

# Curriculum Vita

**Surname:** Hashemi

**First Name:** Seyedeh-Sara

**Current Position:** Assistant Professor of Histology

**Affiliation:**

*Burn and Wound Healing Research Centre, Shiraz University of Medical Sciences (SUMS), Shiraz, Iran*

*Department of Comparative Biomedical Sciences, School of Advanced Medical Sciences and Technologies, Shiraz University of Medical Sciences, Shiraz, Fars, Iran.*

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## Educational Background

2008- 2012: **Ph.D.** in Comparative Histology, Shiraz University- Shiraz- Iran

2003-2005: **M.Sc.** in Physiology, Faculty of Sciences, Shiraz University, Shiraz, Iran.

1998-2002: **B.Sc.** in General Biology, Faculty of Sciences, Tabriz University-Tabriz. Iran.

## Employment

2013- Present **Assistant Professor and Academic Member of Shiraz University of Medical Sciences (SUMS) – Shiraz- Iran.**

## Fellowships

- *Research fellowship, Shiraz University of Medical Sciences, Shiraz, Iran, 2015.*
- *E-learning fellowship, Shiraz University of Medical Sciences, Shiraz, Iran. April to September 2016.*

- *Medical education fellowship, Shiraz University of Medical Sciences, Shiraz, Iran from November to December 2016.*

## **Occupations**

- *Assistant professor of Burn and Wound Healing Research Centre, Shiraz University of Medical Sciences, Shiraz, Iran (2013-now).*
- *Assistant professor of Department of Comparative Biomedical Sciences, School of Advanced Medical Sciences and Technologies, Shiraz University of Medical Sciences, Shiraz, Fars, Iran (2017-now).*
- *Research Manager in Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran (2015-now).*
- *Head of the Cell Culture Lab. In Research Center Tower Prophet Mohammad, Shiraz University of Medical Sciences, Shiraz, Iran (2015-now).*
- *Head of the Cell Culture & Skin Tissue Engineering Lab. in Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran (2013-now).*
- *Scientific Secretary 1<sup>th</sup> National Burn and Wound Congresses. 26 May. 2016, Shiraz University of Medical Sciences, Shiraz, Iran (2016).*

## **Honorary Activities**

1. **Editorial board member** of World Journal of Plastic Surgery (WJPS)
2. **Reviewer of:**
  - 1) Journal of Cosmetic Dermatology-27
  - 2) Iranian Journal of Basic Medical Sciences (IJBMS)- 7
  - 3) European Journal of Medical Research-3
  - 4) Stem Cells International-4
  - 5) BioMed Research International-4
  - 6) Medicina-2
  - 7) Journal of Inflammation Research-1
  - 8) Biopreservation and Biobanking-1
  - 9) Dose-Response-1
  - 10) Regenerative Medicine-1
  - 11) Inflammation-1

- 12) Human Cell-1
- 13) Bioengineered-1
- 14) Journal of Biomaterials Applications-1
- 15) Journal of Cosmetic and Laser Therapy-1
- 16) Journal of Biomaterials Applications-1
- 17) European Journal of Inflammation-1
- 18) International Journal of Medical Arts-1
- 19) Brazilian Journal of Medical and Biological Research-1
- 20) The Scientific World Journal-1
- 21) International Journal of Dentistry-1
- 22) International Journal of Inflammation-1
- 23) Mediators of Inflammation-1
- 24) Evidence-Based Complementary and Alternative Medicine-1
- 25) Current Molecular Medicine-1
- 26) Electronic Journal of General Medicine-1

## **Grants**

1. *NIMAD: The healing effect of Wharton Jelly mesenchymal stem cells labeled with iron dextran nanoparticle together with Acellular dermal matrix (ADM) scaffold in treatment of burn injuries: Biomechanical, histological, SEM, MRI, and molecular analysis Proposal No:963474.*
2. *NIMAD: Polysaccharide/protein nanofibrous scaffold loaded with healing/antimicrobial agent with stabilized structure in aqueous media for skin regeneration. Proposal No: 964399.*

## **Book Chapter**

- *Fermentation Processes: Emerging and Conventional Technologies- Chapter 5. Biomass Fractionation Using Emerging Technologies- 145-169- Publisher: John Wiley & Sons, Ltd (2021). ISBN: 9781119505853.*

- *Multiple Emulsions – Emulsion-based Systems for Delivery of Food Active Compounds: Formation, Application, Health and Safety- Chapter 3. Multiple emulsions- Publisher: John Wiley & Sons, Ltd (2018). ISBN: 978-1-119-24714-2.*

## **Patent**

1. *Antibacterial acellular dermal matrix- patent number:100445- 23.02.2020- Seyedeh-Sara Hashemi- Alireza Rafati*

## **Articles**

1. *Jelodar G.A., Hashemi S.S., Bahaodini A.A., Rafati A.R. Use of rat estrus serum for in vitro maturation of bovine oocyte. Journal of Shaeed Sdoughi University of Medical Sciences Yazd. 2007; 15(1).*
2. *khaksar Z, Tajali M, Hashemi SS. Effects of Juglans Regia Leaves Ethanolic Extract on Changes of Spinal Cord Lumbo-Sacral Region in Diabetic Rats Fetus. Armaghane-danesh. 2012; 17(5).*
3. *Rafati A.R., Hashemi S.S., Koochi Hosseinabadi O. Effects of cinnamon extract on Cerebellum Histomorphometry in diabetic rat's fetus. Armaghane-danesh. 2013; 18(6).*
4. *Hashemi S.S., Jelodar G.A., Rafati A.R. The Effects of Fluoxetine on cortisol and thyroid hormone levels in rats. Arak Medical University Journal. 2014; 17(2).*
5. *Hashemi S.S., khaksar Z., Tajali M. Morphometric Study of the effect of Walnut (Juglans regia) leaf extract on Cerebrum malformation in fetuses of diabetic rats. Journal of Chemical and Pharmaceutical Research. 2015; 7(2):441-445.*
6. *Hashemi S.S., khaksar Z., Morphometric Study of the effect of Walnut (Juglans regia) leaf extract on Cerebellum malformation in off springs of diabetic rats. Biomedical & Pharmacology Journal. 2015; 8 (1): 467-475.*
7. *Hashemi S.S., Rafati A.R. Effects of Different Concentrations of Serums on In Vitro Maturation of Bovine Oocytes. Biosciences Biotechnology Research Asia. 2015;12(2).*

