

CURRICULUM VITAE

Aliakbar Yousefi-Ahmadipour, PhD

Cell Therapy & Regenerative Medicine Specialist

Expert in Stem Cell Biology, Cancer Research, and Tissue Engineering

CONTACT INFORMATION

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Faculty of Paramedicine, Department of Laboratory Sciences, Rafsanjan University of Medical Sciences, Rafsanjan, Iran

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EDUCATION

Ph.D. in Cell Therapy (2016-2018)

Tehran University of Medical Sciences, Tehran, Iran

Thesis: "Therapeutic effects of combination of platelet lysate and sulfasalazine administration in TNBS-induced colitis in rat"

First rank in nationwide PhD entrance exam in Applied Cell Sciences

Achieved highest GPA among all PhD classmates

MSc in Medical Toxicology (2012-2016)

Tehran University of Medical Sciences, Tehran, Iran

- Thesis: "Laccase-catalyzed treatment of ketoconazole, identification of biotransformed metabolites, determination of kinetic parameters, and evaluation of micro-toxicity"
- First rank in nationwide MSc entrance exam in Medical Toxicology
- Achieved highest GPA among all MSc classmates

BSc in Laboratory Sciences (2008-2012)

Rafsanjan University of Medical Sciences, Rafsanjan, Iran

RESEARCH EXPERIENCE

Principal Investigator (2018-Present)

Department of Laboratory Sciences, Faculty of Paramedical Sciences, Rafsanjan University of Medical Sciences

- Established and directed **stem cell culture** and **molecular biology** laboratories

- Secured funding for +15 research projects focused on stem cell-cancer interactions and regenerative medicine
- Mentored 12 MSc students through thesis completion
- Published 20+ peer-reviewed articles as corresponding author
- Key research areas:
 - Stem cell-cancer microenvironment interactions
 - Mesenchymal stem cell differentiation and therapeutic applications
 - Tissue engineering for wound healing and bone regeneration
 - Cancer stem cell signaling pathways

Research Scientist (2016-2018)

Molecular Medicine Research Center, Tehran University of Medical Sciences

- Conducted research on stem cell therapy for inflammatory bowel disease
- Developed protocols for stem cell isolation, characterization, and differentiation
- Collaborated on multi-disciplinary research projects with immunology and oncology departments

Research Assistant (2012-2016)

Department of Pharmacology and Toxicology, Tehran University of Medical Sciences

- Investigated toxicological effects of nanoparticles
- Performed enzyme extraction and characterization studies
- Contributed to development of novel bioremediation approaches using laccase enzymes

PUBLICATIONS

Peer-Reviewed Articles

- Fatemeh Sadeghian, Faezeh Kazemi, Ali Pirsadeghi, Fatemeh Asadi, Mahnaz Tashakori & **Aliakbar Yousefi-Ahmadipour***. Adipose MSCs response to breast cancer cell-derived factors in conditioned media and extracts. *Cell and Tissue Banking*. 2024. Volume 26, article number 6, (2025)
- Kazemi F, Sadeghian F, Pirsadeghi A, Asadi F, Javdani H, **Yousefi-Ahmadipour A***. Adipose mesenchymal stem cell conditioned medium and extract: A promising therapeutic option for regenerative breast cancer therapy. *SAGE Open Medicine*. 2024 Dec;12:20503121241306606.
- Pirsadeghi A, Namakkobi N, Behzadi MS, Pourzinolabedin H, Askari F, Shahabinejad E, Ghorbani S, Asadi F, Hosseini-Chegeni A, **Yousefi-Ahmadipour A***, Kamrani MH. Therapeutic approaches of cell therapy based on stem cells and terminally differentiated cells: Potential and effectiveness. *Cells & Development*. 2024 Feb 3:203904.
- Ahmadi Hekmatikar AH, Agha-Alinejad H, **Yousefi-Ahmadipour A**, Molanouri Shamsi M. Effect of aerobic exercise combined with anti-PD-L1 antibody injection on body weight and

heart weight of breast cancer-bearing mice: Management in cancer cachexia. *Journal of Exercise & Organ Cross Talk*. 2024 Dec 30;4(4):298-303.

