

Curriculum Vitae

Last update: June 2025

Dr. Hassan Niknejad, PharmD, PhD

Department of Pharmacology and Nanomedicine, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Academic Position:

Professor of Regenerative Pharmacology

2016-Current

Department of Pharmacology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

2009-2016

Nanomedicine and Tissue Engineering Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Other Personal Information:

Date of Birth: 21 Sep 1975

Gender & Marital: Male, Married

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Education:

1995-2002

Tehran University of Medical Sciences, Doctor of Pharmacy (Pharm.D.)

Thesis: Investigation of interaction between nitric oxide and ATP-dependent potassium channel in isolated rat atria

2002-2008

Shahid Beheshti University of Medical Sciences, PhD

Thesis: The effects of designed Nano-matrix on dopaminergic differentiation of amniotic epithelial stem cells.

Awards:

First Rank of Technology Achievements in Research Festival of Shahid Beheshti University of Medical Sciences (Year of award: 2022)

The World's Top 2% Scientist Based on the Ranking of Stanford University (Year of award: 2021-2024)

First Rank of Research Festival in Shahid Beheshti University of Medical Sciences (Year of award: 2014)

Research interest:

Regenerative Medicine

Stem cells

Tissue Engineering

Medical Nanotechnology

Drug Delivery

Angiogenesis

Cancer

Translational Medicine

Grants:

- 1) International network for translating research on perinatal derivatives into therapeutic approaches

Funding organization: European Cooperation in Science & Technology (Ecost) (COST Action CA17116)

- 2) Design and construction of a bioreactor for liver decellularization and recellularization equipped with cell encapsulation microfluidic system for liver tissue engineering

- Funding organization:** National Institutes for Medical Research Development (NIMAD) (Award number: 963951)
- 3) In vitro effects of 2D and 3D chitosan-gelatin scaffolds on angiogenesis and immunological state of amniotic epithelial cells
Funding organization: National Institutes for Medical Research Development (NIMAD) (Award number: Elite Researcher Grant Proposal no. 963248)
- 4) Full- thickness wound healing in an animal model using freeze dried amniotic membrane and Lacto-N-Neotetraose oligosaccharide
Funding organization: National Institutes for Medical Research Development (NIMAD) (Award number: Elite Researcher Grant Proposal no. 958796)
- 5) Differentiation of amniotic epithelial stem cells into dopaminergic neurons via controlled delivery of CdSe quantum dots conjugated retinoic acid
Funding organization: Iran National Science Foundation (INSF) (Award number: 89002428)
- 6) Evaluating the effects of cold plasma atmospheric and its activated media on the viability and apoptosis of cancer cells
Funding organization: National Institutes for Medical Research Development (NIMAD) (Award number: Elite Researcher Grant Proposal no. 971253)
- 7) Design and Fabrication of Biocompatible Conducting Nanochitosan/Polypyrrole-Alginate Scaffold for Nerve Tissue Engineering
Funding organization: National Institutes for Medical Research Development (NIMAD) (Award number: Elite Researcher Grant Proposal no. 987688)
- 8) Comparison of the human amniotic epithelial stem cells resistance against the cytotoxic effect of Abraxane and Paclitaxel and evaluating the uptake/release ability of these cells
Funding organization: National Institutes for Medical Research Development (NIMAD) (Award number: Elite Researcher Grant Proposal no. 4000341)
- 9) Investigation of Inhibition of Scar Formation in an Animal Model through Cell Therapy with Amniotic Membrane-Derived Stem Cells Using a Cell Spraying System
Funding organization: Vice-Chancellor of Research Affairs, Shahid Beheshti University of Medical Sciences (Award number: 30744)

- 10) Prototype Production of Intra-articular Injectable Extracellular Matrix Containing Methylprednisolone for Treatment of Degenerative Joint Diseases in the Older Adults
Funding organization: Vice-Presidency for science and technology affairs-2024 (Award number: 128420)

Publications:

Book

- 1) Hassan Niknejad (2012). Application of Embryonic Stem Cells in Parkinson's Disease, Mechanisms in Parkinson's Disease -Models and Treatments, Dr. Juliana Dushanova (Ed.), ISBN: 978-953-307-876-2, InTech, DOI: 10.5772/24400.
- 2) Payam Sadeghi and Mohammad Amiri (2018). Guideline for Scientific Olympiad of Medical Students. Publisher: SBMU. Under supervision of Hassan Niknejad.

