Curriculum Vitae

Seyed Mahmoud Hashemi, Ph.D.

Personal Information

Name: Seyed Mahmoud (Masiha) Hashemi

Ph.D. in Immunology

Associate Professor

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

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Education and Research Experience

Mar 2013 – present	**Assistant Professor:** Shahid Beheshti University of Medical Sciences, Department of Immunology, Tehrān, Tehrān, Iran
Jan 2008 – Jan 2012	**PhD Student:** Tarbiat Modares University, Department of Immunology, Tehrān, Iran
Jan 2004 – Jan 2008	**Researcher:** Royan Institute, Institute for Stem Cell Biology and Technology , Iran
2002-2005	***M.Sc.* Student:** Tarbiat Modares University, Department of Immunology, Tehrān, Iran
2000-2002	***B.Sc.**: Clinical laboratory science, Shaid Beheshti University, Tehran, Iran*

Awards:

1. The winner of 23rd Abu Reyhan Biruni Research Festival. 2022
2. The winner of *17th Razi Research Festival on Medical Sciences*, Tehran, IRAN, 2012.
3. The second winner of *16th Razi Research Festival on Medical Sciences, Tehran, IRAN, 2011*

Administrative Activities:

1. Head of the Department of Immunology 2022- now
2. Secretary of Iranian Society of Immunology and Allergy, 2018- 2021
3. Head of Scientific Committee, 14th International Congress of Immunology and Allergy, Tehran, Iran, April 2018
4. Research Deputy, Department of Immunology, 2016-2019

Research Projects

2003-2006	Phase 1 human trial of autologous bone marrow-hematopoietic stem cell transplantation in patients with decompensated cirrhosis
2002-2006	Differentiation of human embryonic stem cells into hepatocytes in 2D and 3D culture systems in vitro
2002-2006	Comparison the Protective Effect of Mucosal BCG Vaccination with Subcutaneous Against Leishmania Major Infection in Susceptible BALB/c Mice
2007-2009	Production of hepatocytes from stem cells
2007-2009	Production of hepatocytes from stem cells in 3-D culture systems
2007-2011	Establishment and differentiation of mouse embryonic stem cell
2008-2011	Transplantation of bone marrow derived mesenchymal stem cells in diabetic mice
2009-2011	Transplantation of bone marrow derived mesenchymal stem cells in EAE mouse model mice
2009-2012	Establishment of mouse model of autoimmune disease
2009-2012	Immunomodulatory effects of mesenchymal stem cells in autoimmune diabetes
2009-2015	Immunomodulatory effects of mesenchymal stem cells in Mouse Model of Multiple Sclerosis
2013-2019	Immunomodulatory effects of *Dendritic Cells* and mesenchymal stem cells in Mouse Model of IBD
2013-2020	Immunomodulatory effects of Extracellular vesicles derived from mesenchymal stem cells in Mouse Model of IBD
2016-2020	Comparison of the effects of MSCs-derived Extracellular vesicles with conditioned media on neutrophil function
2020-2023	Extracellular vesicles engineering in cell therapy and drug delivery

Journal Editorial board memberships:

1. Editor-in-Chief of *School of Medicine Students' Journal* (SMSJ)
2. Deputy editor of "*Research In Medicine*"
3. Deputy editor of "*Immunoregulation*"
4. Member of Editorial Board of " STEM CELLS Translational Medicine"
5. Member of Editorial Board of " Frontiers in Immunology"
6. Member of Editorial Board of " Frontiers in Frontiers in Bioengineering and Biotechnology"
7. Member of Editorial Board of "International Journal of Health Studies"
8. Member of Editorial Board of Journal of "Stem Cell and Regenerative Biology"
9. Member of Editorial Board of "journal of hematology and blood disorders"

Publications

Book:

1. *Essential Cell Biology* (2004), Author(s): Alberts B, Bray D, Johnson A, Lewis J, Raff M, Roberts K, Walter . Translator(s): Baharvand H, Sheikhian A Mirhabibi B, Farzaneh, **Hashemi S. M.**SM, Ebrahimi M, Zare N, Moradi Sh. Publisher(s):House of Biology (Tabesh-e Andisheh)

2. *Chapter book*, *Immunomodulatory Properties of Perinatal Tissue-Derived Mesenchymal Stem Cells*, *Perinatal Tissue-Derived Stem Cells*, *Alternative Sources of Fetal Stem Cells*, Springer International Publishing Switzerland 2016.
3. *Exosomes in Diagnosis and Therapy*, (in Persian) 2019, Seyed Mahmoud Masiha Hashemi, Mohammad Mahmoudi, Mahsa Taghavi Farahabadi, Zohreh Bolandi.