- Ahmadi Hekmatikar AH, Agha-Alinejad H, **Yousefi-Ahmadipour A**, Molanouri Shamsi M. Simultaneous effect of physical activity and anti-PDL1 injection on tumor weight and life span of mice with breast cancer. *Journal of Exercise & Organ Cross Talk*. 2024 Jun 1;4(2):126-32.
- **Yousefi-Ahmadipour A**, Pirsadeghi A, Allahverdi A, Asadi F. Pancreatic cancer and stem cell. In *Cancer Stem Cells and Signaling Pathways* 2024 Jan 1 (pp. 363-379). Academic Press.
- Ahmadi AM, Ayoobi F, Jamali Z, **Yousefi-Ahmadipour A**, Marotta F. Stem cells signaling pathways and surface receptors: implications for multiple sclerosis treatment. In *Stem Cells and Signaling Pathways* 2024 Jan 1 (pp. 271-283). Academic Press.
- Tashakori M, Asadi F, Khorram FS, Manshoori A, Hosseini-Chegeni A, Moghadam FM, Kamalabadi MA, **Yousefi-Ahmadipour A***. Effects of MRI on stemness properties of Wharton's jelly-derived mesenchymal stem cells. *Cell and Tissue Banking*. 2023 Sep;24(3):523-33.
- Tashakori M, Jamalizadeh A, Nejad-Ghaderi M, Hadavi M, **Yousefi-Ahmadipour A**, Moghadam FM, Rahnama M, Haftcheshmeh SM, Mashayekhi K, Momtazi-Borojeni AA. Association between the copper/selenium ratio and the immune response to SARS-CoV-2 infection. *Biomarkers in Medicine*. 2023 Jun;17(6):307-17.
- Behfar S, Nazari A, **Yousefi-Ahmadipour A**, Pourmasoumi S, Sayadi A, Arababadi MK. Breastfeeding Increases the Expression of TLR4, TNF- α , CCL2, and CCL3 in the Prepuce Tissue of Neonates. *Archives of Medical Research*. 2022 Nov 1;53(7):688-93.
- Arababadi MK, Rahmani MR, Asadi F, Shabanizadeh A, **Yousefi-Ahmadipour A***. Involvement of T-bet and GATA3 transcription factors in Mesenchymal stem cells and royal jelly combination treatment in brain stroke. *Journal of Stroke and Cerebrovascular Diseases*. 2022 Sep 1;31(9):106678.
- Asadi F, Ayoobi F, Arababadi MK, Arababadi ZK, **Yousefi-Ahmadipour A***. Aqueous extract of Achillea millefolium significantly affects mesenchymal stem cell renewal and differentiation in a dose dependent manner. *Journal of Stem Cells & Regenerative Medicine*. 2022;18(2):29.
- Tashakori M, Jamalizadeh A, Nejad-Ghaderi M, Hadavi M, **Yousefi-Ahmadipour A***, Moghadam FM, Soresrafil A, Mashayekhi K. Seroprevalence of Anti-SARS-CoV-2 IgG Antibody in Healthcare Workers: A Report From Rafsanjan City. *Journal of Inflammatory Diseases*. 2022 Jan 1;25(4).
- **Yousefi-Ahmadipour A**, Sartipi M, Khodadadi H, Shariati-Kohbanani M, Arababadi MK. Toll-like receptor 4 and the inflammation during aging. *JOURNAL OF GERONTOLOGY AND GERIATRICS*. 2022 Mar 1:1-8.
 - Allahverdi A, Arefian E, Soleimani M, Ai J, Nahanmoghaddam N, **Yousefi-Ahmadipour A**, Asadi F, Pirsadeghi A, Nazeri N, Vahidi R, Abazari MF, Afgar A, Mirzaei-

Parsa MJ. Current status of stem cell therapy and nanofibrous scaffolds in cardiovascular tissue engineering. *Regenerative Engineering and Translational Medicine*. 2021 Oct 26:1-21.

