

Sona Zare

Curriculum Vitae

CONTACTS

- Skin and Stem Cell Research Center, Tehran University of Medical Sciences, No 4, Maryam Alley, South Kamraniyeh Street, Tehran, Iran.
- Stem Cell and Regeneration Medicine Center, Sharif University of Technology, Azadi Ave, Tehran, Iran.

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CURRENT POSITION

- Director of Cell Therapy Department, Skin and Stem Cell Research Center, Tehran University of Medical Sciences, Tehran, Iran.
- Director of Clean Room, Stem Cell and Regeneration Medicine Center, Sharif University of Technology, Tehran, Iran.
- CEO of Zist Sakht Bonyan Pars Company (stem cells and tissue engineering research and develop products), Sharif University of Technology, Tehran, Iran.

ACADEMIC BACKGROUND

Ph.D.: Cellular and Molecular Biology, Islamic Azad University (2015-2020)

M.Sc.: Cellular and Molecular Biology, University of Kurdistan (2008-2011)

B.Sc.: Plant Biology, Shahid Beheshti University (2003-2007)

RESEARCH INTERESTS

- Applications of autologous and allogeneic cell therapy in skin diseases
- Applications of tissue engineering in diabetic and burn wounds
- Applications of stem cell derived condition medium and exosomes for skin repair
- Design and fabrication of hydrogels for using in clinic
- Cell banking

PUBLICATIONS

- **Journal Papers**

Zare S, Zarei MA, Ghadimi T, Fathi F, Jalili A, Hakhamaneshi MS. Isolation, cultivation and transfection of human keratinocytes. *Cell biology international*. 2014 Apr;38(4):444-51.

Zare S, Hassani AS, Nilforoushzadeh MA. Cell Therapy for Dermal Reconstruction. *Journal of Skin and Stem Cell*. 2014 Oct 1;1(2).

Zare S, Kurd S, Rostamzadeh A, Nilforoushzadeh MA. Types of stem cells in regenerative medicine: a review. *J Skin Stem Cell*. 2014;1(3).

Rostamzadeh A, Anjomshoa M, Kurd S, Chai JK, Jahangiri F, Nilforoushzadeh MA, **Zare S (Corresponding Author)**. The role of Wharton's jelly mesenchymal stem cells in skin reconstruction. *Journal of Skin and Stem Cell*. 2015 Jun 1;2(2).

Zare S, Anjomshoa M, Kurd S, Chai JK, Dahmardei M, Nilforoushzadeh MA, Rostamzadeh A. Regenerative medicine: novel approach in burn wound healing. *Journal of Skin and Stem Cell*. 2015 Jun 1;2(2).

Zare S, Ahmadi R, Rostamzadeh A, Kurd S, Hejazi S, Fard M, Anjomshoa M, Nilforoushzadeh MA. Application of allogeneic fibroblast cells in cellular therapy of recessive dystrophic epidermolysis bullosa. *Journal of Skin and Stem Cell*. 2015;2(3).

Faramarzi H, Mehrabani D, Fard M, Akhavan M, **Zare S**, Bakhshalizadeh S, Manafi A, Kazemnejad S, Shirazi R. The potential of menstrual blood-derived stem cells in differentiation to epidermal lineage: a preliminary report. *World Journal of Plastic Surgery*. 2016 Jan;5(1):26.

Amirkhani MA, **Zare S**, Shoaie-Hassani A, Torbati E, Nilforoushzadeh MA. Literature Review of Adipose-derived Mesenchymal Cells from History to Approaches. *Iranian Red Crescent Medical Journal*. 2017;19(1):1.

Akhavan-Tavakoli M, Fard M, Khanjani S, **Zare S**, Edalatkhah H, Mehrabani D, Zarnani AH, Shirazi R, Kazemnejad S. In vitro differentiation of menstrual blood stem cells into keratinocytes: a potential approach for management of wound healing. *Biologicals*. 2017 Jul 1; 48:66-73.

Fard M, Akhavan-Tavakoli M, Khanjani S, **Zare S**, Edalatkhah H, Arasteh S, Mehrabani D, Zarnani AH, Kazemnejad S, Shirazi R. Bilayer amniotic membrane/nano-fibrous fibroin scaffold promotes differentiation capability of menstrual blood stem cells into keratinocyte-like cells. *Molecular biotechnology*. 2018 Feb;60(2):100-10.

Kazemikhoo NA, **Zare S**, Mokmeli S, Dahmardehei M, Vaghardoost R, Momeni M, Ansari F, Nilforoushzadeh MA. Effects of Autologous Fibroblast Transplantation and Low-Level Laser Therapy in Healing Process of Grade Three Burn wounds in Diabetic Patients.

Ashtiani HR, Bishe P, Lashgari NA, Nilforoushzadeh MA, **Zare S**. Liposomes in cosmetics. *Journal of Skin and Stem Cell*. 2016 Sep 23;3(3).