Patents

- 1) Production of albumin nanoparticles without toxicity of glutaraldehyde.
- 2) Artificial skin through in situ differentiation of amniotic cells.
- 3) Extraction of anti-cancer ingredients from human placenta.
- 4) High-yield production of collagen type I and IV from human placenta.
- 5) Biocompatible paclitaxel-conjugated albumin nanoparticles.
- 6) Producing a natural scaffold from embryonic membranes with the ability to grow stem cells on both sides
- 7) Producing a natural biological scaffold from the decellularized liver

Congress paper (National and International)

1. G. Yazdanpanah, M. Khayat-Khoei, **H. Niknejad**, (2012). Ps-99: Endothelial Differentiation of Human Amniotic Epithelial Cells (Pages: 68-0). Volume 14,

- supplement 1, Summer 2012 (Presented at 8th Royan Congress on Stem Cell Biology and Technology)
2. S. Masoumi, S. Jamili, **H. Niknejad, (2014)**. Effects of Size and Concentration of Nanosilver on Liver Tissue of Common Carp (*Cyprinus carpio*). Iran NanoSafety Congress, Tehran, Iran.
 3. Azizian S., Modaresifar K., Ghasemzaie N., **Niknejad H., (2016)**. 3rd Iranian Congress on Progress in Tissue Engineering and Regenerative Medicine. Page 19-21. Tehran, Iran.
 4. S. Sharifi, P.Ghavam Mostafavi, A. Mashinchian Moradi, M.H. Givianrad, **H. Niknejad, (ICNP 2017)**. Cytotoxic Effect of Crude Extract of Sea Pen *Virgularia gustaviana* on HeLa and MDA-MB-231 Cancer Cell Lines. 19th International Conference on Natural Products.
 5. A. Jafari, M. Rezaei-Tavirani, H. Zali, **H. Niknejad, (2018)**. A New Strategy for Cancer Therapy by Conditioned Medium Derived from Human Amniotic Epithelial Stem Cells. 3rd National Festival and International Congress of Rehabilitation Stem Cells and Medical Stems and Technologies, Tehran, Iran.
 6. **H. Niknejad (2018, invited speaker)**. Placenta stem cells as the crossroad of pharmacotherapy and regenerative medicine. 1st International Iranian Tissue Engineering and Regenerative Medicine Congress (ITERM2018)
 7. **H. Niknejad (2019, Invited speaker)**. Induction of angiogenesis by placenta derived stem cells and matrix for tissue engineering and regenerative medicine. TERMIS EU 2019. 27-31 May 2019 Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 105)
 8. A. Ahmadi, S.S. Ebadi, N Halvaei1, R. Mazloomnejad-Meybodi, **H.Niknejad. (2019)**. Osteogenic differentiation of the human placenta derived amniotic membrane using Simvastatin and BMP9. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 353).
 9. F. Biniazan, A. Manzari-Tavakoli, F. Safaeinejad, A. Moghimi, F. Rajaei, **H. Niknejad. (2019)**. The effect of BMP signaling on neural and keratinocyte differentiation of placenta derived cells. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 460).
 10. M.H. Farjoo, **H. Niknejad. (2019)** Human placenta derived membrane is a favourable natural biomaterial for vascular tissue engineering. TERMIS EU