Articles:

1.
Soufihasanabad S, Mahmoudi M, Taghavi-Farahabadi M, Mirsanei Z, Mahmoudi Lamouki R, Mirza Abdalla JK, et al. In vivo polarization of M2 macrophages by mesenchymal stem cell-derived extracellular vesicles: A novel approach to macrophage polarization and its potential in treating inflammatory diseases. Medical Hypotheses [Internet]. 2024;187
2.
Nasiri Z, Soleimanjahi H, Baheiraei N, Hashemi SM, Pourkarim MR. The impact understanding of exosome therapy in COVID-19 and preparations for the future approaches in dealing with infectious diseases and inflammation. Scientific Reports [Internet]. 2024;14(1
3.
Mirsanei Z, Jamshidi-Adegani F, Vakilian S, Ahangari F, Soufihasanabad S, Al-Riyami K, et al. Synergistic effects of mesenchymal stem cell-derived extracellular vesicles and dexamethasone on macrophage polarization under inflammatory conditions. Inflammopharmacology. 2024;32(2):1317–32.
4.
Khosrowpour Z, Hashemi SM, Mohammadi-Yeganeh S, Simorgh S, Eftekhari BS, Brouki Milan P, et al. Decellularized Placental Sponge: A Platform for Coculture of Mesenchymal Stem Cells/Macrophages to Assess an M2 Phenotype and Osteogenic Differentiation In Vitro and In Vivo. ACS Omega. 2024;9(5):5298–318.
5.
Heidari N, Abbasi-Kenarsari H, Niknam B, Asadirad A, Amani D, Mirsanei Z, et al. Exosomes Derived from Heat-shocked Tumor Cells Promote In vitro Maturation of Bone Marrow-derived Dendritic Cells. Iranian Journal of Allergy, Asthma and Immunology. 2024;23(1):97–106.
6.
Hazrati A, Malekpour K, Khorramdelazad H, Rajaei S, Hashemi SM. Therapeutic and immunomodulatory potentials of mesenchymal stromal/stem cells and immune checkpoints related molecules. Biomarker Research [Internet]. 2024;12(1).
7.
Firouzabadi SR, Mohammadi I, Ghafourian K, Kiani A, Hashemi SM. Mesenchymal Stem Cell-Derived Extracellular Vesicle Therapy for Asthma in Murine Models: A Systematic Review and Meta-analysis. Stem Cell Reviews and Reports [Internet]. 2024;
8.
Firouzabadi SR, Mohammadi I, Ghafourian K, Kiani A, Hashemi SM. Correction to: Mesenchymal Stem Cell-Derived Extracellular Vesicle Therapy for Asthma in Murine Models: A Systematic Review and Meta-analysis (Stem Cell Reviews and Reports, (2024), 10.1007/s12015-024-10704-8). Stem Cell Reviews and Reports [Internet]. 2024;
9.
Yeganeh A, Fathollahi A, Hashemi SM, Yeganeh F. In vitro treatment of murine splenocytes with extracellular vesicles derived from mesenchymal stem cells altered the mRNA levels of the master regulator genes of T helper cell subsets. Molecular Biology Reports. 2023;50(4):3309–16.
10.
Soori H, Mohammadi G, Ahmadi A, Abedini A, Hashemi SMM, Sartipi M, et al. Comparing the control of COVID-19 epidemic before and after the implementation of rapid response program in southeast of Iran. Payesh. 2023;22(1):73–82.
11.
Sahlolbei M, Azangou-Khyavy M, Khanali J, Khorsand B, Shiralipour A, Ahmadbeigi N, et al. Engineering chimeric autoantibody receptor T cells for targeted B cell depletion in multiple sclerosis model: An in-vitro study. Heliyon [Internet]. 2023;9(9).
12.
Sadeghi S, Tehrani FR, Tahmasebi S, Shafiee A, Hashemi SM. Exosome engineering in cell therapy and drug delivery. Inflammopharmacology. 2023;31(1):145–69.
13.
Mokhberian N, Sharifi K, Soleymaninejadian E, Eftekhary M, Hashemi SM, Farhadi S, et al. Author Correction: RNAa-mediated epigenetic attenuation of the cell senescence via locus specific induction of endogenous SIRT1 (Scientific Reports, (2022), 12, 1, (15826), 10.1038/s41598-022-17972-9). Scientific Reports [Internet]. 2023;13(1).
14.
Mohammadi NG, Namaki S, Hashemi SM, Salehi M, Ghaffarpour S, Ghazanfari T. Impact of the MCP-1-2518A>G polymorphism on COVID-19 severity in the Iranian population: A case-control study. International Immunopharmacology [Internet]. 2023;119.
15.
Mirsharif ES, Chenary MR, Bozorgmehr M, Mohammadi S, Hashemi SM, Ardestani SK, et al. Immunophenotyping characteristics of COVID-19 patients: Peripheral blood CD8+ HLA-DR+ T cells as a biomarker for mortality outcome. Journal of Medical Virology [Internet]. 2023;95(1).
16.
Malekpour K, Hazrati A, Soudi S, Hashemi SM. Mechanisms behind therapeutic potentials of mesenchymal stem cell mitochondria transfer/delivery. Journal of Controlled Release. 2023;354:755–69.
17.
Khosrowpour Z, Hashemi SM, Mohammadi-Yeganeh S, Moghtadaei M, Brouki Milan P, Moroni L, et al. Coculture of adipose-derived mesenchymal stem cells/macrophages on decellularized placental sponge promotes differentiation into the osteogenic lineage. Artificial Organs. 2023;47(1):47–61.
18.