Salehinia F, Ashtiani HA, Rastegar H, Allameh AA, **Zare S**, Nilforoushzadeh MA. Discovering Cellular Response to Medicinal Herbs, Iranian Traditional Medicine and Modern Cosmeceutical Approaches. *Journal of Skin and Stem Cell*. 2016 Dec 23;3(4).

Nilforoushzadeh MA, Ashtiani HR, Jaffary F, Jahangiri F, Nikkhah N, Mahmoudbeyk M, Fard M, Ansari Z, **Zare S (Corresponding Author)**. Dermal fibroblast cells: biology and function in skin regeneration. *Journal of Skin and Stem Cell*. 2017 Jun 30;4(2).

Nilforoushzadeh MA, Ashtiani HR, Nickhah N, Fard M, Mahmoudbeyk M, Jahangiri F, Ansari ZJ, **Zare S (Corresponding Author)**. Application of dermal fibroblast cells in cell therapy of wound. *Journal of Skin and Stem Cell*. 2017 Dec 31;4(3-4).

Ashtiani HR, Zakizadeh S, Khanahmadi M, Nilforoushzadeh MA, **Zare S**. Apoptosis in hair and skin: a review. *Journal of Skin and Stem Cell*. 2018 Dec 31;5(4).

Nilforoushzadeh MA, Heidari-Kharaji M, Zare M, **Zare S**, Baiat Tork B, Jaffary F. Combination therapy of trichloroacetic acid, human autologous fibroblast injection and fibroblast seeded microfibrillar collagen scaffold as a novel treatment for osteomyelitis diabetic foot ulcer. *Journal of Diabetes Investigation*. 2021 Jun;12(6):1112-7.

Sharifynia S, Tabarsi P, Bahmani N, Jamaati H, Pourabdollah M, Askari E, Daustany M, Emami M, **Zare S**, Hasani Y, Mohammadnia A. Real-time PCR-based method for detection of *Aspergillus* Spp in bronchoalveolar respiratory samples. *Minerva*. 2020 Dec;59.

Nilforoushzadeh MA, Heidari-Kharaji M, Alavi S, Mahmoudbeyk M, Torkamaniha E, Peyrovan A, Nouri M, **Zare S (Corresponding Author)**. Assessing the effectiveness of the combination therapy with fractional Er-YAG laser and platelet-rich plasma in treatment of periorbital dark circles patients: A clinical trial. *Journal of Cosmetic Dermatology*. 2021 Nov;20(11):3526-36.

Zare S, Ahmadi R, Mohammadnia A, Nilforoushzadeh MA, Mahmoodi M. Biological characteristics and optical reflectance spectroscopy of human placenta derived mesenchymal stem cells for application in regenerative medicine. *Journal of Lasers in Medical Sciences*. 2021;12.

Nilforoushzadeh MA, **Zare S (Corresponding Author)**, Farshi S, Mahmoudbeyk M, Nouri M, Jaffary F, Nikkhah N. Clinical, biometric, and ultrasound assessment of the effects of the autologous fibroblast cells transplantation on nasolabial fold wrinkles. *Journal of Cosmetic Dermatology*. 2021 Oct;20(10):3315-23.

Nilforoushzadeh MA, Heidari-Kharaji M, Alavi S, Nouri M, Nikkhah N, Jahangiri F, Mahmoudbeyk M, Peyrovan A, Baiat Tork B, Torkamaniha E, **Zare S (Corresponding Author)**. Transplantation of autologous fat, stromal vascular fraction (SVF) cell, and platelet-rich plasma (PRP) for cell therapy of atrophic acne scars: Clinical evaluation and biometric assessment. *Journal of cosmetic dermatology*. 2022 May;21(5):2089-98.

Nilforoushzadeh MA, Razzaghi M, Rustamzadeh A, Alimohammadi A, **Zare S (Corresponding Author)**, Farshi S. Effects of Nitric Oxide Activity on the Induction of Oxidative Stress in Skin Cell Signalling, Migration and Apoptosis. *J Clin Exp Dermatol Res. S*. 2021; 9:572.

Nilforoushzadeh MA, Amiri AB, Shaghghi B, Alimohammadi A, Ahmadi R, Darian EK, Razzaghi M, Tavirani MR, **Zare S (Corresponding Author)**. Characterization of an Enzyme-Catalyzed Crosslinkable Hydrogel as a Wound Dressing in Skin Tissue Engineering. *Journal of Lasers in Medical Sciences*. 2021;12.

Nilforoushzadeh MA, Amirkhani MA, Khodaverdi E, Razzaghi Z, Afzali H, Izadpanah S, **Zare S (Corresponding Author)**. Tissue engineering in dermatology-from lab to market. *Tissue and Cell*. 2022 Feb 1; 74:101717.

Nilforoushzadeh MA, Raoofi A, Afzali H, Gholami O, **Zare S (Corresponding Author)**, Nasiry D, Khodaverdi Darian E, Rustamzadeh A, Alavi S, Ahmadi R, Alimohammadi A. Promotion of cutaneous diabetic wound healing by subcutaneous administration of Wharton's jelly mesenchymal stem cells derived from umbilical cord. *Archives of dermatological research*. 2022 Feb 7:1-3.