2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 667).
11. A. Jafari, P. Parhizgar, H. Zali, B. Farhadi-Hoseinabadi, **H. Niknejad. (2019)** Application of human placenta derived amniotic epithelial cells as novel approach in cancer treatment. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 705).
 12. S.S. Ebadi, A. Ahmadi, **H. Niknejad. (2019)** Bone morphogenetic protein-9 and small-molecule phenamil synergistically induced osteogenic differentiation of intact human placenta membrane. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 775).
 13. B.J. Nooshin, Sh. Rahmani, S.S. Shafiee, **H. Niknejad. (2019)** Design, construction and optimizing of a constant pressure bioreactor for whole liver decellularization. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 776).
 14. B. Farhadihosseiniabadi, S. Shariatzadeh, A. Jafari, T. Tayebi, B.J. Noushin, A. ManzariTavakoli, **H. Niknejad (2019)** The co-application of freeze-dried amniotic membrane and lacto-n-neotetraose oligosaccharide as an inducer of type 2 immune response for full-thickness wound healing. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 784).
 15. T. Tayebi, A. Baradaran-Rafii, A. Zafari, B. Farhadihosseiniabadi, **H. Niknejad. (2019)** Biofabrication of corneal endothelial grafts through culturing the human corneal endothelial cells on nanochitosan-polycaprolactone membrane. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 810).
 16. A. Ahmadi, S.S. Ebadi, R. Mazloomnejad-Meybodi, N. Halvaei, **H. Niknejad. (2019)**. Recent advances on application of small molecules as osteogenic inducers. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 889).
 17. F. Biniazan, F. Rajaei, A. Manzari-Tavakoli, F. Safaeinejad, **H. Niknejad (2019)** Signaling pathways involved in regulation of keratinocyte differentiation of stem cells. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 932).

18. Manzari-Tavakoli, F. Biniazan, A. Moghimi, **H. Niknejad**, F. Safaeinejad. **(2019)**. BMP Signaling cross-talk with other pathways in neural differentiation. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 933).
19. K. Amirzadeh gougheri, M.H. Farjoo, **H. Niknejad. (2019)**, Exosomes in diagnosis and therapy of cardiovascular diseases. Hype or hope? TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1054).
20. E. Jamshidi, P. Soltani, M. Abbasi-Kangevari, M. H. Farjoo, **H. Niknejad (2019)**, Recent advances in placenta-derived mesenchymal stem cells and their exosomes in cancer therapy. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1055).
21. N. Halvaei, P. Parhizgar, A. Ahmadi, R. Mazloomnejad-Meybodi, **H. Niknejad. (2019)**, Presenting Animal models for investigation of gold storage solution in organ transplantation. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1060).
22. R. Mazloomnejad-Meybodi, N. Halvaei, M. Malekpour, A. Ahmadi, **H. Niknejad. (2019)**. The current approaches on angiogenesis in decellularized scaffolds. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1061).
23. P. Parhizgar, T. Tayebi, A. Jafari, N. Halvaei, **H. Niknejad. (2019)**. The recent advances on the ingredients of cold storage solutions for liver transplantation Presenting. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1068).
24. F. Yousefimoghaddam, M. Nourbakhsh, S. Bideri, T. Tayebi, P. Parhizgar, **H. Niknejad. (2019)**. Recent advances on application of hydrogels for microfluidic-based stem cell encapsulation. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1069).
25. S.S. Ebadi, A. Ahmadi, **H. Niknejad. (2019)**. Bone morphogenic proteins and osteogenic differentiation of stem cells. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1115).
26. Esfandpour, S. Motamedi, S.S. Ebadi, **H. Niknejad. (2019)**. Cell Spray and Wound Healing: current approaches and technology. TERMIS EU 2019. 27-31

- May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1116).
27. A. Manzari-Tavakoli, S. Shafiee, A. Moghimi, B. Farhadhosseinabadi, **H. Niknejad. (2019)**. Biocompatible conducting nanochitosan/polypyrrole–alginate scaffold for nerve tissue engineering. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1117).
 28. M.R. Malekpour, S. Shafiee, M. Abbasi-Kangevari, B. Jambar -Nooshin, R. Mazloomnejad-Meybodi, **H. Niknejad. (2019)** Presenting Recent advances on tissue and whole-organ decellularization protocols. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1118).
 29. M. Kazemzadeh Hemmesi, S. Shariatzadeh, **H. Niknejad. (2019)**. The recent advances on the role of placenta stem cell and comparison with other sources in cell therapy of wound healing. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1120).
 30. D. Hayati, M. Valizadeh, S. Shariatzadeh, A. Jafari, H. Rajabi-Maham, **H. Niknejad. (2019)**. The effect of human amnion-derived exosomes on angiogenesis. TERMIS EU 2019. 27-31 May 2019Rhodes, Greece. eCM Periodical, Collection 3; TERMIS EU Abstracts (page 1121).