Khosrojerdi A, Soudi S, Hosseini AZ, Khaligh SG, Hashemi SM. The combination of mesenchymal stem cell- and hepatocyte-derived exosomes, along with imipenem, ameliorates inflammatory responses and liver damage in a sepsis mouse model. Life Sciences [Internet]. 2023;326.
19.
Ghalavand M, Moradi-Chaleshtori M, Dorostkar R, Mohammadi-Yeganeh S, Hashemi SM. Exosomes derived from rapamycin-treated 4T1 breast cancer cells induced polarization of macrophages to M1 phenotype. Biotechnology and Applied Biochemistry. 2023;70(5):1754–71.
20.
Ghalavand M, Dorostkar R, Borna H, Mohammadi-Yeganeh S, Hashemi SM. MicroRNA-122 Is More Effective than Rapamycin in Inhibition of Epithelial-mesenchymal Transition and mTOR Signaling Pathway in Triple Negative Breast Cancer. Iranian Journal of Allergy, Asthma and Immunology. 2023;22(1):46–61.
21.
Farhadi S, Mohammadi-Yeganeh S, Kiani J, Hashemi SM, Koochaki A, Sharifi K, et al. Exosomal delivery of 7SK long non-coding RNA suppresses viability, proliferation, aggressiveness and tumorigenicity in triple negative breast cancer cells. Life Sciences [Internet]. 2023;322.
22.
Bolandi Z, Hashemi SM, Abasi M, Musavi M, Aghamiri S, Miyanmahaleh N, et al. In vitro naive CD4+ T cell differentiation upon treatment with miR-29b-loaded exosomes from mesenchymal stem cells. Molecular Biology Reports. 2023;50(11):9037–46.
23.
Abdolmohammadi K, Mahmoudi T, Alimohammadi M, Tahmasebi S, Zavvar M, Hashemi SM. Mesenchymal stem cell-based therapy as a new therapeutic approach for acute inflammation. Life Sciences [Internet]. 2023;312.
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Zolfaghari S, Milan PB, Dehpour AR, Fomeshi MR, Eskandari F, Ebrahimi L, et al. The effect of poly I:C or LPS priming on the therapeutic efficacy of mesenchymal stem cells in an adjuvant-induced arthritis rat model. Pharmacological Reports. 2022;74(4):654–68.
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Zamani F, Oraee-Yazdani S, Langroudi L, Hashemi SM. Role of mesenchymal stem cells in growth and progression of cancer and prospective potentials in cancer therapy. Koomesh. 2022;24(1):1–25.
26.
Sheykhhasan M, Amini R, Soleimani Asl S, Saidijam M, Hashemi SM, Najafi R. Neuroprotective effects of coenzyme Q10-loaded exosomes obtained from adipose-derived stem cells in a rat model of Alzheimer's disease. Biomedicine and Pharmacotherapy [Internet]. 2022;152.
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Sattari M, Masoudnia M, Mashayekhi K, Hashemi SM, Khannazer N, Sattari S, et al. Evaluating the effect of LPS from periodontal pathogenic bacteria on the expression of senescence-related genes in human dental pulp stem cells. Journal of Cellular and Molecular Medicine. 2022;26(22):5647–56.
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Nazerian Y, Ghasemi M, Yassaghi Y, Nazerian A, Hashemi SM. Role of SARS-CoV-2-induced cytokine storm in multi-organ failure: Molecular pathways and potential therapeutic options. International Immunopharmacology [Internet]. 2022;113.
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Moradi-Chaleshtori M, Koochaki A, Shojaei S, Paryan M, Safarzadeh M, Hashemi SM, et al. Overexpression of pigment epithelium-derived factor in breast cancer cell-derived exosomes induces M1 polarization in macrophages. Immunology Letters. 2022;248:31–6.
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31.
Mojtahedi H, Hossein-Khannazer N, Hashemi SM, Masoudnia M, Askarzadeh M, Khojasteh A, et al. Effects of Lipopolysaccharide from Porphyromonas gingivalis and Escherichia coli on Gene Expression Levels of Toll-like Receptors and Inflammatory Cytokines in Human Dental Pulp Stem Cells. Iranian Journal of Immunology. 2022;19(3):299–310.