Nilforoushzadeh MA, Nouri M, Alavi S, Sadatiseyedmahaleh A, Razzaghi Z, Khodaverdi Darian E, Afzali H, Mahmoudbeyk M, Behrangi E, Nikkhah N, Peyrovan A, **Zare (Corresponding Author), S**. Combination of epidermal keratinocyte–melanocyte cells suspension and microneedling: Safe surgical approach in vitiligo. *Journal of Cosmetic Dermatology*. 2022 Apr 14.

Nilforoushzadeh MA, Afzali H, Raoofi A, Nouri M, Naser R, Gholami O, Nasiry D, Mohammadnia A, Razzaghi Z, Alimohammadi A, Naraghi ZS, **Zare S (Corresponding Author)**, Topical spray of Wharton's jelly mesenchymal stem cells derived from umbilical cord accelerates diabetic wound healing. *Journal of Cosmetic Dermatology*. 2022 Apr 28.

Nilforoushzadeh MA, Heidari-Kharaji M, Alavi S, Nouri M, **Zare S (Corresponding Author)**, Mahmoudbeyk M, Peyrovan A, Sadati AS, Behrangi E. Acne scar treatment using combination therapy: Subcision and human autologous fibroblast injection. *Journal of Cosmetic Dermatology*. 2022 Apr 15.

Nilforoushzadeh MA, Khodaverdi Darian E, Afzali H, Amirkhani MA, Razzaghi M, Naser R, Amiri AB, Alimohammadi A, Nikkhah N, **Zare S (Corresponding Author)**. Role of Cultured Skin Fibroblasts in Regenerative Dermatology. *Aesthetic Plastic Surgery*. 2022 Jun 8:1-9.

Nilforoushzadeh MA, Amirkhani MA, Seirafianpour F, Pakbaz Y, **Zare S (Corresponding Author)**, Goodarzi A. Regenerative Medicine in Dermatology. *Journal of Skin and Stem Cell*. 2022 Mar 31;9(1).

Shojaei E, **Zare S**, Shirkavand A, Eslami E, Fathollah S, Mansouri P. Biophysical evaluation of treating adipose tissue-derived stem cells using non-thermal atmospheric pressure plasma. *Scientific Reports*. 2022 Jul 1;12(1):1-3.

Behrangi E, Moradi S, Ghassemi M, Goodarzi A, Hanifnia A, **Zare S**, Nouri M, Dehghani A, Seifadini A, Nilforoushzadeh MA, Roohaninasab M. The investigation of the efficacy and safety of stromal vascular fraction in the treatment of nanofat-treated acne scar: a randomized blinded controlled clinical trial. *Stem Cell Research & Therapy*. 2022 Dec;13(1):1-1.

Nilforoushzadeh MA, Ataei A, **Zare S (Corresponding Author)**, two methods with less Donor site complications of Epidermal Cellular Grafting in Cell Therapy of Vitiligo (accepted in *Iranian Journal of Public Health*).

Alizadeh-Otaghvar HR, Moradi F, Sadigh N, Raofi A, Darabi S, Rustamzadeh A, Ghadimi T, Rezaie MJ, Seidkhani E, Ahadi R, Shabani R, Mousavi-Khaneghahh A, **Zare S**. Silk fibroin and Nettle extract promote wound healing in a rat model: A histological and morphometrical study. *Acta Histochemica*. 2022 Aug 1;124(6):151930.

Roohaninasab M, Seifadini A, Atefi N, Sadeghzadeh-Bazargan A, Goodarzi A, Hanifnia AR, Nouri M, **Zare S**, Moradi S, Dehghani A, Nilforoushzadeh MA. Evaluating the effectiveness of Stromal-Vascular Fraction (SVF) cells along with subcision method in the treatment of acne scars: a double blind randomized controlled clinical trial study. *Journal of Cosmetic Dermatology*. 2022 Sep 10.

Nilforoushzhadeh MA, Farshi S, Nouri M, Alavi S, Tork BB, Jaffary F, **Zare S (Corresponding Author)**. Transplantation of Autologous Epidermal Melanocyte-Keratinocyte Cells Suspension for Cell Therapy of Vitiligo: A Clinical Evaluation and Biometric Assessment. *Journal of Cosmetic Dermatology*. 2022 Oct 7.

Wdowiak A, Kamalzadeh S, **Zare S**. The Healing Effects of Conditioned Medium Derived from Human Neonatal Fibroblast Cells on Diabetic Wound. *International Journal of BioLife Sciences (IJBLS)*. 2022 Dec 1;1(3 (Special Issue: papers selected from ICLS22, Istanbul, Turkey)):147-53.

Zare S, Sajadi R, Nateghizad H. The Healing Effects of Human Acellular Amniotic Membrane on Skin Wound in Diabetic Animals. *International Journal of BioLife Sciences (IJBLS)*. 2022 Dec 1;1(3 (Special Issue: papers selected from ICLS22, Istanbul, Turkey)):159-64.