Published Articles:

- 1) Tayebi T, Kasravi M, Naderi A, Nooshin BJ, Niknejad H. The interaction of the biocompatible scaffold containing nanochitosan-chitosan-polycaprolactone with telomerase activator and rock inhibitor in propagation and functional properties of corneal endothelial cells. **International Journal of Biological Macromolecules**. 2025 May 28:144744.
- 2) Raissi-Dehkordi N, Raissi-Dehkordi N, Ebrahimibagha H, Tayebi T, Moeinabadi-Bidgoli K, Hassani M, Niknejad H. Advancing chronic and acute wound healing with cold atmospheric plasma: Cellular and molecular mechanisms, benefits, risks, and future directions. **Frontiers in Medicine**. 2025 Feb 26;12:1527736.

- 3) Manzari-Tavakoli A, Babajani A, Vousooghi N, Moghimi A, Tarasi R, Safaeinejad F, Norouzi S, Bahrami S, Niknejad H. Therapeutic potential of placenta-derived stem cells cultivated on noggin-loaded nanochitosan/polypyrrole-alginate conductive scaffold to restore spinal cord injury. **Stem Cell Research & Therapy**. 2024 Dec 23;15(1):497.
- 4) Rahmanian M, Fathi M, Eftekhari M, Vakili K, Deravi N, Yaghoobpoor S, Sharifi H, Zeinodini R, Babajani A, Niknejad H. Developing a novel hypothesis to enhance mental resilience via targeting *Faecalibacterium prausnitzii* in gut-brain axis. **Medical Hypotheses**. 2024 Nov 1;192:111468.
- 5) Ostadi Y, Khanali J, Tehrani FA, Yazdanpanah G, Bahrami S, Niazi F, Niknejad H. Decellularized Extracellular Matrix Scaffolds for Soft Tissue Augmentation: From Host–Scaffold Interactions to Bottlenecks in Clinical Translation. **Biomaterials Research**. 2024 Sep 6;28:0071.
- 6) Kafili G, Tamjid E, Niknejad H, Simchi A. Concentration modulated microstructure and rheological properties of nanofibrous hydrogels derived from decellularized human amniotic membrane for 3D cell culture. *Journal of Materials Science: Materials in Engineering*. 2024 Jul 29;19(1):12.
- 7) Yassaghi Y, Nazerian Y, Niazi F, Niknejad H. Advancements in cell-based therapies for thermal burn wounds: a comprehensive systematic review of clinical trials outcomes. **Stem Cell Research & Therapy**. 2024 Sep 4;15(1):277.
- 8) Kafili G, Tamjid E, Niknejad H, Simchi A. Development of bioinspired nanocomposite bioinks based on decellularized amniotic membrane and hydroxyethyl cellulose for skin tissue engineering. **Cellulose**. 2024 Mar;31(5):2989-3013.
- 9) Kafili G, Niknejad H, Tamjid E, Simchi A. Amnion-derived hydrogels as a versatile platform for regenerative therapy: from lab to market. **Frontiers in Bioengineering and Biotechnology**. 2024 Feb 26;12:1358977.
- 10) Kasravi M, Yaghoobi A, Tayebi T, Hojabri M, Taheri AT, Shirzad F, Nooshin BJ, Mazloomnejad R, Ahmadi A, Tehrani FA, Yazdanpanah G. MMP inhibition as a novel strategy for extracellular matrix preservation during whole liver decellularization. **Biomaterials Advances**. 2024 Jan 1;156:213710.
- 11) Ahmadi A, Ahmadabadi MG, Babajani A, Yazdanpanah G, Bahrami S, Hassani M, Niknejad H. Exosomal Cargo: Pro-angiogenic, anti-inflammatory, and regenerative effects in ischemic and non-ischemic heart

