

رزومه

نامزد عضویت در هیات مدیره انجمن علمی مهندسی و ترمیم بافت ایران
(لطفا بخش‌های قرمز رنگ تکمیل و سپس فایل نهایی در **ساختار PDF** ارسال گردد)

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Tissue engineering

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EDUCATION

2007/2011 Faculty of Science, School of Biology, University of Tehran, Tehran, Iran
B.Sc: Biology

POST GRADUATE TRAINING

2011/2014 Department of Life Sciences Engineering, Faculty of New Sciences and
Technologies, University of Tehran
M.Sc: Biomedical engineering-Tissue engineering
Report to Prof. Ghassem Amoabediny

2015/2019 Department of tissue engineering and applied cell science, Tehran University
of Medical Science, Tehran
Ph.D: Tissue engineering
Report to Prof. Jafar Ai

POST DOCTORIAL WORK

PROFESSIONAL APPOINTMENTS

2019 - Now Department of Tissue Engineering and Applied Cell Science,
Mazandaran University of Medical Science, Sari, Iran
Assistant Professor, Tissue engineering

PRIVATE PRACTICE

MEDICAL AND SCIENTIFIC SOCIETIES

Now انجمن مهندسی و ترمیم بافت ایران

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Now

انجمن بیومتریال و مهندسی بافت ایران

Now

Universal Scientific Education and Research Network (USERN)

COMMITTEE APPOINTMENTS

POST DOCTORAL CONFERENCES

PUBLICATIONS

Journal Articles

- Bahrami N, Bordbar S, Hasanzadeh E, Goodarzi A, Ai A, Mohamadnia A. The effect of decellularized cartilage matrix scaffolds combined with endometrial stem cell-derived osteocytes on osteochondral tissue engineering in rats. *In Vitro Cell Dev Biol Anim.* 2022 Jun 21.
- Kia V, Eshaghi-Gorji R, Mansour RN, Hassannia H, Hasanzadeh E, Gheibi M, Mellati A, Enderami SE. Mesenchymal Stromal Cells and their EVs as potential leads for SARS-CoV2 treatment. *Current Stem Cell Research & Therapy.* 2022 Apr 26.
- Saremi J, Mahmoodi N, Rasouli M, Ranjbar FE, Mazaheri EL, Akbari M, Hasanzadeh E, Azami M. Advanced approaches to regenerate spinal cord injury: The development of cell and tissue engineering therapy and combinational treatments. *Biomedicine & Pharmacotherapy.* 2022 Feb 1;146:112529.
- Mahmoodi N, Ai J, Hassannejad Z, Ebrahimi-Barough S, Hasanzadeh E, Nekounam H, Vaccaro AR, Rahimi-Movaghar V. Improving motor neuron-like cell differentiation of hEnSCs by the combination of epothilone B loaded PCL microspheres in optimized 3D collagen hydrogel. *Scientific Reports.* 2021 Nov 5;11(1):1-21.
- Mellati A, Hasanzadeh E, Gholipourmalekabadi M, Enderami SE. Injectable nanocomposite hydrogels as an emerging platform for biomedical applications: A review. *Materials Science and Engineering: C.* 2021 Oct 14:112489.
- Abpeikar Z, Moradi L, Javdani M, Kargozar S, Soleimannejad M, Hasanzadeh E, Mirzaei SA, Asadpour S. Characterization of Macroporous Polycaprolactone/Silk Fibroin/Gelatin/Ascorbic Acid Composite Scaffolds and In Vivo Results in a Rabbit Model for Meniscus Cartilage Repair. *Cartilage.* 2021 Aug 2:19476035211035418.