Zare S, Mirbahari SN. Isolation and Characterization of Human Adipose Tissue Derived Mesenchymal Stem Cells. *International Journal of BioLife Sciences (IJBLS)*. 2022 Dec 1;1(3 (Special Issue: papers selected from ICLS22, Istanbul, Turkey)):193-200.

Abbasnezhad F, **Zare S**, Razzaghi M, Karjou R, Karjou Z, Zadehmodarres S. Effective Combination Therapy with Human Amniotic Membrane Mesenchymal Stem Cells and Low-Level Laser Therapy in Wound Healing in Animal Models. *Journal of Lasers in Medical Sciences*.;13:e72-.

Nilforoushzhadeh MA, Nouri M, Alavi S, Amirkhani MA, Zare S, Rad EA, Rohaninasab M, Behrangi E, Shamloo A, Maleki B, **Zare S (Corresponding Author)**. Notable Enhancement of Facial Scarring Following Autologous Melanocyte-Keratinocyte Transplantation and NUVB Therapy: A Case Report. *Journal of Lasers in Medical Sciences*. 2022;13:e78-.

• **Conference Papers**

S. Kurd, N. Mollasalimi, A. Ahmadi, F. Menbari, **S. Zare**, E. Izadpanah, K. Hasanzadeh, “Effect of methanolic and n-hexanic extracts of *Allium porrum* L. on some human coagulation tests in vitro”, 8-10 February 2011, Ahvaz, Iran (poster presentation).

S. Zare, M. A. Zarei, F. Fathi, A. Jalili, M. S. Hakhamaneshi, S. Kurd, N. Borjian, “Investigation of in Vitro Effect of Various Matrix Culture Dishes on Growth and Prolifereation of Human Skin Keratinocyte cells”, 1st International Tehran Burn Congress, 7-9 March 2012, Tehran, Iran (oral presentation).

S. Zare, S. Kurd, F. Fathi, M. A. Zarei, A. Jalili, M. S. Hakhamaneshi, “Induction of Pluripotency in Human Keratinocytes using Plasmid Containing Four Transcription Factors”, The First National Conference on New Cellular and Molecular Biotechnology, 16-17 May 2012, Tehran, Iran (poster and oral presentation).

S. Kurd, F. Fathi, M. A. Zarei, A. Jalili, M. S. Hakhamaneshi, **S. Zare**, “Reprogramming Mouse Cumulus Cells Using Somatic Cell Nuclear Transfer Method (SCNT)”, 15th Tabriz International Medical Sciences Congress, 22-24 August 2012, Tabriz, Iran (poster presentation).

S. Zare, F. Fathi, S. Kurd, M. A. Zarei, A. Jalili, M. S. Hakhamaneshi, “Induction of Pluripotency in Human Skin Keratinocytes using Plasmid Containing Two Transcription Factors Oct4 and Sox2”, Royan International Twin Congress (8th congress on Stem Cell Biology and Technology, 5-7 September 2012, Tehran, Iran (poster presentation).

S. Kurd, F. Fathi, M. A. Zarei, A. Jalili, M. S. Hakhamaneshi, **S. Zare**, “Production of Cloned Mice by Somatic Cell Nuclear Transfer”, Royan International Twin Congress (13th congress on Reproductive Medicine), 5-7 September 2012, Tehran, Iran (poster presentation).

M. A. Nilforoushzadeh, **S. Zare**, S. Izadpanah, “Application of Autologous Fibroblast Cells in Cell Therapy of Skin Aging”, Congress of Skin Diseases Update (Skin & Aging), 8-10 Jan 2014, Tehran, Iran (poster presentation).

M. A. Nilforoushzadeh, **S. Zare**, S. Izadpanah, “Cell Therapy of Skin Aging Using Adipose Derived Mesenchymal Stem Cells”, Congress of Skin Diseases Update (Skin & Aging), 8-10 Jan 2014, Tehran, Iran (poster presentation).

M. A. Nilforoushzadeh, **S. Zare**, S. Izadpanah, “Keratinocyte Cells Appropriate Case for Generation of induced Pluripotent Stem Cells (iPS Cells)”, 7th Congress of updates in Dermatology and Cosmetic, 18-20 Feb 2014, Esfahan, Iran (oral presentation).

M. A. Nilforoushzadeh, F. Jaffary, **S. Zare**, S. Izadpanah, E. Haftbaradaran, A. Zolfaghari, “Application of Fibroblast Cells in Cell Therapy of Skin Diseases”, 7th Congress of updates in Dermatology and Cosmetic, 18-20 Feb 2014, Esfahan, Iran (oral presentation).

M. A. Nilforoushzadeh, F. Jaffary, **S. Zare**, S. Izadpanah, “Cell Therapy: New Method in Treatment of Diseases”, 7th Congress of updates in Dermatology and Cosmetic, 18-20 Feb 2014, Esfahan, Iran (oral presentation).