- diseases—A comprehensive review. **Biomedicine & Pharmacotherapy**. 2023 Dec 1;168:115801.
- 12) Mazini F, Abdollahifar MA, Niknejad H, Manzari-Tavakoli A, Zhaleh M, Asadi-Golshan R, Ghanbari A. Retinoic acid loaded with chitosan nanoparticles improves spermatogenesis in scrotal hyperthermia in mice. **Clinical and Experimental Reproductive Medicine**. 2023 Dec;50(4):230.
 - 13) Jafari A, Mirzaei Y, Mer AH, Rezaei-Tavirani M, Jafari Z, Niknejad H. Comparison of the effects of preservation methods on structural, biological, and mechanical properties of the human amniotic membrane for medical applications. **Cell and Tissue Banking**. 2023 Oct 15:1-9.
 - 14) Pourali M, Tarasi R, Tayebi T, Niknejad H. Design and Fabrication of Biodegradable Tissue Adhesive Using Albumin Nanoparticles and Polypyrrole as a Suture Substitute in Surgery and Trauma. **Scientific Journal of Kurdistan University of Medical Sciences**. 2023 Oct 10:77-87.
 - 15) Kafili G, Tamjid E, Niknejad H, Simchi A. Development of printable nanoengineered composite hydrogels based on human amniotic membrane for wound healing application. **Journal of Materials Science**. 2023 Aug;58(30):12351-72.
 - 16) Jafari A, Niknejad H, Rezaei-Tavirani M, Sarrami-Forooshani R, Gilanchi S, Jafari Z. Antiproliferative and apoptotic effects of conditioned medium released from human amniotic epithelial stem cells on breast and cervical cancer cells. **International Journal of Immunopathology and Pharmacology**. 2023 Dec 31;37:03946320221150712.
 - 17) Hojabri M, Tayebi T, Kasravi M, Aghdaee A, Ahmadi A, Mazloomnejad R, Tarasi R, Shaabani A, Bahrami S, Niknejad H. Wet-spinnability and crosslinked Fiber properties of alginate/hydroxyethyl cellulose with varied proportion for potential use in tendon tissue engineering. **International Journal of Biological Macromolecules**. 2023 Jun 15;240:124492.
 - 18) Kasravi M, Ahmadi A, Babajani A, Mazloomnejad R, Hatamnejad MR, Shariatzadeh S, Bahrami S, Niknejad H. Immunogenicity of decellularized extracellular matrix scaffolds: a bottleneck in tissue engineering and regenerative medicine. **Biomaterials Research**. 2023 Dec;27(1):1-24.
 - 19) Moeinabadi-Bidgoli K, Rezaee M, Hossein-Khannazer N, Babajani A, Aghdaei HA, Arki MK, Afaghi S, Niknejad H, Vosough M. Exosomes for angiogenesis induction in ischemic disorders. **Journal of Cellular and Molecular Medicine**. 2023 Feb 14.