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Hosseini NF, Amini R, Ramezani M, Saidijam M, Hashemi SM, Najafi R. AS1411 aptamer-functionalized exosomes in the targeted delivery of doxorubicin in fighting colorectal cancer. Biomedicine and Pharmacotherapy [Internet]. 2022;155.
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Heidari N, Abbasi-Kenarsari H, Namaki S, Baghaei K, Zali MR, Mirsanei Z, et al. Regulation of the Th17/Treg balance by human umbilical cord mesenchymal stem cell-derived exosomes protects against acute experimental colitis. Experimental Cell Research [Internet]. 2022;419(1).
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Hazrati A, Soudi S, Malekpour K, Mahmoudi M, Rahimi A, Hashemi SM, et al. Immune cells-derived exosomes function as a double-edged sword: role in disease progression and their therapeutic applications. Biomarker Research [Internet]. 2022;10(1).
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Hazrati A, Soudi S, Hashemi SM. Wharton's Jelly Mesenchymal Stem Cells-derived Exosomes and Imipenem in Combination Reduce Apoptosis and Inflammatory Responses in E.coli-infected HepG2 Cells. Iranian Journal of Allergy, Asthma and Immunology. 2022;21(3):273–86.
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Hazrati A, Malekpour K, Soudi S, Hashemi SM. Mesenchymal stromal/stem cells spheroid culture effect on the therapeutic efficacy of these cells and their exosomes: A new strategy to overcome cell therapy limitations. Biomedicine and Pharmacotherapy [Internet]. 2022;152.
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Hazrati A, Malekpour K, Soudi S, Hashemi SM. Mesenchymal Stromal/Stem Cells and Their Extracellular Vesicles Application in Acute and Chronic Inflammatory Liver Diseases: Emphasizing on the Anti-Fibrotic and Immunomodulatory Mechanisms. Frontiers in Immunology [Internet]. 2022;13.
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Hazrati A, Malekpour K, Soudi S, Hashemi SM. CRISPR/Cas9-engineered mesenchymal stromal/stem cells and their extracellular vesicles: A new approach to overcoming cell therapy limitations. Biomedicine and Pharmacotherapy [Internet]. 2022;156.
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Habibian A, Soleimanjahi H, Hashemi SM, Babashah S. Characterization and Comparison of Mesenchymal Stem Cell-Derived Exosome Isolation Methods using Culture Supernatant. Archives of Razi Institute. 2022;77(4):1383–8.
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Fooladi T, Soudi MR, Hashemi SM, Abdeshahian P. Production of Childinan SF-2 as Bioactive Compound from Daldinia childiae: A Survey on Antioxidant, Antibacterial and Antitumor Properties. Iranian Journal of Biotechnology. 2022;20(4):84–96.
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Farrokhi S, sotoodehnejadnematalahi F, Fathollahi A, Haji Molla Hoseini M, Hashemi SM, Yeganeh F. The immunomodulatory potential of murine adipose-derived mesenchymal stem cells is enhanced following culture on chitosan film. Tissue and Cell [Internet]. 2022;74.
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Farahi S, Hosseini S, Ghanbarian H, Hashemi SM, Salehi M, Hosseini S. The Use of Trichostatin A during Pluripotent Stem Cell Generation Does Not Affect MHC Expression Level. Stem Cells International [Internet]. 2022;2022.
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Eshghi F, Tahmasebi S, Alimohammadi M, Soudi S, Khaligh SG, Khosrojerdi A, et al. Study of immunomodulatory effects of mesenchymal stem cell-derived exosomes in a mouse model of LPS induced systemic inflammation. Life Sciences [Internet]. 2022;310.
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Dehghani L, Khojasteh A, Soleimani M, Oraee-Yazdani S, Keshel SH, Saadatnia M, et al. Safety of intraparenchymal injection of allogenic placenta mesenchymal stem cells derived exosome in patients undergoing decompressive craniectomy following malignant middle cerebral artery infarct, a pilot randomized clinical trial. International Journal of Preventive Medicine. 2022;13(1):7.