S. Zare, F. Fathi, M. A. Nilforoushzadeh, F. Jaffary, M. A. Zarei, “Optimization of Human Keratinocyte Cells Culture for Clinical Applications”, 7th Congress of updates in Dermatology and Cosmetic, 18-20 Feb 2014, Esfahan, Iran (oral presentation).

S. Zare, F. Fathi, S. Kurd, M. A. Zarei, A. Jalili, M. S. Hakhamaneshi, “Optimization of Transfection of Human Skin Keratinocyte Cells by Plasmid Containing Green Fluorescent Protein Gene (GFP) for Application of These Cells in Gene Therapy and Cell Therapy”, 1th Iranian National Conference of Molecular Medicine, 20 March 2014, Mashhad, Iran (poster presentation).

S. Zare, F. Fathi, S. Kurd, M. A. Zarei, A. Jalili, M. S. Hakhamaneshi, “Reprogramming of Human Somatic Cells Without Using Virus”, 1th Iranian National Conference of Molecular Medicine, 20 March 2014, Mashhad, Iran (poster presentation).

S. Kurd, **S. Zare**, “Reprogramming of Somatic Cells to Embryonic period”, 1th Iranian National Conference of Molecular Medicine, 20 March 2014, Mashhad, Iran (poster presentation).

S. Zare, S. Kurd, “Cell Therapy with Using Skin Keratinocyte Somatic Cells”, 1th Iranian National Conference of Molecular Medicine, 20 March 2014, Mashhad, Iran (poster presentation).

S. Kurd, F. Fathi, **S. Zare**, “Cell Reprogramming with Using Nuclear Transfer Method”, 1th Iranian National Conference of Molecular Medicine, 20 March 2014, Mashhad, Iran (Oral presentation).

S. Kurd, **S. Zare**, S. Korani, Y. Moradi, A. Hagigi, T. koozegaran, “Bone Marrow Stem Cells and Their Application in Cell Therapy”, 1th Iranian National Conference of Molecular Medicine, 20 March 2014, Mashhad, Iran (poster presentation).

S. Zare, 8th international congress on addiction science, 10-12 sep 2014, Tehran, Iran (Participated).

S. Zare, M. A. Nilforoushzadeh, "Allogeneic Fibroblasts in Wounds Repair", the 1th national congress of wound and tissue repair, 24- 26 September 2014, Tehran, Iran (Oral presentation).

S. Zare, M. A. Nilforoushzadeh, F. Jaffary, A. R. Shoaee Hassani, S. Izadpanah, M. A. Amirkhani, H. R. Fattah, "Application of Fibroblast Cell Therapy in Wound Healing", the 1th national congress of wound and tissue repair, 24- 26 September 2014, Tehran, Iran (poster presentation).

M. A. Nilforoushzadeh, **S. Zare**, F. Jaffary, M. A. Amirkhani, S. Izadpanah, A. R. Shoaee Hassani, H. R. Fattah, " Role of Mesenchymal Stem Cells in Wound Healing", the 1th national congress of wound and tissue repair, 24- 26 September 2014, Tehran, Iran (poster presentation).

M. A. Nilforoushzadeh, A. R. Shoaee-Hassani, P. Mansoori, **S. Zare**, "A biocompatible 3D scaffold for cell culture: The Platelet gel", the 1th national congress of wound and tissue repair, 24- 26 September 2014, Tehran, Iran (poster presentation).

A. R. Shoaee-Hassani, M A. Nilforoushzadeh, **S. Zare**"Adipocyte Derived Stromal Cells (ADSCs) Application to Promote Epidermal Regeneration", the 1th national congress of wound and tissue repair, 24- 26 September 2014, Tehran, Iran (poster presentation).

S. A. Mortazavi-Tabatabaei, M A. Nilforoushzadeh, **S. Zare**, P Mansoori, A. R. Shoaee-Hassani, Application of Platelet-Rich Plasma to Cure Chronic Skin Wounds", the 1th national congress of wound and tissue repair, 24- 26 September 2014, Tehran, Iran (poster presentation).

S. Zare, A. R. Shoaee-Hassani, M. A. Nilforoushzadeh, "Oligodendrocytic differentiation of Adipose derived mesenchymal stem cell in response to EGF", 3rd basic and clinical neuroscience congress, October 29-31 2011, Tehran, Iran (poster presentation).

S. Zare, 11th Iranian conference of medical physics, 2014, Tehran, Iran (Participated).

S. Zare, M. A. Nilforoushzadeh, E. Rahimi, "Transplantation of skin melanocyte and keratinocyte cells in cell therapy of vitiligo", 14th annual congress of Iranian society of dermatology, December 24-26 2014, Tehran, Iran.

M. A. Amirkhani, M. A. Nilforoushzadeh, **S. Zare**, "Application of mesenchymal stem cells and fibroblast cells in treatment of skin diseases", 14th annual congress of Iranian society of dermatology, December 24- 26 2014, Tehran, Iran.

E. Rahimi, M. A. Nilforoushzadeh, N. Aghdami, **S. Zare**, P. Mohammadi, "Potentials of hair follicle stem cells in hair cell therapy", 14th annual congress of Iranian society of dermatology, December 24-26 2014, Tehran, Iran.