8. Zare D., Jelodar G.A., **Hashemi S.S.** Effect of radiation leakage caused by the microwave oven on the number and viability of sperm mature and immature male rats. *Journal of Shahrekord University of Medical Sciences*. 2016; 18 (2): 100-108.
9. **Hashemi S.S.**, Rafati A.R. Anti-diabetic effect of Cinnamomum zeylanicum Extract in the cerebrum histomorphometry in old fetus diabetic rats. *Der Pharma Chemica*. 2016; 8(12):68-73.
10. **Hashemi S.S.**, Servatkah M. The in vitro effect of different cord blood Platelet Rich Plasma Concentrations on proliferation of dermal fibroblasts. *BIOSCIENCES BIOTECHNOLOGY RESEARCH ASIA*. 2016; 13(8).
11. **Hashemi S.S.**, Rafati A.R. Comparison between human cord blood serum and platelet-rich plasma supplementation for Human Wharton's Jelly Stem Cells and dermal fibroblasts culture. *International Journal of Medical Research & Health Sciences*. 2016; 5 (8).
12. Hoveidi E., Kohan L., **Hashemi S.S.** Association between mir-143 rs41291957 and rs4705342 Genetic Variants with risk endometriosis in pregnant women. *Feyz Journal of Kashan University of Medical Sciences*. 2016; 20 (5).
13. Heidar panah S., Kohan L., **Hashemi S.S.** The relationship between FAS gene rs1800682 polymorphisms and susceptibility to polycystic ovary syndrome. *Arak Medical University Journal*. 2016; 19(115): 9-16.
14. **Hashemi S.S.**, Mahmoodi M., Rafati A.R. Comparison between human adult and umbilical cord blood platelet-rich plasma on proliferation and migration on human skin fibroblast. *World Journal of Plastic Surgery (WJPS)* .2017; 6(2).
15. Nikmaram N., Roohinejad Sh., **Hashemi S.S.**, Koubaa M., Barba F.J., Abbaspourrad A.R., Greiner R., Emulsion-based systems for fabrication of electrospun nanofibers: Food, pharmaceutical and biomedical applications. *RSC Adv*. 2017.
16. Mohtasham Amiri Z., Tanideh N., Seddighi A., Mokhtari M., Amini M., Shakouri Partovi A., Manafi A., **Hashemi S.S.**, Mehrabani D. The Effect of Lithospermum officinale, Silver Sulfadiazine and Alpha Ointments in Healing of Burn Wound Injuries in Rat. *World Journal of Plastic Surgery (WJPS)*. 2017; 6(3).
17. Poorfath MR., Behbahani B., **Hashemi S.S.**, Derakhshanfar A. Monitoring Wound Healing of Burned Rats Using Mesenchymal Stem Cells containing cGFP integrated by Lentiviral Vectors. *Iranian Journal of Basic Medical Sciences (IJBMS)*. 2018; 21(1).

18. **Hashemi S.S.**, Jowkar S., Mahmoodi M., Rafati A.R, Mehrabani D. *Biochemical Methods in Production of Three-Dimensional Scaffold from Human Skin: A New Window in Aesthetic Surgery. World Journal of Plastic Surgery (WJPS).* 2018; 7(1).
19. **Hashemi S.S.**, Rajabi S.S., Mahmoudi R., Ghanbari A., Jafari Barmak M. *Study of the effect of hyaluronic acid on the behavior of skin fibroblasts cultured on chitosan scaffold. Armaghane danesh.* 2018; 23 (2).
20. Amini M., Zare A., Sobhani Z., **Hashemi S.S.**, Vafa L. *The Effect of Laparoscopic Sleeve Gastrectomy on Serum Iron Level. International Journal of Nutrition Sciences.* 2018; 3 (4).
21. Sobhanian P., Khorram M., **Hashemi S.S.**, Mohammadi A.A. *Development of nanofibrous collagen-grafted poly (vinyl alcohol)/gelatin/alginate scaffolds as potential skin substitute. International Journal of Biological Macromolecules.* 2019; 130(1).
22. **Hashemi S.S.**, Kabiri H., Mohammadi A.A., Hashempoor M.R., Amini M., Zardosht M. *The healing effect of Wharton's jelly stem cells seeded on biological scaffold in chronic skin ulcers: A randomized clinical trial. Journal of Cosmetic Dermatology.* 2019; 18(6):1961-1967.
23. Derakhshanfar A, Moayedi J, **Hashemi SS**, Vahedi M, Valizadeh A. *Comparative study on the effects of heated brass bars and scalds methods in experimental skin burn in rat. Comparative Clinical Pathology.* 2019:1-5.
24. Derakhshanfar A., **Hashemi S.S.**, Moayedi JA. *Study on the effects of Perovskia abrotanoides karel on experimental skin burn in male rat: in-vivo and in-vitro findings. J Adv Med Biomed Res.* 2019; 27(122): 17-22.
25. **Hashemi S.S.**, Saadat Jo Z., Mahmoudi R., Delaviz H., Berdania H., Salehpour Z., Jafari Barmak M., Ghanbari A. *Evaluation of Fibroblast Cell Proliferation Assay on Polycaprolactone-Chitosan-Tannic Acid Scaffold. Armaghane danesh.* 2019; 10;24(5):779-94.
26. Nazempour M., Mehrabani D., Mehdinavaz-Aghdam R., **Hashemi S.S.**, Derakhshanfar A., Zare Sh., Zardosht M., Moayedi J., Vahedi M. *The effect of allogenic human Wharton's jelly stem cells seeded onto acellular dermal matrix in healing of rat burn wounds. Journal of Cosmetic Dermatology.* 2020; 19(4):995-1001.

