda Aboudzadeh, Mohammad Imani, Mohammad Ali Shokrgozar, Alireza Khavandi, Jafar Javadpour, Yousef Shafieyan, **Mehdi Farokhi**. Fabrication and characterization of poly(D,L-lactide-co-glycolide)/hydroxyapatite nanocomposite scaffolds for bone tissue regeneration. *Journal of Biomedical Materials Research Part A, 137-145, 2011*. **(IF: 3.2)**

38. F. Mottaghitalab, **M. Farokhi**, M. Ziabari, A. Divsalar, A. Eslamifar, V. Mottaghitalab, M.A. Shokrgozar. Enhancement of Neural Cell lines Proliferation Using Nano-structured Chitosan/Poly(vinyl alcohol) Scaffolds Conjugated With Nerve Growth Factor. *Carbohydrate Polymers, 86, 526–535, 2011.* **(IF: 5)**

39. F.Mottaghitalab, V. Mottaghitalab, **M. Farokhi**, M.A. Shokrgozar. Cytocompatibility Evaluation of porous Single-Walled Carbon Nanotube Reinforced Chitosan/Poly(Vinyl alcohol) nanocomposites for neural tissueengineering. *Journal of Biomedical Nanotechnology, 2010, 276-284(9), 2011.* **(IF: 5.1)**

40. M. Shokrgozar, **M. Farokhi**, F. Rjaei, M. Bagheri, Sh. Azari, S. Ghasemi, F. Mottaghitalab, K. Azadmanesh, J. Radfar. Biocompatibility evaluation of HDPE-UHMWPE Reinforced β-TCP Nanocomposites Using High Purified Human Osteoblast Cells. *Journal of Biomedical Materials Research A, 1074-1083, 2010.* **(IF: 3.2)**

41. M. Bagheri Hossein Abadi, I. Ghasemi, A. Khavandi, M.A. Shokrgozar, **M. Farokhi**, S.Sh. Homaeigohar, A. Eslamifar. Synthesis of Nano b-TCP and the Effects on the Mechanical and Biological Properties of b-TCP/HDPE/UHMWPE Nanocomposites. *POLYMER COMPOSITES, 1745-1753, 2010.* **(IF: 2)**

42. Farzad Rajaei, **Mehdi Farokhi**, Nazem Ghasemi. Ali Asghar Pahlevan Effects of extremely low-frequency magnetic field on mouse epididymis and deferens ducts. *Iranian Journal of Reproductive Medicine, 85-89, 2009.* **(IF: 0.19)**

43. Atefeh Shamosi, **Mehdi Farokhi**, Jafar Ai, Esmaeel Sharifi. Induction of spontaneous neo-angiogenesis and tube formation in human endometrial stem cells by bioglass. *Journal of Medical Hypotheses and Ideas* (2015) 9, 94–98.

44. Maryam Jazayeri, Mohammad Ali Shokrgozar, Nooshin Haghighipour, Reza Mahdian, **Mehdi Farrokhi**, Shahin Bonakdar, Fereshteh Mirahmadi, Tannaz Nourizadeh Abbariki. Evaluation of Mechanical and Chemical Stimulations on Osteocalcin and Runx2 Expression in Mesenchymal Stem Cells. *Mol Cell Biomech. 2015;12:197-213.*

45. aryam Jazayeri, Mohammad Ali Shokrgozar, Nooshin Haghighipour, Bahram Bolouri, Fereshteh Mirahmadi, **Mehdi Farokhi**. Effects of Electromagnetic Stimulation on Gene Expression of Mesenchymal Stem Cells and Repair of Bone Lesions. Cell Journal (Yakhteh) 19.1 (2017): 34. **(IF: 0.8)**