

CURRICULUM VITAE

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Education:

Institution	Degree	Year
Tehran University of Medical Sciences	PhD. in Tissue Engineering	2010-2015
Baqiatallah University of Medical Sciences	M.S in Anatomical Sciences	2005-2008
Shahid Beheshti University of Medical Sciences	B.S in Nursing	2000-2004

Professional Academic Experience:

2021	Associate Professor, Semnan University of Medical Sciences
2019- 2021	Assistant Professor, Semnan University of Medical Sciences
2016-2019	Assistant Professor, Shahrekord University of Medical Sciences
2009-2010	Researcher, Cellular & Molecular Research Center, Iran University of Medical Sciences
2007-2009	Director, Cellular & Molecular Laboratory, Shefa Neuroscience Research Center, Khatam Alanbia Hospital

Professional Clinical Experience:

2014-2016	Epilepsy Monitoring Unit (EMU), Pars Hospital
2007-2009	Shefa Neuroscience Center, Khatam Alanbia Hospital

Professional Industrial Experience:

2014-2017	Mede Bioeconomy Company, Tehran
2018-	Dana Well Company, Tehran
2020-	Noor and Mehr Biotechnology Company, Karaj

Research Projects:

- 2019** Analyzing of SOX2, Nanog, C-myc, KLF4 and HIF-1 gene expression in A172 cell line after NF- κ B pathway using CRISPR / Cas9 (SKUMS: 4032)
- 2018** Effect of Vaccinium angustifolium extract on expression of miR-146a and its target (iNOs) in rat brain ischemia (SKUMS: 3730)
- 2018** Preparation and evaluation of the slow-release drug delivery system of chitosan hydrogel loaded with docetaxol and hydroalcoholic extract of Euphorbia microsciadia to treat breast cancer in mice (SKUMS: 3677)
- 2018** Chitosan based delivery of crab extracellular vesicles into 3D simulated breast cancer tumor. (SKUMS: 3629)
- 2018** Design, construction and evaluation of biocompatibility and efficacy of a scaffold containing brain electrodes. (SKUMS: 3701)
- 2017-2018** Nanocomposite scaffold containing nano particles in bone tissue engineering (SKUMS: 1687)
- 2016** Development of a 3D model of SCC and analysis of correlation between inhibitory factors (CFH and C4BP) expression and stemness of SCC to plan a new cure. National Institute for Medical Research Development (TUMS)
- 2016** Analysis of CFH and C4BP expression in Oral SCC and Leukoplakia. (SKUMS: 2668)
- 2016-2018** Complement factor H and stemness of human glioblastoma. (SKUMS: 2784)
- 2012-2015** Transplantation of human adipose derived stem cells; secreting NGF and seeded in chitosan based hydrogel, in contusion model of spinal cord injury. Tehran University of Medical Sciences (PhD Thesis)
- 2010-2014** Transplantation of bone marrow stromal cells in experimental model of Alzheimer's disease, Iran University of medical sciences
- 2010-2012** The roles of Genistein and Daidzein extracted from soy bean, in multiple sclerosis (autoimmune encephalomyelitis), Tehran University of Medical Sciences
- 2008-2010** Cell therapy in spinal cord injury, Shefa Neuroscience Research Center Khatam Alanbia Hospital

Developmental Activities:

- Tissue Engineering Lab, Semums (2019-2020)
- Tissue Engineering Lab, Skums (2015-2016)
- Cellular & Molecular Lab, Shefa Neuroscience Research Center (2008-2009), Khatam Alanbia Hospital
- Histology Lab, Cellular & Molecular Research Center, Iran University of Medical Sciences (2009)

Publications:

Papers:

Tissue Engineering and regenerative medicine:

- 1- Abpeikar Z, Javdani M, Mirzaei SA, Alizadeh A, Moradi L, Soleimannejad M, Bonakdar S, Asadpour S. **Macroporous scaffold surface modified with biological macromolecules and piroxicam-loaded gelatin nanofibers toward meniscus cartilage repair.** *Int J Biol Macromol.* 2021 Apr 29;183:1327-1345. doi: 10.1016/j.ijbiomac.2021.04.151. Epub ahead of print. PMID: 33932422.
- 2- Bahraminasab M, Dostmohammadi N, Alizadeh A. **Low-cost synthesis of nano-hydroxyapatite from carp bone waste: Effect of calcination time and temperature.** *Int J Applied ceramic Tech.* 2020. 18(3). <https://doi.org/10.1111/ijac.13678>
- 3- Asgharzad S, Alizadeh A, Arab S. **Regenerative Medicine Approaches in COVID -19 Pneumonia.** *Curr Stem Cell Res Ther.* 2021 Jan 12. doi: 10.2174/1574888X16999210112205826. Epub ahead of print. PMID: 33438550
- 4- Alizadeh M, Rezakhani L, Khodaei M, Soleimannejad M, Alizadeh A. **Evaluating the effects of vacuum on the microstructure and biocompatibility of bovine decellularized pericardium.** *J Tissue Eng Regen Med.* 2021 Feb;15(2):116-128. doi: 10.1002/term.3150. Epub 2020 Nov 23. PMID: 33175476.
- 5- Alizadeh A, Moradi L, Katebi M, Ai J, Azami M, Moradveisi B, Ostad SN. **Delivery of injectable thermo-sensitive hydrogel releasing nerve growth factor for spinal cord regeneration in rat animal model.** *J Tissue Viability.* 2020 Nov;29(4):359-366. doi: 10.1016/j.jtv.2020.06.008. Epub 2020 Jul 26. PMID: 32839065.
- 6- Rezakhani L, Alizadeh M, Alizadeh A. **A three dimensional in vivo model of breast cancer using a thermosensitive chitosan-based hydrogel and 4 T1 cell line in Balb/c.** *J Biomed Mater Res A.* 2021 Jul;109(7):1275-1285. doi: 10.1002/jbm.a.37121. Epub 2020 Oct 24. PMID: 33058428.
- 7- Alizadeh A, Rezakhani L, Anjom Shoa M, Ghasemi S. **Frequency of CD44 positive cells in MKN45 cell line after treatment with docetaxel in two and three-dimensional cell cultures.** *Tissue Cell.* 2020 Apr;63:101324. doi: 10.1016/j.tice.2019.101324. Epub 2019 Dec 16. PMID: 32223952.
- 8- Nosrati H, Abpeikar Z, Mahmoudian ZG, Zafari M, Majidi J, Alizadeh A, Moradi L, Asadpour S. **Corneal epithelium tissue engineering: recent advances in regeneration and replacement of corneal surface.** *Regen Med.* 2020 Aug;15(8):2029-2044. doi: 10.2217/rme-2019-0055. Epub 2020 Nov 10. PMID: 33169642.
- 9- **A review of accelerated wound healing approaches: biomaterial-assisted tissue remodeling,** *Journal of Materials Science: Materials in Medicine*
- 10- **Chondrocytes Proliferation of Patients with Cartilage Lesions in Their Own Body for Use in Cartilage Tissue Engineering: Hypotheses on a New Approach for the Proliferation of Chondrocytes,** *Galen Medical Journal.*

- 11-Neural Differentiation of Wharton's Jelly Stem Cells in ThreeDimensional Chitosan Based Culture Environment**, Journal of Babol University of medical Sciences.
- 12-Bioactive materials: a comprehensive review on interactions with biological microenvironment based on the immune response**, Journal of Bionic Engineering
- 13-Effect of Oxidizing Atmosphere on the Surface of Titanium Dental Implant Material**, Journal of Bionic Engineering
- 14-Evaluation of vacuum washing in the removal of SDS from decellularized bovine pericardium: method and device description**, 2019, Heliyon
- 15-Evaluation of the neuroprotective effects of electromagnetic fields and coenzyme Q10 on hippocampal injury in mouse**, 2019, Journal of cellular physiology
- 16-M Khodaei, A Alizadeh. A spacer less method for porous titanium scaffold fabrication**. Journal of Applied Tissue Engineering, 2019, 5 (3), 13-17
- 17-S Ghasemi, A Alizadeh. Bone Regeneration based on Personal gene therapy**. Applied Biotechnology reports, 2019
- 18-Evaluation of the Effect of Rosmarinic Acid in Induction of Neural Differentiation in Wharton's Jelly Stem Cells**, 2019, Isfahan medical journal
- 19-Neural Differentiation of Wharton's Jelly Stem Cells in Three-Dimensional chitosan Based culture environment**, Journal of Babol university of medical sciences, 2019
- 20- A Alizadeh. An Injectable Chitosan- β Glycerolphosphate Hydrogel and Nerve Growth Factor-Overexpressing Stem Cells in Spinal Cord Injury**. Submitted Molecular Neurobiology, 2018
- 21- An introduction to tissue engineering and its most widely used scaffolds**. J Isfahan Med Sch 2018
- 22- A. Alizadeh. The Effect of Tissue-Engineered Wound Dressing Comprising Copper, on the Healing Process of Full-Thickness Wound in Mouse Model**. J Isfahan Med Sch 2018; 36(478): 472-7.
- 23-F Mohebbi, A Alizadeh. Skin substitutes; an updated review of products from year 1980 to 2017**. Applied Biotechnology Reports, Revised 2017. Scopus
- 24- A Karimpour Malekshah, F Talebpour Amiri, E Ghaffari , A Alizadeh. Growth and Chondrogenic Differentiation of Mesenchymal Stem Cells Derived from Human Adipose Tissue on Chitosan Scaffolds**. J Babol Univ Med Sci. 2016; 18 (9), 32-38. Scopus
- 25-Tarahani nia M, Alizadeh A, Takhshid A, Sadroddiny S. Decellularization of lung tissue and analysis of its differentiative potential on bone marrow mesenchymal stem cells**. Applied Tissue Engineering. 2015; 2(1): 1-11. PMC