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- Nekounam H, Kandi MR, Shaterabadi D, Samadian H, Mahmoodi N, Hasanzadeh E, Faridi-Majidi R. Silica nanoparticles-incorporated carbon nanofibers as bioactive biomaterial for bone tissue engineering. *Diamond and Related Materials*. 2021 May 1;115:108320.
- Nekounam H, Dinarvand R, Khademi R, Asghari F, Mahmoodi N, Arzani H, Hasanzadeh E, Hadi A, Karimi R, Kamali M, Khosravani M. Preparation of cationized albumin nanoparticles loaded indirubin by high pressure homogenizer. *Journal of Computational Applied Mechanics*. 2021;52(3):498-506.
- Mahmoodi N, Ai J, Hassannejad Z, Ebrahimi-Barough S, Hasanzadeh E, Hadi A, Nekounam H, Rahimi-Movaghar V. Are reported methods for synthesizing nanoparticles and microparticles by magnetic stirrer reproducible?. *Journal of Computational Applied Mechanics*. 2020 Dec 1;51(2):498-500.
- Hasanzadeh E, Ebrahimi-Barough S, Mahmoodi N, Mellati A, Nekounam H, Basiri A, Asadpour S, Ghasemi D, Ai J. Defining the role of 17 β -estradiol in human endometrial stem cells differentiation into neuron-like cells. *Cell Biology International*. 2021 Jan;45(1):140-53.
- Hasanzadeh E, Mahmoodi N, Basiri A, Esmaeili Ranjbar F, Hassannejad Z, Ebrahimi-Barough S, Azami M, Ai J, Rahimi-Movaghar V. Proanthocyanidin as a crosslinking agent for fibrin, collagen hydrogels and their composites with decellularized Wharton's-jelly-extract for tissue engineering applications. *Journal of Bioactive and Compatible Polymers*. 2020 Nov;35(6):554-71.
- Mahmoodi N, Ai J, Ebrahimi-Barough S, Hassannejad Z, Hasanzadeh E, Basiri A, Vaccaro A, Rahimi-Movaghar V. "Microtubule stabilizer epothilone B as a motor neuron differentiation agent for human endometrial stem cells. *Cell Biology International*. 2020 May 44(5): 1168-1183.
- Kargar Jahromi H, Farzin A, Hasanzadeh E, Ebrahimi Barough S, Mahmoodi N, Najafabadi M, Sagharjoghi Farahani M, Mansoori K, Shirian S, Ai J. Enhanced sciatic nerve regeneration by poly-L-lactic acid/multi-wall carbon nanotube neural guidance conduit containing Schwann cells and curcumin encapsulated chitosan nanoparticles in rat. *Materials Science and Engineering: C*. 2020 Apr 109: 110564.
- Farzin A, Hassan S, Ebrahimi-Barough S, Ai A, Hasanzadeh E, Goodarzi A, Ai J. A facile two step heat treatment strategy for development of bioceramic scaffolds for hard tissue engineering applications. *Materials Science and Engineering: C*. 2019 Dec 1; 105:110009.

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- Hasanzadeh E, Ebrahimi-Barough S, Mirzaei E, Azami M, Tavangar SM, Mahmoodi N, Basiri A, Ai J. Preparation of fibrin gel scaffolds containing MWCNT/PU nanofibers for neural tissue engineering. Journal of Biomedical Materials Research Part A. 2019 Apr; 107 (4):802-14. (On the cover of journal, APRIL 2019 VOLUME 107A ISSUE 4)
- Basiri A, Farokhi M, Azami M, Ebrahimi-Barough S, Mohamadnia A, Rashtbar M, Hasanzadeh E, Mahmoodi N, Eslaminejad MB, Ai J. A silk fibroin/decellularized extract of Wharton's jelly hydrogel intended for cartilage tissue engineering. Progress in biomaterials. 2019 Mar 1; 8(1):31-42.
- Hasanzadeh E, Amoabediny G, Haghhighipour N, Gholami N, Mohammadnejad J, Shojaei S, Salehi-Nik N. The stability evaluation of mesenchymal stem cells differentiation toward endothelial cells by chemical and mechanical stimulation. In Vitro Cellular & Developmental Biology-Animal. 2017 Oct 1; 53(9):818-26.
- Gholami N, Amoabediny GH2, Haghhighipour N, Hasanzadeh E, Mohammadnejad J, Shojaei S. Effect of purification, chemical factor and shear stress on endothelial differentiation of human adipose-derived mesenchymal stem cells using a perfusion bioreactor. International Journal of stem cell research and transplantation. 2016 Sep 12:04(7), 220-227

Conference Papers

- Nekounam H, Mahmoodi N, Hasanzadeh E, Faridi-Majidi R. Electro-conductive carbon nanofibers containing ferrous sulfate for bone tissue engineering. 8th International E-congress on Nanosciences and Nanotechnology. 2021. Tehran. Iran.
- Mahmoodi N, Rahimi-movaghar V, Hasanzadeh E, Nekounam H, Asghari F, Esmaeili Ranjbar F. The effect of valproate sodium on synaptophysin expression in motor neuron-like cell differentiation of human endometrial stem cells. 2020. Semnan. Iran.
- Hasanzadeh E, Ai J, Ebrahimi-Barough S, Mahmoodi N, Nekounam H, Asadpour S. The Influence of chemical stimuli of estrogen on neurofilament (NF-H) gene expression in endometrial stem cells. 16th Royan International Congress on Stem Cell Biology & Technology. 2020. Tehran. Iran.
- Nekounam H, Zarei M, Hasanzadeh E, Mahmoodi N, Faridi-Majidi R. Fabrication and Characterization of ZnO /CNF Nanohybrid as a