27. **Hashemi S.S.**, Poorfath MR., Derakhshanfar A. Behbahani B. The role of labeled cell therapy with and without scaffold in early excision burn wounds in animal model of rat. *Iranian Journal of Basic Medical Sciences*. 2020; 23(5):673-679.
28. Sabahi Z., Khoshnoud M J., Khalvati B., **Hashemi S.S.**, Ghasempour Farsani Z., Mogholi Gerashi H., Rashedinia M. Syringic acid improves oxidative stress and mitochondrial biogenesis in the liver of streptozotocin-induced diabetic rats. *Asian Pacific Journal of Tropical Biomedicine*. 2020; 10(3): 111-119.
29. Amirsadeghi A., Jafari A., Eggermont LJ., **Hashemi S.S.**, Bencherif SA., Khorram M., Vascularization Strategies for Skin Tissue Engineering. *Biomaterials Science*. 2020; 8, 4052–4073.
30. Hassanshahi N., Masoumi SJ, Mehrabani D., **Hashemi S.S.**, Zare M. The Healing Effect of Aloe Vera gel on Acetic AcidInduced Ulcerative Colitis in Rat. *Journal of Digestive Diseases (MEJDD)*. 2020; 12 (3):154-161.
31. Kamali-Sarvestani A, Hoseini SE, Mehrabani D, **Hashemi SS**, Derakhshanfar A. Effects in rats of adolescent exposure to cannabis Sativa on emotional behavior and adipose tissue. *Bratislava Medical Journal*. 2020; 121(4):297-301.
32. Parsa F, Hoseini SE, Mehrabani D, Hashemi SS, Derakhshanfar A. Effect of Cannabis sativa on brain tissue and memory in male Wistar rats. *Journal of Veterinary Research*. 2020; 24 (5):271-280.
33. Goudarzi Z, Hoseini SE, Mehrabani D, **Hashemi SS**, Derakhshanfar Effect of methamphetamine on uterine tissue, anxiety and apoptotic genes in female Wistar rats. *Journal of Veterinary Research*. 2020; 24(9): 526-536.
34. **Hashemi S.S.**, Rajabi S.S., Mahmoudi R., Ghanbari A., Jafari Barmak M. Polyurethane/Chitosan/ Hyaluronic acid scaffolds are biocompatible and provide an enriched environment for the growth and proliferation of fibroblasts. *Journal of Wound Care*. 2020; 2; 29(10):586-596. doi: 10.12968/jowc.2020.29.10.586.
35. Goudarzi Z., Hoseini SE., Mehrabani D., **Hashemi S.S.** Changes in blood chemistry, pro-inflammatory cytokines and apoptotic genes following methamphetamine use in experimental rats. *PERIÓDICO TCHÊ QUÍMICA*. 2020; vol.17 (n°36)
36. Sanati P., Suan Chua L., Nasiri R., **Hashemi S.S.** Nanoencapsulation of Andrographolide Rich Extract for the Inhibition of Cervical and Neuroblastoma Cancer Cells. *Journal of Biomedical Nanotechnology*. 2020; 16(9): 1370-1380(11). doi: 10.1166/jbn.2020.2973.

37. Sobhani Z., Amini M., Hashemi S.S., Vafa L., Moeinvaziri N., Haghighat N., Hosseini B., Zare A. Changes of Serum 25OH-vitaminD Level in Obese Patients after Sleeve Gastrectomy in Iranian Population. *Annals of Bariatric Surgery*. 2020; 10;9(2):22-5.
38. Kamali Sarvestani A., Hoseini S.E., Mehrabani D., Hashemi S.S. The Effect of Cannabis Extract on the Growth of Adipose-Derived Stem Cells in Adult Male Rats. *Journal of Advanced Biomedical Sciences*. 2020; 10 (4), 2883-2892
39. Rashedinia M, Khoshnoud MJ, Fahlyan BK, **Hashemi SS**, Alimohammadi M, Sabahi Z. Syringic acid: A potential natural compound for the management of renal oxidative stress and mitochondrial biogenesis in diabetic rats. *Current Drug Discovery Technologies*. 2021,18 (3), 405-413.
40. Parsa F, Hosseini E, Mehrabani D, Hashemi S. The Effect of Cannabis Extract on SH-SY5Y Nerve Cell. *Journal of Ardabil University of Medical Sciences*. 2021 Jan 10;20(2):232-41.
41. Soltani Rad N., Behrouz S., Atashbasteh E., **Hashemi S.S.** Butyl methyl imidazolium silica sulfate (BMIm) SS: A novel hybrid nano-catalyst for highly efficient synthesis of new 1,2-diol monoesters of ibuprofen as the novel prodrugs of ibuprofen having potent analgesic property. *Bio-organic Chemistry*.2021; 107, 104570
42. Karimi Z., Janfeshan S., Kargar Abarghouei E., **Hashemi S.S.** TLR 2 and TLR 4 are involved in the therapeutic effect of Mesenchymal Stem Cells in renal ischemic-reperfusion injury in rats. *Bioimpacts*. 2021;11(3)
43. **Hashemi S.S.**, Mahmoodi M., Tohidinik H.R., Mohammadi A. A. Epidemiology and LA50 of Burn in Children in Shiraz, Southern Iran. *World Journal of Plastic Surgery (WJPS)*. 2021; 10(1): 66-70.
44. **Hashemi S.S.**, Mohammadi A.A., Moshirabadi K. Zardosht M. The effect of dermal fibroblasts and mesenchymal stem cells seeded on an amniotic membrane scaffold in skin regeneration: a case series. *Journal of Cosmetic Dermatology*.2021; <https://doi.org/10.1111/jocd.14043>
45. Amirsadeghi A., Khorram M., **Hashemi S.S.** Preparation of Multilayer Electrospun Nanofibrous Scaffolds Containing Soluble Eggshell Membrane as Potential Dermal Substitute. *Journal of Biomedical Materials Research Part A*. 2021; 109 (10): 1812-1827 <https://doi.org/10.1002/jbm.a.37174>.