- 26- **Investigation of systemic lupus erythematosus (SLE) with integrating transcriptomics and genome wide association information**, Gene, 2019; 706, 181-187
- 27- **Melatonin-pretreated adipose-derived mesenchymal stem cells efficeintly improved learning, memory, and cognition in an animal model of Alzheimer's disease**, 2019. Metabolic brain disease, 1-13
- 28- **Comparison of the preconditioning efficacy of melatonin in bone marrow mesenchymal stem cells and adipose derived stem cells**. Accepted, Cell journal, 2017(IF: 1.6)
- 29- A Hosseini, H Estiri, B Abdolhosseinzadeh, A Alizadeh. **Multiple Sclerosis gene therapy with recombinant viral vectors: Overexpression of IL-4, LIF, and IL-10 in Wharton' s jelly stem cells used in EAE mice model**. Cell Journal (Yakhteh). 2017; 19(3). IF: 1.5
- 30- A Alizadeh, S Ghasemi. **Importance of Analyzing the Genomic Instability in Stem Cell-Based Therapies**. Journal of Isfahan Medical School. 2016; 34 (383), 572-579. Scopus
- 31- Z Golipoor, SS Asl, F Mehraein, A Alizadeh, E Asadi, M Sarbishegi. **Spinal Cord Injury Repair by Intrathecal Infusion of Stromal Cell-Derived Factor-1/CXC Chemokine Receptor 4 in a Rat Model**. Gene, Cell and Tissue. 2016; 3 (2). ISC
- 32- Golipoor Z, Mehraein F, Zafari F, Alizadeh A. **Migration of bone marrow derived very small embryonic like stem cell toward the injured spinal cord**, Cell journal.2016; 17(4): 639–647. IF: 1.6
- 33- Eftekharzadeh M, Nobakht M, Alizadeh A. **The effect of intrathecal delivery of bone marrow stromal cells on hippocampal neurons in rat model of Alzheimer's disease**. Iranian J of Basic Med Sci. 2015; 5: 520-525. IF: 1.5
- 34- Alizadeh A, Soleimani M, Ai J. **Lentiviral mediated overexpresion of NGF in adipose derived stem cells**. Clon Transgen. 2015; 4:142. IF:1.5
- 35- Alizadeh A, Tarihi T, Dashtnavard H. **The Influence of lithium chloride on induction of bone marrow stromal cells into neuronal phenotype**. Daneshvar Medicine, 2009;3: 51-56. ISC
- 36- Katebi M, Alizadeh A, Mehdizadeh M. **Assay of TGF- β and b-FGF on the Potential of Peripheral Blood-Borne Stem Cells and Bone Marrow-Derived Stem Cells In Wound Healing in a Murine Model**. Iranian Anatomical Sciences, 2011; 35:129-136. ISC

Animal Models:

- 1- Z Golipoor; E Nasiri; A Alizadeh; R Gazor. **Effects of Melatonin-Pretreated Adipose-derived Mesenchymal Stem Cells (MSC) on the Therapeutic Potential of MSC-based Therapy in an Animal Model of Alzheimer's Disease**. Metabolic Brain Disease. Accepted, 2019
- 2- N Amini, N Vouseoghi, A Alizade. **Transplantation of Adipose Tissue-Derived Stem Cells into Brain Through Cerebrospinal Fluid in Rat Models: Protocol Development and Initial Outcome Data**. Current Stem Cell Research & Therapy. Accepted, 2018