- Saremi J, Khanmohammadi M, Azami M, Ai J, **Yousefi-Ahmadipour A**, Ebrahimi-Barough S. Tissue-engineered nerve graft using silk-fibroin/polycaprolactone fibrous mats decorated with bioactive cerium oxide nanoparticles. *Journal of Biomedical Materials Research Part A*. 2021 Sep;109(9):1588-99.
- Mehdipour A, **Yousefi-Ahmadipour A**, Kennedy D, Arababadi MK. Ionizing radiation and toll like receptors: a systematic review article. *Human Immunology*. 2021 Jun 1;82(6):446-54.
- Shabanizadeh A, Rahmani MR, **Yousefi-Ahmadipour A**, Asadi F, Arababadi MK. Mesenchymal Stem Cells: The Potential Therapeutic Cell Therapy to Reduce Brain Stroke Side Effects. *Journal of Stroke and Cerebrovascular Diseases*. 2021 May 1;30(5):105668.
- **Yousefi-Ahmadipour A**, Ebrahimi-Barough S. MicroRNA-4731-5p delivered by AD-mesenchymal stem cells induces cell cycle arrest and apoptosis in glioblastoma. *Journal of cellular physiology*. 2020 Nov;235(11):8167-75.
- Allahverdi A, Arefian E, Soleimani M, Ai J, **Yousefi-Ahmadipour A**, Babaei A, Islam MS, Ebrahimi-Barough S. Involvement of EGFR, ERK-1, 2 and AKT-1, 2 activity on human glioma cell growth. *Asian Pacific Journal of Cancer Prevention: APJCP*. 2020 Dec;21(12):3469.
- Shabanizadeh A, Rahmani MR, **Yousefi-Ahmadipour A**, Asadi F, Arababadi MK. Mesenchymal Stem Cells: The Potential Therapeutic Cell Therapy to Reduce Brain Stroke Side Effects. *Journal of Stroke and Cerebrovascular Diseases*. 2021 May 1;30(5):105668.
- Mehdipour A, **Yousefi-Ahmadipour A**, Kennedy D, Arababadi MK. Ionizing radiation and toll like receptors: a systematic review article. *Human Immunology*. 2021 Jun 1;82(6):446-54.
- Saremi J, Khanmohammadi M, Azami M, Ai J, **Yousefi-Ahmadipour A**, Ebrahimi-Barough S. Tissue-engineered nerve graft using silk-fibroin/polycaprolactone fibrous mats decorated with bioactive cerium oxide nanoparticles. *Journal of Biomedical Materials Research Part A*. 2021 Sep;109(9):1588-99.
- **Yousefi-Ahmadipour A**, Asadi F, Pirsadeghi A, Nazeri N, Vahidi R, Abazari MF, Afgar A, Mirzaei-Parsa MJ. Current Status of Stem Cell Therapy and Nanofibrous Scaffolds in Cardiovascular Tissue Engineering. *Regenerative Engineering and Translational Medicine*. 2021 Oct 26:1-21.
- **Yousefi-Ahmadipour A**, Ebrahimi-Barough S, Niknia S, Allahverdi A, Mirzahosseini-Pourranjbar A, Tashakori M, Ravari SK, Asadi F, Nezhad RH, Lotfibakhshairesh N, Mirzaei MR. Therapeutic effects of combination of platelet lysate and sulfasalazine administration in TNBS-induced colitis in rat. *Biomedicine & Pharmacotherapy*. 2020 May 1;125:109949.

- Allahverdi A, Arefian E, Soleimani M, Ai J, Nahanmoghaddam N, **Yousefi-Ahmadipour A**, Ebrahimi-Barough S. MicroRNA-4731-5p delivered by AD-mesenchymal stem cells induces cell cycle arrest and apoptosis in glioblastoma. **Journal of Cellular Physiology**. 2020 Jan 19.
- Manjili FA, **Yousefi-Ahmadipour A**, Arababadi MK. The roles played by TLR4 in the pathogenesis of multiple sclerosis; A systematic review article. **Immunology Letters**. 2020 Apr 1;220:63-70.
- Hosseini-Chegeni A, Jazaeri F, **Yousefi-Ahmadipour A**, Heidari M, Abdollahie A, Dehpour AR. Thalidomide attenuates the hyporesponsiveness of isolated atria to chronotropic stimulation in BDL rats: The involvement of TNF- α , IL-6 inhibition, and SOCS1 activation. **Iranian Journal of Basic Medical Sciences**. 2019 Nov;22(11):1259.
- **Yousefi-Ahmadipour A**, Rashidian A, Mirzaei MR, Farsinejad A, PourMohammadi-Nejad F, Ghazi-Khansari M, Ai J, Shirian S, Allahverdi A, Saremi J, Ebrahimi-Barough S. Combination therapy of mesenchymal stromal cells and sulfasalazine attenuates trinitrobenzene sulfonic acid induced colitis in the rat: the S1P pathway. **Journal of Cellular Physiology**. 2019 Jul;234(7):11078-91.
- Nooshabadi VT, Mardpour S, **Yousefi-Ahmadipour A**, Allahverdi A, Izadpanah M, Daneshimehr F, Ai J, Banafshe HR, Ebrahimi-Barough S. The extracellular vesicles-derived from mesenchymal stromal cells: A new therapeutic option in regenerative medicine. **Journal of cellular biochemistry**. 2018 Oct;119(10):8048-73.
- Tarasi R, Alipour M, Gorgannezhad L, Imanparast S, **Yousefi-Ahmadipour A**, Ramezani A, Ganjali MR, Shafiee A, Faramarzi MA, Khoobi M. Laccase immobilization onto magnetic β -cyclodextrin-modified chitosan: improved enzyme stability and efficient performance for phenolic compounds elimination. **Macromolecular Research**. 2018 Aug 1;26(8):755-62.
- Amiri S, **Yousefi-Ahmadipour A**, Hosseini MJ, Haj-Mirzaian A, Momeny M, Hosseini-Chegeni H, Mokhtari T, Kharrazi S, Hassanzadeh G, Amini SM, Jafarinejad S. Maternal exposure to silver nanoparticles are associated with behavioral abnormalities in adulthood: Role of mitochondria and innate immunity in developmental toxicity. **Neurotoxicology**. 2018 May 1;66:66-77.
- Amiri S, **Yousefi-Ahmadipour A**, Hosseini MJ, Haj-Mirzaian A, Momeny M, Hosseini-Chegeni H, Mokhtari T, Kharrazi S, Hassanzadeh G, Amini SM, Jafarinejad S. Maternal exposure to silver nanoparticles are associated with behavioral abnormalities in adulthood: Role of mitochondria and innate immunity in developmental toxicity. **Neurotoxicology**. 2018 May 1;66:66-77.
- **Yousefi-Ahmadipour A**, Bozorgi-Koshalshahi M, Mogharabi M, Amini M, Ghazi-Khansari M, Faramarzi MA. Laccase-catalyzed treatment of ketoconazole, identification of