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نامزد عضویت در هیات مدیره انجمن علمی مهندسی و ترمیم بافت ایران (لطفا بخش‌های قرمز رنگ تکمیل و سپس فایل نهایی در **ساختار PDF** ارسال گردد)

novel scaffold for bone tissue engineering. Conference on nanofibers. 2019. Tehran. Iran

□ Nekounam H, Gholizadeh Sh, Allahyaria Z, Hasanzadeh E, Mahmoodi N, Faridi-Majidi R. Fabrication and characterization of conductive carbonized nanofibers loaded with gold nanoparticles for nerve tissue engineering. Conference on nanofibers. 2019. Tehran. Iran

□ Esmaeili Ranjbar F, Asghari F, Hasanzadeh E, Mahmoodi N, Esmaeili Ranjbar A. Preparation and characterization of electrospun poly (ϵ -caprolactone)-Zein based nanofibrous scaffolds. Conference on nanofibers. 2019. Tehran. Iran

□ Asghari F, Esmaeili Ranjbar F, Mahmoodi N, Hasanzadeh E, Faridi-Majidi R. The odontogenic differentiation of human dental pulp stem cells on hydroxyapatite-coated biodegradable nanofibrous scaffolds. Conference on nanofibers. 2019. Tehran. Iran

□ Hasanzadeh E, Ebrahimi-Barough S, Mahmoodi N, Nekounam H, Asghari F, Ai J. The effect of fibrin and fibrin/ polyurethane/ multiwall carbon nanotubes hydrogels, as scaffolds for neural tissue engineering, on human endometrial stem cells viability. 3rd International Congress on Biomedicine. 2019. Tehran. Iran.

□ Hasanzadeh E, Ebrahimi-Barough S, Mahmoodi N, Esmaeili Ranjbar F, Nekounam H, Ai J. The effect of estrogen on β -tubulin (Tuj-1) gene expression in neural-like cells differentiated from endometrial stem cells. 3rd International Congress on Biomedicine. 2019. Tehran. Iran.

□ Hasanzadeh E, Ebrahimi-Barough S, Mirzaei E, Mahmoodi N, Basiri A, Nazeri N, Ai J. Tissue engineered fibrin/polyurethane hydrogel scaffold suitable for neural regeneration. 1st International Iranian Tissue Engineering and Regenerative Medicine Congress. 2018. Tehran. Iran.

□ Mahmoodi N, Ai J, Ebrahimi-Barough S, Hassannejad Z, Hasanzadeh E, Basiri A, Rahimi-movaghar V. The Effect of Epothilone B on HB9 Expression in Motor Neuron-like Cell Differentiation of Human Endometrial Stem Cells. 1st International Iranian Tissue Engineering and Regenerative Medicine Congress. 2018. Tehran. Iran.

□ Basiri A, Farokhi M, Azami M, Ebrahimi-Barough V, Rashtbar M, Hasanzadeh E, Mahmoodi N, Baghaban Eslaminejad M, Ai J. Decellularized Wharton's jelly as an appropriate material for tissue engineering application. 1st International Iranian Tissue Engineering and Regenerative Medicine Congress. 2018. Tehran. Iran.

□ Mahmoodi N, Ai J, Ebrahimi-barough S, Hassannejad Z, Hasanzadeh E, Vafa rahimi-movaghar. Axon elongation of differentiated

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motor neuron-like cells from human endometrial stem cells by microtubule stabilizer drug. 2nd International Congress on Biomedicine. 2018. Tehran. Iran.

□ Hasanzadeh E, Ebrahimi-Barough S, Basiri A, Nazeri N, Ai J. Multiwall carbon nanotubes/polyurethane composite fibers suitable for neural tissue engineering. International conference on nanofibers. 2017. Tehran. Iran.

□ Hasanzadeh E, Amoabediny Gh, Haghhighipour N, Gholami N, Amirzadeh N, Mohammadnejad J. Investigation of Von Willebrand Factor (Vwf) gene expression in endothelial cells differentiated from adipose-derived mesenchymal cells and its stability. 11th Royan International Congress on Stem Cell Biology & Technology. 2015. Tehran. Iran.

□ Hasanzadeh E, Amoabediny GH, Haghhighipour N, Amirzadeh N, Mohammadnejad J, Gholami N, Janzamin E. Effects of growth factor and shear stress on the stability of differentiation of mesenchymal stem cells, based on the expression of VE-cadherin gene. 10th Royan International Congress on Stem Cell Biology & Technology. 2014. Tehran. Iran.