- 3- **A comparative study of the neuroprotective effects of electromagnetic fields and coenzyme Q10 in a mouse model of hippocampal injury.** Cellular Physiology. Accepted, 2019
- 4- **Learning, memory, anxiety, antioxidant activity and amyloid precursor protein deposition in adult rats exposed to different extremely low-frequency electromagnetic fields.** Brain Impairment, 2019
- 5- H Amini-Khoei, E Haghani-Samani, M Beigi, A Soltani, GR Mobini and A alizadeh. **On the role of corticosterone in behavioral disorders, microbiota composition alteration and neuroimmune response in adult male mice subjected to maternal separation stress.** International immunopharmacology, 2019 66, 242-250
- 6- A Babahajian, A Sarveazad, F Golab, G Vahabzadeh, A Alizadeh. **Neuroprotective Effects of Trolox, Human Chorionic Gonadotropin, and Carnosic Acid on Hippocampal Neurodegeneration After Ischemia-reperfusion Injury.** Current stem cell research and therapy. Accepted 2018
- 7- M Zamani, M Soleimani, A Alizadeh. **Effect of adenosine receptor agonist and Ascorbic acid on ultrastructure of hippocampal CA1 neurons after ischemia-reperfusion injury.** JIMS, 2017;35 (439): 862-9. Scopus
- 8- A Hosseini, H Estiri, B Abdolhosseinzadeh, A Alizadeh. **Multiple Sclerosis gene therapy with recombinant viral vectors: Overexpression of IL-4, LIF, and IL-10 in Wharton's jelly stem cells used in EAE mice model.** Cell Journal (Yakhteh). 2017; 19(3). IF: 1.5
- 9- SR Jahromi, A Ghaemi, A Alizadeh, F Sabetghadam, HM Tabriz, M Togha. **Effects of intermittent fasting on experimental autoimmune encephalomyelitis in C57BL/6 mice.** Iranian Journal of Allergy, Asthma and Immunology.2016; 15 (3), 212-219. IF:1.5
- 10- Razeghi Jahromi S, Arrefhosseini SR, Ghaemi A, Alizadeh A. **Alleviation of Experimental Allergic Encephalomyelitis in C57BL/6 Mice by Soy Daidzein.** Iranian J of Allergy, Asthma and Immunology,2014; 4:256-264. IF: 1.5
- 11- Razeghi Jahromi S, Arrefhosseini SR, Ghaemi A, Alizadeh A. **Effect of oral genistein administration in early and late phases of allergic encephalomyelitis.** Iranian J of Basic Med Sci. 2014; 7: 509–515. IF: 1.5
- 12- Mozaffarian F, Ababzadeh SH, Alizadeh A. **A Decrease of reelin expression in neonatal ventral hippocampal lesion model.** Journal of Applied Biotechnology Reports, 2014; 1: 121-124. Scopus
- 13- Rigi S, Sakhaei A, Niknam Asl A, Alizadeh A. **Neuroprotective effect of Coenzyme Q10 in hippocampal injury in Balb/c mouse.** Journal of Applied Biotechnology Reports. 2014;2:55-58. Scopus

- 14- Soleimani M, Jameie SB, Razeghi Jahromi S, Alizadeh A. **Method of Housing and Transfer and Experimental Autoimmune Encephalomyelitis: An Experimental Study on C57BL/6**. Thritha J. 2014; 4:1-5
- 15- Soleimani M, Katebi M, Alizadeh A. **The Role of the A2A Receptor in Cell Apoptosis Caused by MDMA**, Cell J (Yakhteh). 2012;3:3231-236. **IF:1.6**
- 16- Mozaffarian F, Joghataei M.T, Alizadeh A. **Post pubertal Behavioral Changes in Rats with Neonatal Lesions of the Ventral Hippocampus (Schizophrenia)**. SMJ, 2:192-194 (2011). **IF:0.6**
- 17- Mohammadzadeh F, Mehdizadeh M, Alizadeh A. **The Role of Agonist of A2A Adenosine Receptors on Neurotoxicity of MDMA (Ecstasy Pill) on Rat's Hippocampus**. Iranian Anatomical Sciences, 2011; 35:129-136. **ISC**
- 18- Razeghi Jahromi S, Togha M. Ghaemi A. Alizadeh, A. **Oral genistein, extracted from soy bean, exerts protective properties in animal model of multiple sclerosis (autoimmune encephalomyelitis)**. Neurology J, 2010; 257 (1).