46. Amirsadeghi A., Jafari A., **Hashemi S.S.**, Kazemi A., Ghasemi Y., Derakhshanfar A., Shahbazi M.A., Niknezhad S.V. Sprayable antibacterial Persian gum-silver nanoparticle dressing for wound healing acceleration. **Materials Today Communications**. 2021 Jun 1; 27:102225.
47. Farhadi N., Mehrabani D., Hosseini S.E., Hashemi S.S. Evaluation of the Effects of Cannabis on Cell Growth of Stem Cells Derived from Endometrial Tissue of Uterine Rats. **Journal of Sabzevar University of Medical Sciences**, 2021; 28(4):814-825
48. Masoumi S.J., Hassanshahi N., Hosseini-Asl S-K., Mehrabani D., **Hashemi S.S.**, Derakhshanfar A., Zare Sh., Jamhiri I. Adipose tissue-derived mesenchymal stem cells ameliorate experimental acute colitis in rats. **Research Square**, 01 Nov 2021  
**DOI: 10.21203/rs.3.rs-1036129/v1**
49. Parsa F., Hoseini S.E., Mehrabani D., Hashemi S.S. The effect of Cannabis sativa on memory, apoptotic genes and inflammatory cytokines in rat. **Academic Journal of Health Sciences: Medicina balear**, 2021; 36 (4), 96-101
50. **Hashemi S.S.**, Saadatjo Z., Mahmoudi R., Delaviz H., Jafari Barmak M. Preparation and evaluation of polycaprolactone/chitosan/Jaft biocompatible nanofibers as a burn wound dressing. **Burns**. 2021; doi: 10.1016/j.burns.2021.12.009. Epub ahead of print. PMID: 34973854.
51. Sanati P., **Hashemi S.S.**, Bahadoran M. ,Amani Babadi A., Akbari E. Detection of Escherichia coli K12 in Water Using Slot Waveguide in Cascaded Ring Resonator. **Silicon**. 2021; 851-857. <https://doi.org/10.1111/jocd.14043>
52. Sheikhi F., Khorram M., **Hashemi S.S.**, Mohammadi A.A. Preparation, characterization, and surface modification of Polycaprolactone-based nanofibrous scaffold by grafting with collagen for skin tissue engineering. **Regenerative Engineering and Translational Medicine**.2022; <https://doi.org/10.1007/s40883-022-00254-1>
53. Kamali-Sarvestani A., Hosseini S.E., Mehrabani D., Hashemi S.S. The effect of cannabis extract on the expression of Bax and Bcl-2 genes in adipose tissue cells in adult male rats. **Alborz University Medical Journal** 2022, 11 (3), 325-338.
54. **Hashemi S.S.**, Janfeshan S., Karimi Z. Acute lung injury induced by acute uremia and renal ischemic-reperfusion injury: The role of toll-like receptors 2 and 4, and oxidative stress. **Iranian Journal of Basic Medical Sciences**. 2022, 25 (5), 643-651

55. Mehrabani D., Nazempour M., Mehdiavaz-Aghdam R., **Hashemi S.S.**, Jalli R., Saeedi Moghadam M., Zare Sh., Jamhiri I., Moayedi J., Karimi-Busheri F. MRI tracking of human Wharton's jelly stem cells seeded onto acellular dermal matrix labeled with superparamagnetic iron oxide nanoparticles in burn wounds. **Burns & Trauma**. 2022, 10, tkac018; <https://doi.org/10.1093/burnst/tkac018>
56. Farhadi N., Hosseini S.E., Mehrabani D., **Hashemi S.S.**, Derakhshanfar A. Behavioral and Reproductive Tissue Changes in Female Rats Experimentally Treated to Cannabis Sativa. **Cureus**. 2022, DOI: 10.7759/cureus.
57. **Hashemi S.S.**, Mohammadi AA., Rajabi S.S., Sanati P., Rafati AR., Kian M., Zarei Z. Preparation and evaluation of a polycaprolactone/chitosan/propolis fibrous nanocomposite scaffold as a tissue engineering skin substitute **Bioimpact**, 2023;13(4): 275-287. doi: 10.34172/bi.2023.26317
58. Abbasi S., Rafati A., Hosseini SM., Roohinejad Sh., Hashemi SS., Hashemi Gahruie H., Rashidinejad A. The internal aqueous phase gelation improves the viability of probiotic cells in a double water/oil/water emulsion system. **Food Science & Nutrition**. 2023, <https://doi.org/10.1002/fsn3.3532>
59. Jahanabadi Sh., Bakhshaeekia AR., Rahbar R., Sheikhi AR., Farhadi M., **Hashemi S.S.** Local Flap Reconstruction of Burn Contractures in Extremities and Neck: A Nine-Year Experience with Long-Term Outcome Evaluation in Southwestern Iran. **World Journal of Plastic Surgery (WJPS)**. 2023; 12(2):1-10. doi: 10.29252/wjps.12.2.
60. **Hashemi S.S.**, Pakdin A., Mohammadi A.A., Keshavarzi A., Mortazavi M., Rafati AR. Study the Effect of Calendula officinalis extract loaded on zinc oxide Nanoparticles Cream in Burn Wound Healing. **ACS Applied Materials & Interfaces**. 2023; 15 (51): <https://doi.org/10.1021/acsami.3c17350>
61. **Hashemi S.S.**, Hayatdavoodi Zh., Kian M., Hassanzadeh Nemati N., Mehrabani D., Mohammadi A.A., Rafati A.R., Ghaedi M., Ghafari B., Alizadeh Naini A. Evaluation of a polycaprolactone/Gelatin/Lucilia sericata larva extract nanofibrous mat for burn-wound healing. **Fibers and Polymers**. 2023; 24:3809–3820 <https://doi.org/10.1007/s12221-023-00348-9>
62. **Hashemi S.S.**, Mohammadi A.A., Kian M., Rafati A.R., Ghaedi M., Ghafari B. Evaluation of the Regenerative Effect of Polycaprolactone/Chitosan Electrospun Nanofibrous Scaffold Containing Bentonite nanoparticles in a Rat Model of Deep