M. A. Nilforoushzadeh, **S. Zare**, "Adipose derived mesenchymal stem cells and their application in burn cell therapy", 4th national burn symposium, February 25-26 2015, Tehran, Iran.

S. Zare, M. A. Nilforoushzadeh, "Application of Fibroblast Cell Therapy in Skin Diseases", the first national Iranian congress of dermatologic surgery cosmetic procedures, laser and hair transplant, April-May 29-1 2015, Esfahan, Iran.

M. A. Nilforoushzadeh, **S. Zare**, " Role of Mesenchymal Stem Cells in Skin Cell Therapy ", the first national Iranian congress of dermatologic surgery cosmetic procedures, laser and hair transplant, April-May 29-1 2015, Esfahan, Iran.

S. Zare, M. A. Nilforoushzadeh, M. A. Amirkhani, "Application of human adipose derived mesenchymal stem cells in regenerative medicine", International congress on stem cells and regenerative medicine, May 20-22 2015, Mashhad, Iran.

M. A. Nilforoushzadeh, **S. Zare**, " Skin stem cells", International congress on stem cells and regenerative medicine, May 20-22 2015, Mashhad, Iran.

S. Zare, M. A. Nilforoushzadeh, F. Jahangiri, "Using of dermal fibroblast cells in cell therapy of wounds", The 2nd national congress of wound and tissue repair, October 28-30 2015, Tehran, Iran (poster presentation).

S. Zare, M. A. Nilforoushzadeh, F. Jahangiri, "Application of adipose derived mesenchymal stem cells in cell therapy of wounds", The 2nd national congress of wound and tissue repair, October 28-30 2015, Tehran, Iran (poster presentation).

S. Zare, M. A. Nilforoushzadeh, F. Jahangiri, "Regenerative medicine in burn wound healing", The 2nd national congress of wound and tissue repair, October 28-30 2015, Tehran, Iran (poster presentation).

S. Zare, M. A. Nilforoushzadeh, F. Jahangiri, "Cellular therapy in vitiligo", 4th congress, skin diseases update (women's dermatology), November 25-27 2015, Tehran, Iran (oral presentation).

F. Jahangiri, M. A. Nilforoushzadeh, **S. Zare**, "Application of stem cells conditioned medium in regenerative medicine", 4th congress, skin diseases update (women's dermatology), November 25-27 2015, Tehran, Iran (poster presentation).

Symposium of skin, regeneration, stem cells and regenerative medicine, 7 October 2017 (Participated).

N. Keyhanvar, P. keyhanvar, R. Salehi, **S. Zare**, Mohammad Noui, Cell imprinted plastic compression as a novel method for topographically guide the differentiation of stem cells, the first national festival and international congress on stem cell and regenerative medicine, 19-21 May 2016, Tehran, Iran.

3th Iranian congress on progress in tissue engineering and regenerative medicine, 19-21 October 2016(Participated).

N. Kazemikhoo, **S. Zare**, S. Mokmeli, M. Dahmardehei, R. Vaghardoost, M. Momeni, F. Ansari, M. A. Nilforoushzadeh, Analysis the Effects of Autologous Fibroblast Transplantation and Low-Level Laser Therapy in the Healing Process of Grade 3 Burn wounds in Diabetic Patients, 1st International and 3rd National Congress of Wound Healing and Tissue Repair, 26-28 October 2016, Tehran, Iran (Poster presentation).

F. Jahangiri, **S.Zare**, M. A. Nilforoushzadeh, S. Hejazi, M. Dahmardehei, Cell Therapy for Burn Patients, 1st International and 3rd National Congress of Wound Healing and Tissue Repair, 26-28 October 2016, Tehran, Iran (Poster presentation).

S. Zare, M. A. Nilforoushzadeh, A. Mohamadnia, F. Jahangiri, M. Dahmardehei, S. Hejazi, Regenerative Medicine for Diabetic Foot Ulcer, 1st International and 3rd National Congress of Wound Healing and Tissue Repair, 26-28 October 2016, Tehran, Iran (Poster presentation).

S. Zare, F. Jahangiri, M. A. Nilforoushzadeh, M. Dahmardehei, S. Hejazi, Isolation, Culture and Transfection of Human Skin Keratinocytes: Application in Cell and Gene Therapy in Wound Patients, 1st International and 3rd National Congress of Wound Healing and Tissue Repair, 26-28 October 2016, Tehran, Iran (Poster presentation).

S. Zare, F. Jahangiri, M. A. Nilforoushzadeh, M. Dahmardehei, S. Hejazi, Regenerative Medicine in Burn Wound Healing, 1st International and 3rd National Congress of Wound Healing and Tissue Repair, 26-28 October 2016, Tehran, Iran (Poster presentation).

M. Dahmardehei, **S. Zare**, Wharton's Jelly Mesenchymal Stem Cells for Burn Patients, 1st International and 3rd National Congress of Wound Healing and Tissue Repair, 26-28 October 2016, Tehran, Iran (Poster presentation).