Cancer, Cancer Tissue Engineering:

- 1- Karimi S, Alizadeh A, Tabibi N, Ghasemi S. **Increase the Efficiency of MKN45 Cell Line to CD44 Editing by CRISPR/Cas9: A Hypothesis about P53 Suppression in Gene Editing**. Applied Biotechnology Reports. 10.30491/JABR.2020.223247.1197
- 2- **Inflammatory pathway interactions and cancer multidrug resistance regulation**, Life sciences
- 3- Z Saltanat pour, A Alizadeh. **Enrichment of cancer stem-like cells by the induction of epithelial-mesenchymal transition using lentiviral vector carrying E-cadherin shRNA in HT29 cell line**, Journal of cellular physiology, 2019
- 4- R Sahebi, M Aghaei, S Halvaei, A Alizadeh. **The Role of Microgravity in Cancer: A Dual-edge Sword**. Multidisciplinary Cancer Investigation. 2017; 1 (3). **ISC**
- 5- Ghaemi A, Soleimanjahi H, Razeghi S, Gorji A, Tabaraei A, Moradi A, Alizadeh A. **Genistein Induces a Protective Immunomodulatory Effect in a Mouse Model of Cervical Cancer**. Iranian J of Immunology, 2012; 2:119-127. **IF: 1.5**
- 6- M Beigi, E Haghani, A Alizadeh, ZN Samani. **The Pharmacological properties of several species of terminalia in the world**. International Journal of Pharmaceutical sciences and research. 2018;9(10), 4079-4088

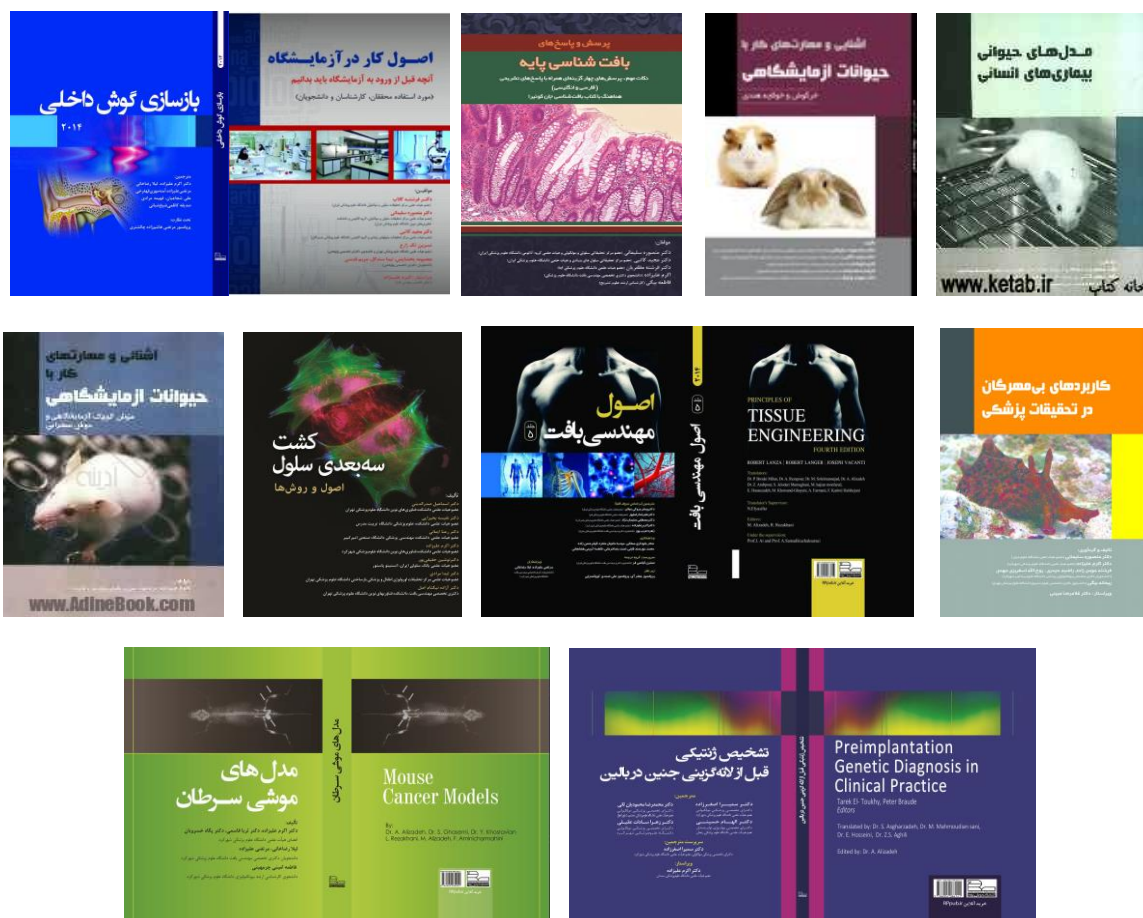
Other Fields:

- 1- Ramzani Ghara A, Ezzati Ghadi F, Hosseini SH et al. **Antioxidant and Antidiabetic Effect of Capparis decidua Edgew (Forssk.) Extract on Liver and Pancreas of Streptozotocin-induced Diabetic Rats**. Applied Biotechnology Reports. 10.30491/JABR.2020.222547.1194

- 2- A Shojaeian, A Alizadeh. **Biotechnology applications, bioethics and analysis of different concepts about it**, SKUMS, Accepted, 2017. ISC
- 3- **Ritalin abuse and its complications**, Isfahan medical school journal 2017; 35 (420). Scopus

Books:

First edition:



Second edition:

7. **Current development and future prospects of tissue engineered skin substitute.** 3rd Iranian congress on progress in tissue engineering and regenerative medicine. Tehran 2016
8. **A tissue engineered model of breast cancer.** 11th International congress of breast cancer. Tehran 2016
9. **Can tissue engineered models replace animal models?** 1st National congress in experimental research on animal models. Shiraz 2016
10. **Transplantation of adipose derived stem cells; secreting NGF and seeded in chitosan based hydrogel, in contusion model of spinal cord injury.** The Second Iranian annual congress on progress in Tissue Engineering. Tehran 2015
11. **Alleviation of experimental allergic encephalomyelitis in C57BL/6 mice by soy daidzein.** Joint Meeting of the 20th Biennial Meeting of the International Society for Developmental Neuroscience and the 5th Annual Neuro Dev Net Brain Development Conference-ISDN. Montreal, Canada 2014
12. **The effect of bone marrow mesenchymal stem cells in neural regeneration,** The First Iranian Annual congress on progress in Tissue Engineering. Tehran 2013
13. **Periodic fasting mediates suppression of T-cell proliferation in experimental autoimmune encephalomyelitis.** 9th international multiple sclerosis congress. Tehran 2012
14. **Effects of intermittent fasting on experimental autoimmune encephalomyelitis.** 8th International Congress on Multiple Sclerosis. Mashhad 2011
15. **Oral genistein, extracted from soy bean, exerts protective properties in animal model of multiple sclerosis (autoimmune encephalomyelitis).** 20th meeting of the European Neurological Society. Berlin, Germany 2010

Professional Societies:

- **Iranian Tissue Engineering and Regenerative Medicine Society** (From 2014).
- **TERMIS** (2016)

Service:

- Member, **Animal models of Human Neural Diseases Workshop**, Shefa Neuroscience Center (2013)
- Admissions Committee, **Laboratory Animal Workshop**, Iran University of Medical Sciences (2010)
- Admissions Committee, **Stem cell Culture Workshop**, Iran University of Medical Sciences (2011)

Skills:

- **Cell culture 2D & 3D**
- **Chitosan Based Hydrogels**
- **Decellularization Methods and Decellularized scaffolds**
- **Animal Modeling and Surgery**
- **Gene Delivery**
- **ICC and IHC**
- **PCR & Gel Electrophoresis**

Interests:

- **Reverse engineering of Biomedical devices and products**
- **Product management**
- **Tissue Decellularization and Recellularization**

Honors and Awards:

- Top graduate of Tehran University of Medical Sciences, School of Advanced Technologies in Medicine (2015)
- First Rank among TE PhD Students, Tehran University of Medical Sciences (2015)
- Second Rank in MS Exam, Ministry of Health (2006)
- First Rank in First Hekmat Motahar Festival, Ministry of Health (2004)