- Second-Degree Burn injury. Iranian Journal of Basic Medical Sciences.* 2024;27(2):223-232- 10.22038/IJBMS.2023.69930.15210
63. Karimi M., Mosaddad S.A., Aghili S.S., Dortaj H., Hashemi S.S., Kiany F. Attachment and proliferation of human gingival fibroblasts seeded on barrier membranes using Wharton's jelly-derived stem cells conditioned medium: An in vitro study. *Journal of Biomedical Materials Research Part B: Applied Biomaterials.* 2024; 112 (1):e35368. <https://doi.org/10.1002/jbm.b.35368>
64. Hashemi S.S., Pirmoradi M., Rafati A.R., Kian M., Mohammadi A.A., Houghoughi M.A.A human acellular dermal matrix coated with zinc oxide nanoparticles accelerates tendon repair in patients with hand flexor tendon injuries in zone 5 of the hand. *BioImpacts.* 2024;14(5):27745 doi: 10.34172/bi.2024.27748
65. Abroudi M., Mehrabani D., Zare S., Jamhiri I., Hamzavai M., Sadat Masoumi S., Mehrabani G., Sadat Masoumi A., Hashemi S.S., Karimi-Busheri F. Apoptosis and Differential Potential of Dental Pulp Stem Cells, When Marijuana Is Added to Nutrients of Cell Culture Medium. *International Journal of Nutrition Sciences.* 2024 Jan 11.
66. Asvar Z., Pirbonyeh N., Emami A., Hashemi S.S., Fadaie M., Ebrahiminezhad AR., Mirzaei E. Enhancing antibacterial activity against multi-drug resistant wound bacteria: Incorporating multiple nanoparticles into chitosan-based nanofibrous dressings for effective wound regeneration. *Journal of Drug Delivery Science and Technology* 2024; 95: 105542, <https://doi.org/10.1016/j.jddst.2024.105542>.
67. Hashemi S.S., Sanati P., Rafati AR. Investigation of the inducing effect of epidermal growth factor on acellular dermal matrix in rat model of skin regeneration. *Journal of Wound Care.* (Accepted)
68. Manafi A., Hamed S.Z., D. Mehrabani D., Hashemi S.S., Seddighi A., Tanideh N., Mokhtari M., Amini M., Comparison of the effects of Hypericum perforatum, silver sulfadiazine and alpha burn ointments in healing of burn wounds. *World Journal of Plastic Surgery (WJPS).* (Accepted).
69. Hashemi S.S., Mehrabani D., Niknam Z. Zebarjad S.M., Moayedi J., Karimi-Busheri F. The Therapeutic Potential of Allogenic Human Wharton's Jelly Stem Cells Seeded onto Poly Vinyl Alcohol/Chitosan/Carbon Nanotubes in Healing of Burn Wounds. *Journal of Pharmacy & Pharmaceutical Sciences.* (Under review).

70. Niknam Z. Zebarjad S.M., Janghorban K., **Hashemi S.S.** *Effect of CNT on Polyvinyl Alcohol/Chitosan Electrospun Fibers: A Detailed Comprehensive Study. Materials Research Express (Under review)*
71. **Hashemi S.S.**, Sanatgar M., Kohan L., Mahmoodi M., Chenari S. *The effect of released growth factors from Mesenchymal Stem Cells on induction of miR146a and miR203 expression in Keratinocytes. Archives of Dermatological Research. (Under review)*
72. **Hashemi S.S.**, Sedigh M., Kohan L., Kavoshi A., Rafati A.R, Mehrabani D. *The effect of conditioned media from human Wharton's jelly stem cells on human fibroblast cells: miRNA-21 and wound healing. Dermatologica Sinica (DSI). (Under review).*

## **Congresses**

1. **Hashemi S.S.**, Jelodar GH., Rafati A.R. *Effect of Fetal Bovine Serum (FBS) and Rat estrus serum (RSS) on in Vitro Maturation of Bovine Oocytes. 17<sup>th</sup> Iranian Congresses of Physiology and Pharmacology, 1-4 oct.2005, Kerman, Iran.*
2. **Hashemi S.S.**, Jelodar, G.H., Rafati A.R. *Effect of season on cattle ovarian activity and oocyte recovery based on slaughtered animals.6th Congres Iranian Veterinary Medicine Students, 9-11 Sep. 2005, Mashhad, Iran.*
3. **Hashemi S.S.**, Jelodar G.H. *Study Effects of five different plants on learning and memory.14<sup>th</sup> Iranian Congresses of Biology, 23-25 Aug. 2005, Guilan, Iran.*
4. Rafati A.R., **Hashemi S.S.** *Effect of different concentrations of Estrous Sheep Serum and Rat Estrous Serum on Bovine Oocytes in Vitro Maturation. 35<sup>th</sup> European Congress of Cytology, 27-30 Sep., 2009, Lisbon-Portugal.*
5. Jelodar GH, **Hashemi S.S.** *The Effects of Fluoxetine on cortisol and thyroid hormone levels and Weight variations in rats. 20<sup>th</sup> Iranian Congresses of Physiology and Pharmacology, 10-14 Oct.2011, Hamedan, Iran.*
6. **Hashemi S.S.**, Rafati A.R. *Effect of maternal diabetes in newborn sex determination.20<sup>th</sup> Iranian Congresses of Physiology and Pharmacology, 10-14 Oct.2011, Hamedan, Iran.*
7. **Hashemi S.S.**, khaksar Z., Tajali M. *Effects of Juglans regia leaves ethanolic extract on changes in the brachial enlargement of the spinal cord in 18 days old fetus diabetic rats. 21<sup>th</sup> International Iranian Congresses of Physiology and Pharmacology, 23-27 Aug. 2013, Tabriz, Iran.*