- 20) Mazloomnejad R, Babajani A, Kasravi M, Ahmadi A, Shariatzadeh S, Bahrami S, Niknejad H. Angiogenesis and Re-endothelialization in Decellularized Scaffolds: Recent Advances and Current Challenges in Tissue Engineering. **Frontiers in Bioengineering and Biotechnology**. 2023;11:232.
- 21) Nooshin BJ, Tayebi T, Babajani A, Khani MM, Niknejad H. Effects of Different Perfusing Routes through The Portal Vein, Hepatic Vein, and Biliary Duct on Whole Rat Liver Decellularization. **Cell Journal (Yakhteh)**. 2023 Jan 1;25(1).
- 22) Ahmadi A, Mazloomnejad R, Kasravi M, Gholamine B, Bahrami S, Sarzaeem MM, Niknejad H. Recent advances on small molecules in osteogenic differentiation of stem cells and the underlying signaling pathways. **Stem Cell Research & Therapy**. 2022 Dec;13(1):1-22.
- 23) Ahmadi A, Ebadi SS, Tayebi T, Ebadi SA, Sarzaeem MM, Niknejad H. Osteogenic Differentiation Effect of BMP-9 with Phenamil and Simvastatin on Intact Human Amniotic Epithelial Stem Cells. **Iranian biomedical journal**. 2022 Oct 1;26(6):463-74.
- 24) Babajani A, Manzari-Tavakoli A, Jamshidi E, Tarasi R, Niknejad H. Anti-cancer effects of human placenta-derived amniotic epithelial stem cells loaded with paclitaxel on cancer cells. **Scientific Reports**. 2022 Oct 28;12(1):18148.
- 25) Kafili G, Tamjid E, Niknejad H, Simchi A. Development of injectable hydrogels based on human amniotic membrane and polyethyleneglycol-modified nanosilicates for tissue engineering applications. **European Polymer Journal**. 2022 Oct 5;179:111566.
- 26) Sadeghmousavi, S., Soltani Khaboushan, A., Jafarnezhad-Ansariha, F., Nejad-Gashti, R., Farsi, M., Esmaeil-Pour, R., Alijani, M., Majidi Zolbin, M., Niknejad, H. and Kajbafzadeh, A.M., 2022. The role of spinal cord tractography in detecting lesions following selective bladder afferent and efferent fibers injury: A novel method for induction of neurogenic lower urinary tract dysfunction in rabbit. **Neurourology and Urodynamics**, 41(7), pp.1539-1552.
- 27) Ghasemzaie N, Hadjizadeh A, Niknejad H. Chitosan nanoparticles encapsulated into PLA/gelatin fibers for bFGF delivery. **Journal of Polymer Engineering**. 2022 Sep 1;42(8):776-86.
- 28) Biniazan F, Rajaei F, Darabi S, Babajani A, Mashayekhi M, Vousooghi N, Abdollahifar MA, Salimi M, Niknejad H. Effects of Placenta-Derived Human Amniotic Epithelial Cells on the Wound Healing Process and TGF- β Induced

- Scar Formation in Murine Ischemic-Reperfusion Injury Model. **Stem Cell Reviews and Reports**. 2022 Aug;18(6):2045-58.
- 29) Yaghoobi A, Nazerian Y, Meymand AZ, Ansari A, Nazerian A, Niknejad H. Hypoxia-sensitive miRNA regulation via CRISPR/dCas9 loaded in hybrid exosomes: A novel strategy to improve embryo implantation and prevent placental insufficiency during pregnancy. **Frontiers in Cell and Developmental Biology**. 2022;10.
- 30) Manzari-Tavakoli A, Babajani A, Farjoo MH, Hajinasrollah M, Bahrami S, Niknejad H. The cross-talks among bone morphogenetic protein (BMP) signaling and other prominent pathways involved in neural differentiation. **Frontiers in Molecular Neuroscience**. 2022;15.
- 31) Jafari A, Rezaei-Tavirani M, Farhadhosseinabadi B, Zali H, Niknejad H. Human amniotic mesenchymal stem cells to promote/suppress cancer: two sides of the same coin. **Stem Cell Research & Therapy**. 2021 Dec;12:1-1.
- 32) Shafiee S, Shariatzadeh S, Zafari A, Majd A, Niknejad H. Recent advances on cell-based co-culture strategies for prevascularization in tissue engineering. **Frontiers in Bioengineering and Biotechnology**. 2021 Nov 25;9:745314.
- 33) Shariatzadeh S, Shafiee S, Zafari A, Tayebi T, Yazdanpanah G, Majd A, Haj-Mirzaian A, Bahrami S, Niknejad H. Developing a pro-angiogenic placenta derived amniochorionic scaffold with two exposed basement membranes as substrates for cultivating endothelial cells. **Scientific Reports**. 2021 Nov 18;11(1):22508.
- 34) Motamedi S, Esfandpour A, Babajani A, Jamshidi E, Bahrami S, Niknejad H. The current challenges on spray-based cell delivery to the skin wounds. **Tissue Engineering Part C: Methods**. 2021 Oct 1;27(10):543-58.
- 35) Moeinabadi-Bidgoli K, Babajani A, Yazdanpanah G, Farhadhosseinabadi B, Jamshidi E, Bahrami S, Niknejad H. Translational insights into stem cell preconditioning: from molecular mechanisms to preclinical applications. **Biomedicine & Pharmacotherapy**. 2021 Oct 1;142:112026.
- 36) Nazerian Y, Vakili K, Ebrahimi A, Niknejad H. Developing cytokine storm-sensitive therapeutic strategy in COVID-19 using 8P9R chimeric peptide and soluble ACE2. **Frontiers in Cell and Developmental Biology**. 2021 Sep 3;9:717587.
- 37) Jafari A, Rezaei-Tavirani M, Niknejad H, Zali H. Tumor targeting by conditioned medium derived from human amniotic membrane: New insight in