biotransformed metabolites, determination of kinetic parameters, and evaluation of micro-toxicity. **Journal of Molecular Catalysis B: Enzymatic**. 2016 Nov 1;133:77-84.

- Rahmani R, Mahmoodi M, Karimi M, Hoseini F, Heydari R, Salehi M, **Yousefi A**. Effect of hydroalcoholic extract of *Capparis spinosa* fruit on blood sugar and lipid profile of diabetic and normal rats. **Zahedan J Res Med Sci**. 2013 Jan 1;15(11):34-8.

Book Chapters

1. **Yousefi-Ahmadipour A**, Pirsadeghi A, Allahverdi A, Asadi F. (2024). Pancreatic cancer and stem cell. In *Cancer Stem Cells and Signaling Pathways* (pp. 363-379). Academic Press.
2. Ahmadi AM, Ayoobi F, Jamali Z, **Yousefi-Ahmadipour A**, Marotta F. (2024). Stem cells signaling pathways and surface receptors: implications for multiple sclerosis treatment. In *Stem Cells and Signaling Pathways* (pp. 271-283). Academic Press.
3. Dental Stem Cells: Regenerative Potential. Bersani, E. (Author). Yousefi, A., Abedi, P., Rafiei, M., & Razaghi-Jahromi, H., Rafsanjan University of Medical Sciences Press, 2021. ISBN: 978-622-981971-5. (Persian translation)

TECHNICAL SKILLS

Stem Cell Research

- Expert in isolation and characterization of MSCs from multiple sources (umbilical cord, placenta, adipose tissue, dental tissues)
- Proficient in 2D/3D cell culture, differentiation assays, and stemness marker analysis
- Extensive experience with flow cytometry for stem cell characterization (CD markers, viability, apoptosis)
- Expertise in stem cell tracking and *in vivo* transplantation studies

Molecular & Cellular Techniques

- Western blotting, immunocytochemistry, immunohistochemistry
- qPCR, RT-PCR, gene expression analysis
- Enzyme extraction and activity assessment
- Chromatography techniques (HPLC, LC-MS, GC-MS, TLC)
- Nanoparticle synthesis and characterization (nanosilver, nanogold)

Cancer Research and Stem Cell-Cancer Interactions

- Investigation of cancer stem cell signaling pathways and microenvironment interactions
- Conducted studies on breast cancer and glioblastoma with therapeutic strategies involving stem cells and metal complexes
- Proficient in tumor xenograft modeling and therapeutic assessments

Animal Models

- Established and characterized models of carcinoma, inflammatory bowel disease, and cirrhosis
- Expertise in tumor xenograft studies and therapeutic intervention assessments
- Proficient in surgical procedures and post-operative care

Tissue Engineering and Regenerative Medicine

- Scaffold fabrication (electrospinning, 3D printing)
- Acellular matrix preparation and characterization
- In vitro and in vivo evaluation of engineered tissues