8. **Hashemi S.S.**, khaksar Z., Tajali M. *Effects of Juglans regia leaves ethanolic extract on changes in the cerebrum in 18 days old fetus diabetic rats. 21<sup>th</sup> International Iranian Congresses of Physiology and Pharmacology, 23-27 Aug. 2013, Tabriz, Iran.*
9. **Hashemi S.S.**, Mohamadi A.A., Amini M., Parvin F. *Human Umbilical Cord Wharton's Jelly Stem Cells Cultured on amniotic scaffolds in Chronic Wound Healing. Wound and Tissue Repair Congresses, 24-26 Sep. 2014, Tehran, Iran.*
10. **Hashemi S.S.**, khaksar Z., Tajali M. *Effects of Juglans regia leaves ethanolic extract on changes in the cerebellum in old fetus diabetic rats. 3<sup>th</sup> Basic and Clinical Neuroscience Congresses, 29-31 Oct. 2014, Tehran, Iran.*
11. Poorfath MR., Salehi S., Behzad Behbahani A., **Hashemi S.S.** *Construction of lentiviral vector of GFP gene to follow the umbilical cord mesenchymal stem cells. 4<sup>th</sup> National Burn Congresses, 25-26 Feb. 2015, Tehran, Iran. (premier article)*
12. **Hashemi S.S.**, Servatkah M. *Effect of platelet-rich plasma on human fibroblast cell migration during wound healing burns. 4<sup>th</sup> National Burn Congresses, 25-26 Feb. 2015, Tehran, Iran.*
13. **Hashemi S.S.** *Epidemiology of burns and LA50 in children admitted in Fars. 4<sup>th</sup> National Burn Congresses, 25-26 Feb. 2015, Tehran, Iran.*
14. Afrasiabi Z., Zardosht M., Mohamadi A.A., Kherad M., Zardosht Z., **Hashemi S.S.** *Study of Epidemiology and Pathology hospitalization burn patients with addiction. Annual International Addiction Science Congress. 9-11 Sep. 2015, Tehran, Iran.*
15. Hoveidi E., Kohan L., **Hashemi S.S.** *Association between mir-143 rs41291957 gene polymorphism and the risk endometriosis. International Congress on reproduction (ISERB 2015). 23-25 May, 2015, Tehran, Iran.*
16. **Hashemi S.S.**, Rostami O., Jowkar S. *Preparation of human 3D skin matrix and investigation of the interaction between Wharton's jelly mesenchymal stem cells and prepared matrix. 5<sup>th</sup> National Burn Congresses, 24-25Feb. 2016, Tehran, Iran. (premier article)*
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18. **Hashemi S.S.**, Poorfath MR., Behbahani B. *Tracking of Mesenchymal Stem Cells in Burned Rats Using cGFP Containing Lentiviral Vectors. 5<sup>th</sup> National Burn Congresses, 24-25 Feb. 2016, Tehran, Iran.*
19. **Hashemi SS.**, Mohammadi A.A., Mahmoodi M., TohidiNik HR., Afrasiabi Z., Zardosht M., Kashvarzi A. *Improvement of LA50 among hospitalized children in Ghotbedin-Shirazi burn hospital during 2010 to 2014. 5<sup>th</sup> National Burn Congresses, 24-25 Feb. 2016, Tehran, Iran.*
20. **Hashemi S.S.**, Mohammadi A.A., Mahmoodi M., TohidiNik HR., Afrasiabi Z., Zardosht M., Kashvarzi A. *Epidemiologically research about educational level among hospitalized patients in Ghotbedin-Shirazi burn hospital during 2009 to 2015. 5<sup>th</sup> National Burn Congresses, 24-25 Feb. 2016, Tehran, Iran.*
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22. **Hashemi S.S.**, Rafati A.R., *Anti-diabetic effect of Cinnamon Extract in the cerebrum histomorphometry in old fetus diabetic rats. The 1<sup>st</sup> National Congress on Animal Models in Experimental Researchs. 14 Apr. 2016, Shiraz, Iran.*
23. **Hashemi S.S.**, Rafati A.R., *Study of the brachial spinal cord region in diabetic rat's fetus changes under the influence of aqueous cinnamon extract. The 1<sup>st</sup> National Congress on Animal Models in Experimental Researchs. 14 Apr. 2016, Shiraz, Iran.*
24. **Hashemi S.S.**, Behrooz S., Soltanirad M.N., Parsaseresht sh. *Antibacterial properties of Chitosan and Aloe Vera composite scaffolds for Wound Healing. 1<sup>th</sup> National Burn and Wound Congresses. 26 May. 2016, Shiraz, Iran.*
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26. **Hashemi S.S.**, Sanatgar M. *Effect of The Wharton's Jelly mesenchymal stem cells supernatant on expression of miR- 203 in keratinocytes. 1<sup>th</sup> National Burn and Wound Congresses. 26 May. 2016, Shiraz, Iran.*
27. Sedigh M., **Hashemi S.S.** *Study of miR- 146a expression on human skin fibroblasts under the influence mesenchymal stem cells. 1<sup>th</sup> National Burn and Wound Congresses. 26 May. 2016, Shiraz, Iran.*

28. **Hashemi S.S., Mahmoodi M., Tamadon GH.** Studying the effect of Platelet Rich Plasma (PRP) on expression of miRNA21 and miRNA 146a in fibroblast cells. 3<sup>th</sup> Iranian congress on progress in tissue engineering and regenerative medicine, 19-21 Oct. 2016, Tehran, Iran.
29. **Hashemi S.S., Sedigh M.** The effect of mesenchymal stem cells on the expression level of miR-146a and miR-21 in human fibroblast cells. 3<sup>th</sup> Iranian congress on progress in tissue engineering and regenerative medicine, 19-21 Oct. 2016, Tehran, Iran.
30. **Hashemi S.S., Mahmoodi M.** Real-time PCR analysis of expression induction of miR-21 and miR-146a after treatment with cord blood PRP. 3<sup>th</sup> Iranian congress on progress in tissue engineering and regenerative medicine, 19-21 Oct. 2016, Tehran, Iran.
31. **Hashemi S.S., Bakhshandeh S.** Effect of fraxinus excelsior extracts on proliferation and migration of human skin fibroblast. 6<sup>th</sup> National Burn Congresses, 22-23 Feb. 2017, Mashhad, Iran.
32. **Hashemi S.S., Damyar F.** Effects of the aqueous extract of winter cherry fruits (*Physalis alkekengi*) on proliferation and migration of human skin fibroblast. 6<sup>th</sup> National Burn Congresses, 22-23 Feb. 2017, Mashhad, Iran.
33. **Hashemi S.S., Mohammadi A.A.** The effect of Human Umbilical Cord Wharton's Jelly Stem Cells Cultured on amniotic membrane in Chronic Wound Healing (Clinical control randomize trial). 2<sup>nd</sup> International Congress on Stem Cell and Regenerative Medicine, 13-15 July 2017, Tehran, Iran.
34. **Hashemi S.S., Rafati A.R.** Evaluation of Mesenchymal Stem Cells Cultured on Nanofibrous Scaffolds for Skin Tissue Engineering and Wound Healing. 2<sup>nd</sup> International Congress on Wound and Tissue Repaire, 25-27 Oct. 2017, Tehran, Iran.
35. **Hashemi S.S., Mohammadi A.A.** Effect of co-cultured mesenchymal stem cells and fibroblast cells Cultured on amniotic membrane scaffold in Chronic Wound Healing (Clinical control randomize trial). 7<sup>th</sup> National Burn Congresses, 3-4 March 2018, Tehran, Iran.
36. **Hashemi S.S., Rafati A.R., Hamidizadeh N.** Determination of the best mixing ratio of co-cultured primary melanocyte and keratinocyte cells in the re pigmentation of induced vitiligo in mouse skin. 7<sup>th</sup> National Burn Congresses, 3-4 March 2018, Tehran, Iran.