- breast cancer therapy. **Technology in Cancer Research & Treatment**. 2021 Aug 16;20:15330338211036318.
- 38) Safaeinejad F, Asadi S, Ghafghazi S, Niknejad H. The synergistic anti-apoptosis effects of amniotic epithelial stem cell conditioned medium and ponesimod on the oligodendrocyte cells. **Frontiers in Pharmacology**. 2021 Jun 21;12:691099.
 - 39) Babajani A, Hosseini-Monfared P, Abbaspour S, Jamshidi E, Niknejad H. Targeted mitochondrial therapy with over-expressed MAVS protein from mesenchymal stem cells: a new therapeutic approach for COVID-19. **Frontiers in Cell and Developmental Biology**. 2021 Jun 11;9:695362.
 - 40) Khanali J, Azangou-Khyavy M, Boroomand-Saboor M, Ghasemi M, Niknejad H. JAK/STAT-dependent chimeric antigen receptor (CAR) expression: A design benefiting from a dual AND/OR gate aiming to increase specificity, reduce tumor escape and affect tumor microenvironment. **Frontiers in Immunology**. 2021 Jun 9;12:638639.
 - 41) Tayebi T, Baradaran-Rafii A, Hajifathali A, Rahimpour A, Zali H, Shaabani A, Niknejad H. Biofabrication of chitosan/chitosan nanoparticles/polycaprolactone transparent membrane for corneal endothelial tissue engineering. **Scientific Reports**. 2021 Mar 29;11(1):1-2.
 - 42) E Jamshidi, A Babajani, P Soltani, H Niknejad. Proposed mechanisms of targeting COVID-19 by delivering mesenchymal stem cells and their exosomes to damaged organs. **Stem cell reviews and reports**, 2021. 1-17.
 - 43) A Jafari, M Rezaei-Tavirani, B Farhadhosseinabadi, H Zali, H Niknejad. Human amniotic mesenchymal stem cells to promote/suppress cancer: two sides of the same coin. **Stem Cell Research & Therapy**, 2021, 12 (1), 1-11.
 - 44) T Tayebi, A Baradaran-Rafii, A Hajifathali, A Rahimpour, H Zali, H Niknejad. Biofabrication of chitosan/ chitosan nanoparticles /polycaprolactone transparent membrane for corneal endothelial tissue engineering. **Scientific Reports**, 2021, 11 (1), 1-12
 - 45) F Biniazan, A Manzari-Tavakoli, F Safaeinejad, A Moghimi, F Rajaei, H Niknejad. The differentiation effect of bone morphogenetic protein (BMP) on human amniotic epithelial stem cells to express ectodermal lineage markers. **Cell and Tissue Research**, 2021, 383 (2), 751-763
 - 46) F Safaeinejad, S Asadi, S Ghafghazi, H Niknejad. The Synergistic Anti-Apoptosis Effects of Amniotic Epithelial Stem Cell Conditioned Medium and

- Ponesimod on the Oligodendrocyte Cells. **Frontiers in Pharmacology**, 2021, 12.
- 47) J Khanali, M Azangou-Khyavy, M Boroomand-Saboor, M Ghasemi, H Niknejad. JAK/STAT-Dependent Chimeric Antigen Receptor (CAR) Expression: A Design Benefiting From a Dual AND/OR Gate Aiming to Increase Specificity, Reduce Tumor Escape and Affect Tumor. **Frontiers in Immunology**, 2021, 12, 1-12.
 - 48) A Babajani, P Hosseini-Monfared, S Abbaspour, E Jamshidi, H Niknejad. Targeted Mitochondrial Therapy with Over-expressed MAVS Protein from Mesenchymal Stem Cells: A New Therapeutic Approach for COVID-19. **Cell and Developmental Biology**, 2021, 9, 1475.
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