S. Zare, F. Jahangiri, M. A. Nilforoushzadeh, R. Ahmadi, M. Dahmardehei, S. Hejazi, Application of Stem Cells Condition Medium in Wound Healing, 1st International and 3rd National Congress of Wound Healing and Tissue Repair, 26-28 October 2016, Tehran, Iran (Poster presentation).

S. Zare, F. Jahangiri, M. A. Nilforoushzadeh, H. Vazini, M. Dahmardehei, S. Hejazi, Allogeneic Fibroblasts in Cell Therapy of Wound Healing, 1st International and 3rd National Congress of Wound Healing and Tissue Repair, 26-28 October 2016, Tehran, Iran, (Poster presentation).

S. Zare, F. Jahangiri, M. A. Nilforoushzadeh, Isolation and cultivation of skin keratinocytes for application in burn patients, the 5 th National burn patients, 24-25 February 2016, Tehran, Iran, (Poster presentation).

S. Zare, F. Fathi, M. A. Nilforoushzadeh, F. Jahangiri, A Sedighian, S. jahtalab, Human skin keratinocyte cells culture for induced pluripotent stem cells generation, 2th national and international Congress of stem cells and regenerative medicine, 13-15 October 2017, Tehran, Iran (Poster presentation).

F. Adeli, M. J. Rezaie, S. H. Anjamrooz, A. Rostamzadeh, **S. Zare**, Effects of human embryonic stem cell on cell cycle in HL60 cells in vitro, 2th national and international Congress of stem cells and regenerative medicine, 13-15 October 2017, Tehran, Iran (Poster presentation).

S. Zare, M. A. Nilforoushzadeh, R. Ahmadi, A. Mohamadnia, M Mahmoodi, Application of Mesenchymal Stem Cells in Cellular Therapy of Wounds, The first international Iranian tissue engineering and regenerative medicine congress (ITERMC), 18-20 July 2018, Tehran, Iran (Poster presentation).

S. Zare, R. Ahmadi, A. Mohamadnia, M. A. Nilforoushzadeh, M. Mahmoodi, The Potentials of Fetal Stem Cells in Wound Healing, The first international Iranian tissue engineering and regenerative medicine congress (ITERMC), 18-20 July 2018, Tehran, Iran (Poster presentation).

S. Zare, M. A. Nilforoushzadeh, P. Mansouri, R. Ahmadi, A. Mohamadnia, M. Mahmoodi, A. Ghahary, Human Placenta Mesenchymal Stem Cells: New Approach in Wound Healing, 3rd international and 5th national congress of wound and tissue repair, 26-28 September 2018, Tehran, Iran (Poster presentation).

S. Zare, A. Ghahary, R. Ahmadi, A. Mohamadnia, P. Mansouri, M. A. Nilforoushzadeh, M. Mahmoodi, The Potentials of Human Cord Mesenchymal Stem Cells in Wound Healing, 3rd international and 5th national congress of wound and tissue repair, 26-28 September 2018, Tehran, Iran (Poster presentation).

S. Zare, P. Mansouri, M. A. Nilforoushzadeh, R. Ahmadi, A. Mohamadnia, A. Ghahary, M. Mahmoodi, Human Amniotic Membrane Mesenchymal Stem Cells: A Revolution in Wound Healing, 3rd international and 5th national congress of wound and tissue repair, 26-28 September 2018, Tehran, Iran (Poster presentation).

S. Zare, Application of fibroblast and keratinocyte cells in cell therapy of skin diseases, Laser in Medicine Research Center, 19 December 2018, Tehran, Iran (Oral presentation).

S. Zare, M. A. Nilforoushzadeh, P. Mansouri, R. Ahmadi, A. R. Mohamadnia, M. Mahmoodi, A. Ghahary, F. Kazemzadeh, A. Peyrovan, A Preliminary Study for Characterization of Placenta Mesenchymal Stem Cells for Application in Skin Diseases Cell therapy, 4th international and 6th national congress of wound and tissue repair, 19-22 November 2019, Tehran, Iran (Poster presentation).

S. Zare, R. Ahmadi, M. A. Nilforoushzadeh, A. R. Mohamadnia, P. Mansouri, M. Mahmoodi, A. Ghahary, A. Peyrovan, F. Kazemzadeh, Transplantation of Mesenchymal Stem Cells for Diabetic Ulcer in Animal Model, 4th international and 6th national congress of wound and tissue repair, 19-22 November 2019, Tehran, Iran (Oral presentation).

S. Zare, Rahim Ahmadi, Abdolreza Mohamadnia, Mohammad Ali Nilforoushzadeh, Minoos Mahmoodi, Evaluation the Effects of Allograft Extra Embryonic Mesenchymal Stem Cells on Diabetic Wounds in Animal Model, International Conference on Biomedical Sciences, 27-28 September 2019, Istanbul, Turkey.