ACADEMIC SERVICE

Editorial Boards

- *Tissue Engineering & Regenerative Medicine Journal*
- *Oncology Research Journal*

Peer Reviewer

- *Stem Cell Research & Therapy*
- *Cytotechnology*
- *Current Stem Cell Research & Therapy*
- *Clinical and Translational Oncology (CLAT)*
- *BMC Bioinformatics*
- *Molecular and Cellular Biochemistry*
- *Immunologic Research*
- *Current Stem Cell Research & Therapy*
- *Journal of Cancer Research and Clinical Oncology*
- *Avicenna Journal of Phytomedicine (AJP)*
- *Oncology Research*
- *Tissue Engineering & Regenerative Medicine*
- *Biotechnology and Applied Biochemistry*
- *BIOCELL*

Research Leadership

- Head of Student Research Committee, Faculty of Paramedical Sciences (2019-Present)
- Member of University Research Council (2020-Present)
- Advisor for Laboratory Sciences Scientific Association (2019-Present)

AWARDS & HONORS

- Top Researcher, Rafsanjan University of Medical Sciences (2020, 2023, 2024)
- Top Author, Rafsanjan University of Medical Sciences (2024)
- Outstanding Youth Award, Kerman Province (2024)
- Member, National Elites Foundation
- First Rank, Nationwide PhD Entrance Exam in Applied Cell Sciences
- First Rank, Nationwide MSc Entrance Exam in Medical Toxicology
- Three Awards for Scientific Contests, Tehran University of Medical Sciences

TEACHING EXPERIENCE

Graduate Courses

- *Cellular Molecular Biology* (2020-Present) - Taught every semester to MSc Laboratory Sciences students
- *System Biology for MSc Immunology* (2022-Present) - Taught every semester to MSc Immunology students
- *Medical Genetics* (2020-Present) - Taught every semester to Laboratory Sciences students
- *Cell Therapy* (2022-Present) - Taught every semester as a specialized course for graduate students
- *Bioinformatics* (2022-Present) - Taught every semester to MSc Laboratory Sciences students

Undergraduate Courses

- *Toxicology (Theory & Practical)* for Laboratory Sciences students (2018-Present) - Taught every odd semester
- *Medical Terminology & Medical Texts* for Laboratory Sciences students (2018-Present) - Taught every odd semester
- *Medical Terminology for Operating Room students* (2020-Present) - Taught every odd semester
- *Medical Texts for Operating Room students* (2019-Present) - Taught every even semester
- *Principles of Laboratory Safety* (2018-Present) - Taught every even semester to Laboratory Sciences students
- *Principles of Technical Maintenance of Laboratory Equipment* (2018-Present) - Taught every even semester to Laboratory Sciences students

Workshops & Specialized Training

- Organized and instructed comprehensive *Cell Therapy* workshops for faculty and graduate students (2020-Present)
- Developed and taught advanced *Cell Culture* techniques workshops (2019-Present)
- Conducted regular *Bioinformatics and Primer Design* workshops for research students (2021-Present)

- Led *Scientific Article Writing* workshops for junior researchers and graduate students (2020-Present)
- Organized specialized *Laboratory Safety* training sessions for laboratory personnel (2022-Present)
- Developed curriculum and taught *Advanced Molecular Techniques* workshops for MSc students

RESEARCH PROJECTS (SELECTED)

1. **Stem Cell-Cancer Interactions** (2022-2024)
Principal Investigator: "Effects of conditioned medium and extracts of adipose-derived mesenchymal stem cells on proliferation and gene expression in breast cancer cell lines"
2. **Regenerative Medicine** (2021-2023)
Principal Investigator: "Synthesis and characterization of alginate scaffolds containing bioactive materials by 3D printing for bone tissue engineering"
3. **Cancer Stem Cell Research** (2020-2022)
Principal Investigator: "Investigating the effect of metal complexes with phenanthroline on apoptosis induction in glioblastoma cancer cell line"
4. **Stem Cell Therapy for IBD** (2019-2021)
Principal Investigator: "Therapeutic and protective effects of combination of mesenchymal stem cell and nabilone on animal model of inflammatory bowel disease"

PROFESSIONAL DEVELOPMENT

- Workshop on Advanced Cell Culture Techniques, Tehran University of Medical Sciences (2017)
- Training in Bioinformatics and Primer Design, Tehran University of Medical Sciences (2016)
- Advanced Flow Cytometry Techniques, Pasteur Institute of Iran (2015)