37. **Hashemi S.S.**, Rajabi S.S., Jafari Barmak M. *The behavior of skin fibroblast cells on three dimensional electrospun scaffold. 7<sup>th</sup> National Burn Congresses, 3-4 March 2018, Tehran, Iran.*
38. Nasiri Kaftarak M., Sameni S., **Hashemi S.S.** *GC-MS Analysis of Propolis Samples from Fars, Iran. National Bee products Congresses, 24-25 April 2018, Esfahan, Iran.*
39. Rasouli S., **Hashemi S.S.** Sameni S. *Investigation of the Wound Healing Effect of Royal Jelly in Mouse. National Bee products Congresses, 24-25 April 2018, Esfahan, Iran.*
40. Nasiri Kaftarak M., Sameni S., **Hashemi S.S.** *Study of Biochemical Composition of Propolis from South of Iran. 3<sup>th</sup> National Conference on Protein & Peptide Sciences. 25-26 April 2018, Shiraz, Iran.*
41. Nasiri Kaftarak M., Sameni S., **Hashemi S.S.** *Comparison of the Wound Healing Activity of Hydro-alcoholic Extract of Propolis with Those of Mesenchymal Stem Cells in Mouse. 6<sup>th</sup> International Congress of Biochemistry and Molecular Biology (ICBMB 2018), 25-26 August, Esfahan, Iran.*
42. Zahiri Z., Sameni S., **Hashemi S.S.** *Relationship between Serum Level of Zinc with Caspase 3 and BAX in Patients with Type 2 Diabetes. 6th International Congress of Biochemistry and Molecular Biology and the 15th Iranian National Congress of Biochemistry (ICBMB 2018), 25-26 August, Esfahan, Iran.*
43. Hasanzade F., sameni S., **Hashemi S.S.**, jafary H., *Evaluation of the effect of type 2 diabetic serum on malondialdehyde, superoxidedismutase and catalase activity in HDF cancer cell line compared to normal human fibroblast cells. 2rd International Biomedical Congress of Iran. 24-27 December 2018, Tehran, Iran.*
44. Zahiri Z., Sameni S., **Hashemi S.S.** *Type-2 diabetic serum effects on the growth and cell survival of cancer cells. 2rd International Biomedical Congress of Iran. 24-27 December 2018, Tehran, Iran.*
45. Dehghanian N., **Hashemi S.S.**, Rafati A.R., Sameni S. *Biochemical study of bee venom from fars province and its effects on the wound healing and cell adhesion of human fibroblast cells. 2rd International Biomedical Congress of Iran. 24-27 December 2018, Tehran, Iran.*



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47. **Hashemi, SS**, Karimi, Z. , Kargare, E. Rahimi Jaberi, K.H. Therapeutic effect of mesenchymal stem cells on acute kidney injury induced by bilateral ischemic reperfusion in rats. 3rd International & 8th National Burn Congress. 28th Februray & 1st March 2019, Shiraz, Iran.
48. Karimi, Z. **Hashemi, SS**. Chenari, S. Therapeutic role of mesenchymal stem cells on acute lung injury induced acute kidney injury by bilateral nephrectomy in rats .3rd International & 8<sup>th</sup> National Burn Congress. 28th Februray & 1st March 2019, Shiraz, Iran.
49. Rafati A.R., **Hashemi S.S.**, Rajabi S.S. Artificial skin substitute made using Propolis and evaluation of fibroblast adhesion and cell viability. 3rd International & 8<sup>th</sup> National Burn Congress. 28<sup>th</sup> Februray & 1st March 2019, Shiraz, Iran.
50. Farhadi N., Hoseini SE., Mehrabani D., **Hashemi S.S.**, Derakhshanfar A. The anxiety-like behavior and uterine tissue histological changes in rats treated with Cannabis sativa. 13<sup>th</sup> annual international addiction science congress. 21<sup>th</sup> Aug 2019 Iran University of Medical. Tehran, Iran.
51. Khajehzadeh H., **Hashemi S.S.**, Hatami M. In vitro effect of low-level laser therapy on the proliferation and migration of human dermal fibroblasts. 9<sup>th</sup> National Burn Congresses, 20-21 Feb. 2020, Tehran, Iran.
52. Niknam Z., **Hashemi S.S.**, Zebarjad SM. Evaluation of tissue-engineered chitosan-poly (vinyl alcohol)- CNT nanofibrous scaffolds in healing of rat model burn wounds. 9<sup>th</sup> National Burn Congresses, 20-21 Feb. 2020, Tehran, Iran.
53. **Hashemi S.S.**, Rafati A.R., Rezaeian poor R. Polyurethane/Chitosan/ Bentonite scaffolds are biocompatible and provide an enriched environment for the growth and proliferation of fibroblasts. 9<sup>th</sup> National Burn Congresses, 20-21 Feb. 2020, Tehran, Iran.
54. **Hashemi S.S.**, Sanati P., Rafati A.R. Exploration of the effect of fibroblast growth factor in collaboration with natural skin substitute for burned wound healing. 10<sup>th</sup> National Burn Congresses, 28-30 Oct. 2021, Mazandaran, Iran.

55. Moradi ghermezi S., **Hashemi S.S.**, Sanati P. Eghbalpour F., Rafati A.R., *Effect of Andrographolide polymeric nanoparticles in improving burned wound healing. 10<sup>th</sup> National Burn Congresses, 28-30 Oct. 2021, Mazandaran, Iran.*
56. Rafati A.R., **Hashemi S.S.**, Sanati P. *Comparison of the healing consequence different human allogeneic platelet-rich plasma in wound healing. 10<sup>th</sup> National Burn Congresses, 28-30 Oct. 2021, Mazandaran, Iran.*
57. Rezaeianpour R., **Hashemi S.S.**, *The Effect of PRP on ASC proliferation and adipogenic differentiation affecting animal model diabetic wound healing. 10<sup>th</sup> National Burn Congresses, 28-30 Oct. 2021, Mazandaran, Iran.*
58. Alizadenaini A., Hadianfard M.J., **Hashemi S.S.** *Preparation and evaluation of Polycaprolactone/Chitosan/pr-NPs biocompatible nanofibers as skin tissue engineering scaffolds. 32nd European Congress on Nanotechnology and Materials Engineering, 26-27 July, 2021, Webinar.*
59. Alizadenaini A., Hadianfard M.J., **Hashemi S.S.**, Kian M. *Hydrogels reinforced with TiO<sub>2</sub>-NPs for wound healing application. Sixth International Conference on Applied Research in Science and Engineering. 30 Mar. 2022*
60. Alizadenaini A., Hadianfard M.J., **Hashemi S.S.** *Fabrication and characterization of two-layer nanocomposite of artificial skin. First National student festival of stem cell sciences and technology . 17 May. 2022. Tehran. Iran.*
61. Alizadenaini A., Hadianfard M.J., **Hashemi S.S.** *Investigation of properties of two-layer synthetic skin nanocomposites containing titanium dioxide antibacterial nanoparticles. 6<sup>th</sup> International Conference on Applied Research in Science and Engineering, 30 March. 2022, Aachen, Germany.*
62. Rafati A.R., **Hashemi S.S.**, Keshavarzi A., Sanati P. *Effect of Epidermal Growth Factor-Loaded Acellular Dermal Matrix in skin regeneration. 11<sup>th</sup> National Burn Congresses, 16-17Feb. 2023, Tehran, Iran.*
63. **Hashemi S.S.**, Eyzadi B., Mohammadi AA., Keshavarzi A., Mortazavi M., *In vitro study of antibacterial hydrogels in wound healing of full skin thickness. 11<sup>th</sup> National Burn Congresses, 16-17Feb. 2023, Tehran, Iran.*