BOOKS

- Stem Cells. **Sona Zare**, Ayoob Rostamzadeh, Mohammad Ali Nilforoushzadeh, Rahim Ahmadi, Abdolreza Mohammadnia, (June 2017)

- Cell Culture lab: Equipments, Materials and Basic Techniques. **Sona Zare**, Ayoob Rostamzadeh, Mohammad Ali Nilforoushzadeh, Abdolreza Mohammadnia, Rahim Ahmadi, (June 2017)

PATENTS

- Rapid repair and reduction of complications caused by burns in grade 2 and 3 burns using low level laser. 2016, Iran.
- Preparation of formulation of skin eczema. 2020, Iran.
- Reconstruction and repair of skin using the substitution of skin containing gelatin and Jelly Wharton mesenchymal stem cells. 2020, Iran.
- Production of formulation of skin lesions using stem cells and stem cell condition medium. 2021, Iran.
- Formulation and production of herbal ointment with natural silk fibroin scaffold for wound repair and healing. 2021, Iran.

PROFESSIONAL SKILLS

- Cell biology techniques:
 - Isolation and primary culture of human and animal
 - Culture of cells for clinical applications (GMP conditions): Human umbilical cord and amnion stem cells, primary fibroblast and keratinocyte cells, human adipose stem cells and SVF
 - Quality controls of cells
 - Condition medium preparation for GMP conditions
 - Differentiation of mesenchymal stem cells to different lineages especially adipocyte and osteogenic lineage
- Tissue engineering techniques:
 - Hydrogel fabrication (Collagen, Gelatin, ...)
 - SEM, XRD, FTIR, Contact Angel, ...

- MTT and Live-Dead assay
- Acellularization of tissue techniques:
 - Acellularization of Human Amniotic Membrane, Umbilical Cord, Skin
 - Freeze drying
 - SEM
- Animal surgical techniques:
 - Induction of wound model
 - Transplantation cells and scaffolds
- Evaluation of healing techniques:
 - Biometric assessment (Sonography, elasticity assessment)
 - Image J software

RESEARCH PROJECTS

- Optimization, production and characterization of stem cell condition medium for clinical applications.
- Study of safety and effectiveness of mesenchymal stem cells condition medium in the treatment of hair loss (phases I / II clinical trial).
- Fabrication and evaluation of the effectiveness of the new generation of wound dressings based on Gelatin / Chitosan hydrogel containing nanoparticles and mesenchymal stem cells derived condition medium to accelerate the healing of wounds (phase 1 & II clinical trial).
- Evaluation of safety and effectiveness of liposomal hyaluronic acid, PRP and vitamin C in rejuvenation and brightening under the eyes.
- Comparison of safety and efficacy of Warton Jelly mesenchymal stem cell conditioned medium – Platelet - Rich Plasma (WJMSCs CM-PRP) and liposomal Warton Jelly mesenchymal stem cell conditioned medium - Platelet-Rich Plasma (WJMSCs CM-PRP Liposomal).

- Evaluation of safety and effectiveness of liposomal formulations of amniotic membrane in relieving inflammation and skin aging after laser rejuvenation (phase I / II clinical trial).

TEACHING EXPERIENCE

- Teaching Biochemistry Laboratory course for biology students, Department of Biological and Biotechnology, Faculty of science, University of Kurdistan, Sanandaj, Iran, 2008-2009.
- Education of cell culture techniques for students, Cellular and Molecular Research Center, Kurdistan University of Medical sciences, Sanandaj, Iran, 2010-2011.
- Education of cell culture techniques for students, Skin and Stem Cell Research Center, Tehran University of Medical sciences, Tehran, Iran, 2012-2013.
- Collaboration in cell culture lab and clean room setting up, Skin and Stem Cell Research Center, Tehran University of Medical sciences, Tehran, Iran, 2012-2013.
- Researcher, cell culture lab and clean room expert in cell therapy group, Skin and Stem Cell Research Center, Tehran University of Medical sciences, Tehran, Iran, 2012-now.
- Teacher in cell culture workshop, Skin and Stem Cell Research Center, Tehran University of Medical sciences, Tehran, Iran, 2013.
- Fibroblast and Keratinocyte isolation and culture, The 3th national festival and international congress on stem cell and regenerative medicine, Skin and Stem Cell Research center, Tehran University of Medical sciences, 26 November 2018, Tehran, Iran.
- Stromal Vascular Fraction (SVF) isolation and culture, The 3th national festival and international congress on stem cell and regenerative medicine, Skin and Stem Cell Research center, Tehran University of Medical sciences, 27 November 2018, Tehran, Iran.

- Basic of Cell Therapy in Dermatology, Skin and Stem Cell Research center, Tehran University of Medical sciences, 27 November 2018, Tehran, Iran.
- Mesenchymal stem Cells, Skin and Stem Cell Research center, Tehran University of Medical sciences, 29-28 November 2019, Tehran, Iran.
- Trained students in the summer training course of stem cells (2019).
- Trained and mentored new employees to take over similar projects in Skin & Stem Cell Research Center, Tehran University of Medical Sciences (2011-now)

References

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