□ Gholami N, Amoabediny GH, Haghhighipour N, Amirzadeh N, Mohammadnejad J, Hasanzadeh E, Janzamin E. Evaluation of the VE-cadherin gene expression in adipose derived stem cells and purified mesenchymal stem cells under chemical and mechanical stimuli. 10th Royan International Congress on Stem Cell Biology & Technology. 2014. Tehran. Iran.

□ Hasanzadeh E, Amoabediny GH, Haghhighipour N, Amirzadeh N, Mohammadnejad J, Gholami N. Investigation of FLK-1 gene expression in differentiated mesenchymal stem cells, exposed to chemical, mechanical and chemical-mechanical factors, in order to study the differentiation and its stability. International Journal of Pediatrics. 2014 May 1; 2(2.3):90-. Mashhad. Iran.

□ Gholami N, Amoabediny GH, Haghhighipour N, Amirzadeh N, Mohammadnejad J, Hasanzadeh E. Effect of purification of human adipose-derived mesenchymal stem cells on the expression of vWF cell factor under chemical and mechanical conditions. International Journal of Pediatrics. 2014 May 1; 2(2.3):92-. Mashhad. Iran.

RESEARCH PROJECTS

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نامزد عضویت در هیات مدیره انجمن علمی مهندسی و ترمیم بافت ایران (لطفا بخش‌های قرمز رنگ تکمیل و سپس فایل نهایی در **ساختار PDF** ارسال گردد)

- Investigation of the effect of cell-laden microfluidic microgels and mesenchymal stem cell extracted exosomes on cardiac function after myocardial infarction (MAZUMS)
- New and advanced technologies in COVID-19: prevention, detection and treatments (MAZUMS)
- Biofabrication of macrocapsules containing adipose-derived mesenchymal stem cells and their In Vitro evaluation for release of therapeutic secretomes in Alzheimer's disease treatment
- Synthesis of polyurethane/poly-L-lactic acid conduit seeded with endometrial stem cells differentiated into neural cells for regeneration of static nerve injury (MAZUMS)
- Repair of sciatic nerve injury by Schwann cells cultured on PLGA /nanotube / coupled with nano-lycopene in animal models of rat (TUMS, JUMS)
- Injectable in situ forming collagen-hyaluronic acid-chondroitin sulfate nanocomposite based hydrogels for cartilage tissue engineering (MAZUMS)
- Repair of spinal for particles nano loaded-curcumin and uterus endometrial cells containing scaffold hydrogel of fabrication rat in the injured spinal cord (TUMS, JUMS)
- Advanced approaches to regenerate spinal cord injury (MAZUMS)
- Study of the stabilizing effect of proanthocyanidin on the structure of fibrin, collagen and their mixture with decellularized Wharton's jelly hydrogel scaffolds for tissue engineering (MAZUMS)
- Fabrication of fibrin/polyurethane hydrogel scaffold seeded with endometrial stem cells differentiated into neural cells for repair and regeneration of spinal cord injury. Tehran University of Medical Science (TUMS).
- Repair of peripheral nerve injury by Schwann cells and poly-L-lactic acid conduit/nanotube/ nano-curcumin in animal models of a rat. Tehran University of Medical Science (TUMS).
- Fabrication of hydrogel scaffolds containing nanoparticles loaded with crocin and imipramine to repair spinal cord injury in rats (TUMS)
- Fabrication of fibrin scaffolds containing breast tumor cells to evaluate the antiproliferative effects of paclitaxel and Astragalus hamosus extract (TUMS)
- Repair of spinal cord injury using fibrin hydrogel and chitosan nanoparticles containing insulin (TUMS)
- Evaluation of the efficacy of collagen hydrogel containing epothilone B-loaded microparticles on the differentiation of human

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endometrial stem cells into motor neuron-like cells. Tehran University of Medical Science (TUMS).

□ Cartilage tissue engineering using endometrial stem cells and silk fibroin/Wharton's jelly composite scaffold. Tehran University of Medical Science (TUMS).

□ Evaluation of continuous differentiation of mesenchymal stem cells into endothelial cells under the chemical stimulation and flow stress in a perfusion bioreactor. University of Tehran (UT), Pasteur Institute of Iran, National Cell Bank of Iran (NCBI).

□ Purification of mesenchymal stem cells derived adipose tissue in order to improve differentiation into endothelial cells. University of Tehran (UT), Pasteur Institute of Iran, National Cell Bank of Iran (NCBI).

PERSONAL DATA

DATE OF BIRTH:

- 1367/06/17

PLACE OF BIRTH

- Ghaemshahr, Mazandaran, Iran

LANGUAGES

- Persian
- English