45.
Asadirad A, Baghaei K, Hashemi SM, Dehnavi S, Ghanbarian H, Mortaz E, et al. Dendritic cell immunotherapy with miR-155 enriched tumor-derived exosome suppressed cancer growth and induced antitumor immune responses in murine model of colorectal cancer induced by CT26 cell line. International Immunopharmacology [Internet]. 2022;104.
46.
Ardestani SK, Salehi MR, Attaran B, Hashemi SM, Sadeghi S, Ghaffarpour S, et al. Neutrophil to Lymphocyte Ratio (NLR) and Derived NLR Combination: A Cost-effective Predictor of Moderate to Severe COVID-19 Progression. Iranian Journal of Allergy, Asthma and Immunology. 2022;21(3):241–53.
47.
Alimohammadi R, Porgoo M, Eftekhary M, Kiaie SH, Ansari Dezfouli E, Dehghani M, et al. SARS-CoV-2 mRNA-vaccine candidate; COReNAPCIN®, induces robust humoral and cellular immunity in mice and non-human primates. npj Vaccines [Internet]. 2022;7(1).
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Tokhanbigli S, Parsamanesh G, Baghaei K, Yarian F, Asadirad A, Hashemi SM, et al. Antigenic Potency of LY6E in Stimulating Dendritic Cells to Elicit Tumor-Specific Responses Against Human Colorectal and Gastric Cancer Cell Lines. International Journal of Peptide Research and Therapeutics. 2021;27(2):1001–8.
49.
Taghavi-Farahabadi M, Mahmoudi M, Rezaei N, Hashemi SM. Wharton's Jelly Mesenchymal Stem Cells Exosomes and Conditioned Media Increased Neutrophil Lifespan and Phagocytosis Capacity. Immunological Investigations. 2021;50(8):1042–57.
50.
Shojaei S, Hashemi SM, Ghanbarian H, Sharifi K, Salehi M, Mohammadi-Yeganeh S. Delivery of miR-381-3p Mimic by Mesenchymal Stem Cell-Derived Exosomes Inhibits Triple Negative Breast Cancer Aggressiveness; an In Vitro Study. Stem Cell Reviews and Reports. 2021;17(3):1027–38.
51.
Shirani A, Ganji F, Golmohammadi M, Hashemi SM, Mozafari M, Amoabediny G, et al. Cross-linked acellular lung for application in tissue engineering: Effects on biocompatibility, mechanical properties and immunological responses. Materials Science and Engineering C [Internet]. 2021;122.
52.
Rezaei R, Baghaei K, Hashemi SM, Zali MR, Ghanbarian H, Amani D. Tumor-Derived Exosomes Enriched by miRNA-124 Promote Anti-tumor Immune Response in CT-26 Tumor-Bearing Mice. Frontiers in Medicine [Internet]. 2021;8.
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Rezaei R, Baghaei K, Amani D, Piccin A, Hashemi SM, Asadzadeh Aghdaei H, et al. Exosome-mediated delivery of functionally active miRNA-375-3p mimic regulate epithelial mesenchymal transition (EMT) of colon cancer cells. Life Sciences [Internet]. 2021;269.
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Paktinat S, Esfandyari S, Karamian A, Koochaki A, Asadirad A, Ghaffari Novin M, et al. Conditioned medium derived from seminal extracellular vesicles-exposed endometrial stromal cells induces inflammatory cytokine secretion by macrophages. European Journal of Obstetrics and Gynecology and Reproductive Biology. 2021;262:174–81.
55.
Moradi-Chaleshtori M, Shojaei S, Mohammadi-Yeganeh S, Hashemi SM. Transfer of miRNA in tumor-derived exosomes suppresses breast tumor cell invasion and migration by inducing M1 polarization in macrophages. Life Sciences [Internet]. 2021;282.
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Moradi-Chaleshtori M, Bandehpour M, Soudi S, Mohammadi-Yeganeh S, Hashemi SM. In vitro and in vivo evaluation of anti-tumoral effect of M1 phenotype induction in macrophages by miR-130 and miR-33 containing exosomes. Cancer Immunology, Immunotherapy. 2021;70(5):1323–39.