64. **Hashemi S.S.**, Rafati A.R., Keshavarzi A., *Development of antibacterial acellular dermal matrix scaffold as a potential skin substitute. 11<sup>th</sup> National Burn Congresses, 16-17Feb. 2023, Tehran, Iran.*
65. Rafati A.R., **Hashemi S.S.**, Saadatjo Z., Jafari Barmak M. *Electrospun Polycaprolactone/Chitosan/Jaft biocompatible nanofibers for skin tissue engineering. 11<sup>th</sup> National Burn Congresses, 16-17Feb. 2023, Tehran, Iran.*
66. Rafati A.R., **Hashemi S.S.**, Mohammadi AA., Ghaedi M., Kian M., GhafariB., Shahhossein Z. *In Vivo Evaluation of Electrospun Nanofibrous Scaffold Containing Bentonite nanoparticle on wound healing. 11<sup>th</sup> National Burn Congresses, 16-17Feb. 2023, Tehran, Iran.*

### **Teaching Experiences**

- *Teaching theoretical and practical basic Histology in Ph.D. student of comparative biomedical of School Advanced Medical Sciences and Technologies in Shiraz University of Medical Sciences.*
- *Teaching theoretical and practical advance Histology in Ph.D. student of comparative biomedical of School Advanced Medical Sciences and Technologies in Shiraz University of Medical Sciences.*
- *Teaching theoretical and practical Embryology in Ph.D. student of comparative biomedical of Advanced Medical Sciences and Technologies in Shiraz University of Medical Sciences.*
- *Teaching theoretical and practical Principles of working with laboratory animals in Ph.D. student of Tissue Engineering and Applied Cell Sciences of School Advanced Medical Sciences and Technologies in Shiraz University of Medical Sciences.*
- *Teaching theoretical and practical Principles of working with laboratory animals, Isolation and culture of cells in the MSc and Ph.D. student of Medical Nanotechnology of School Advanced Medical Sciences and Technologies in Shiraz University of Medical Sciences.*
- *Teaching theoretical and practical Principles of working with laboratory animals in MSc student of Nanotechnology, biotechnology and tissue engineering of School of Medicine in Fasa University of Medical Sciences.*

- *Teaching theoretical and practical basic and advance Histology, Embryology, Physiology, Anatomy and Cell and Molecular biology, Cell Culture and Animal Modeling held in Islamic Azad University and Payame Noor University.*

### **Holding and Teaching at the workshops**

*1 .Holding and teaching at more than 25 workshops on " Principles of working with laboratory animals", faculty members and post graduate students, Medical and other universities around the county. 2015-now*

*2 .Holding and teaching at more than 12 Workshop on "Cell Culture, basics and applications", for faculty members and/or post graduate students, Medical and other universities around the county. 2014-now*

*Holding and teaching at more than 12 Workshop on "Fibroblast Cell Culture", for graduate and post graduate students, Medical and other universities around the county. 2014-now*

*3 .Holding and teaching at more than 8 workshops on "PCR and Primer Design", for graduate and post graduate students, Medical and other universities around the county. 2015-now*

*4 .Holding and teaching at more than 8 Workshop on "Electrophoresis", for graduate and post graduate students, Medical and other universities around the county. 2015-now*

### **Ongoing Researches**

*Currently working as the head of Cell Culture and Skin Tissue Engineering Research Group at Burn and Wound Healing Research Center*

*The main goals of the projects undertaken are:*

- *Cell therapy in chronic skin ulcers patients: Autologous fibroblast cell and Allogenic stem cell therapy*
- *Cell therapy in vitiligo patients: Autologous grafting with melanocytes and keratinocytes suspension for treatment of depigmented lesion collaboration with Molecular Dermatology Research Center is in progress*
- *Production of artificial skin substitutes in burns and chronic wound treatment*

- *Investigation of biomaterials and Nanotherapeutics for Enhancing Skin Wound Healing*
- *Isolation and characterization of mesenchymal stem cells in order to study the differentiation potentials*
- *Assessment of In-vitro proliferation and migration activity*

## **Technical Expertise**

### ***Animal modeling***

- *Ulcerative colitis*
- *Osteoarthritis*
- *Burn*
- *Tendon and ligament injuries*
- *Cancer*
- *Myocardial infarction*
- *Diabetes*
- *Atherosclerosis*
- *Spinal cord injury*
- *MS*

### ***Histology***

- *H&E*
- *Specific staining*

### ***Molecular***

- *PCR*
- *RT-PCR*
- *Real time PCR*
- *Gel electrophoresis*
- *ICC*
- *IHC*
- *WB*
- *ELISA*
- *Spectrophotometry*
- *Flowcytometry*

- *Electroporation*
- *Pronucleus injection*
- *Injection of gene-targeted ESCs into blastocyst*
- *Nanodrug delivery*

#### ***Cell culture***

- *Hematopoietic stem cell culture*
- *Mesenchymal stem cell culture*
- *Embryonic stem cell culture*
- *Embryonic fibroblast culture*
- *Fibroblast culture*
- *Melanocyte culture*
- *Keratinocyte culture*
- *Astrocyte culture*
- *Microglial culture*
- *Oligodendrocyte culture*

#### ***Statistical analysis***

- *SPPS software*
- *Endnote software*
- *Excel*