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Moradi-Chaleshtori M, Bandehpour M, Soudi S, Mohammadi-Yeganeh S, Hashemi SM. Correction to: In vitro and in vivo evaluation of anti tumoral effect of M1 phenotype induction in macrophages by miR 130 and miR 33 containing exosomes (Cancer Immunology, Immunotherapy, (2021), 70, 5, (1323-1339), 10.1007/s00262-020-02762-x). Cancer Immunology, Immunotherapy. 2021;70(5):1341.
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Khosrojerdi A, Soudi S, Zavaran Hosseini A, Ghaffari Khaligh S, Hashemi SM. Imipenem alters systemic and liver inflammatory responses in CLP- induced sepsis mice in a dose-dependent manner. International Immunopharmacology [Internet]. 2021;93.
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Khosrojerdi A, Soudi S, Hosseini AZ, Eshghi F, Shafiee A, Hashemi SM. Immunomodulatory and Therapeutic Effects of Mesenchymal Stem Cells on Organ Dysfunction in Sepsis. Shock. 2021;55(4):423–40.
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Khodakhah F, Tahamtan A, Marzban M, Shadab A, Tavakoli-Yaraki M, Hashemi SM, et al. Hyperglycemia results in decreased immune cell infiltration and increased viral load in the lung in a mouse model of RSV infection. Cytokine [Internet]. 2021;143.
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Heidari N, Abbasi-Kenarsari H, Namaki S, Baghaei K, Zali MR, Ghaffari Khaligh S, et al. Adipose-derived mesenchymal stem cell-secreted exosome alleviates dextran sulfate sodium-induced acute colitis by Treg cell induction and inflammatory cytokine reduction. Journal of Cellular Physiology. 2021;236(8):5906–20.
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Dehghani L, Hashemi SM, Saadatnia M, Zali A, Oraee-Yazdani S, Heidari Keshel S, et al. Stem Cell-Derived Exosomes as Treatment for Stroke: a Systematic Review. Stem Cell Reviews and Reports. 2021;17(2):428–38.
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Sadeghi S, Soudi S, Shafiee A, Hashemi SM. Mesenchymal stem cell therapies for COVID-19: Current status and mechanism of action. Life Sciences [Internet]. 2020;262.
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Sadeghi S, Mosaffa N, Hashemi SM, Mehdi Naghizadeh M, Ghazanfari T. The immunomodulatory effects of mesenchymal stem cells on long term pulmonary complications in an animal model exposed to a sulfur mustard analog. International Immunopharmacology [Internet]. 2020;80.
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Moradi A, Zare F, Mostafavinia A, Safaju S, Shahbazi A, Habibi M, et al. Photobiomodulation plus Adipose-derived Stem Cells Improve Healing of Ischemic Infected Wounds in Type 2 Diabetic Rats. Scientific Reports [Internet]. 2020;10(1).
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Mokhberian N, Bolandi Z, Eftekhary M, Hashemi SM, Jajarmi V, Sharifi K, et al. Inhibition of miR-34a reduces cellular senescence in human adipose tissue-derived mesenchymal stem cells through the activation of SIRT1. Life Sciences [Internet]. 2020;257.
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Karimi Z, Seyedjafari E, Khojasteh A, Hashemi SM, Kazemi B, Mohammadi-Yeganeh S. MicroRNA-218 competes with differentiation media in the induction of osteogenic differentiation of mesenchymal stem cell by regulating β-catenin inhibitors. Molecular Biology Reports. 2020;47(11):8451–63.
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Hashemi SM, Hassan ZM, Hossein-Khannazer N, Pourfathollah AA, Soudi S. Investigating the route of administration and efficacy of adipose tissue-derived mesenchymal stem cells and conditioned medium in type 1 diabetic mice. Inflammopharmacology. 2020;28(2):585–601.
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Eftekhary M, Mohammadi-Yeganeh S, Bolandi Z, Hashemi SM, Mokhberian N, Sharifi K, et al. A novel natural antisense transcript at human SOX9 locus is down-regulated in cancer and stem cells. Biotechnology Letters. 2020;42(2):329–39.
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