

CURRICULUM VITAE

Hossein Ghanbarian

Current Position: Associate Professor
Biotechnology Department, School of Advanced Technologies in Medicine
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WORK EXPERIENCE

Shahid Beheshti University of Medical Sciences, Tehran, Iran

- Mar. 2018 – present **Associate Professor**, Group leader, Biotechnology Department
- Mentoring and supervising Ph.D. students (number = 10)
 - Research on RNA-mediated epigenetic modifications
 - Research on RNA-mediated cell reprogramming and pluripotency
 - Research on RNA-mediated cell senescence and ageing

Shahid Beheshti University of Medical Sciences, Tehran, Iran

- 2011 – 2017 **Assistant Professor**,
- Conducted research on RNA-mediated epigenetic modifications
 - Conducted research on RNA-mediated cell reprogramming and pluripotency
 - Conducted research on stem cell differentiation and lineage commitment
 - Mentored and supervised more than 10 Ph.D. and M.Sc. students
 - University teaching responsibilities: course design and seminars in stem cells and cell reprogramming, RNA biology, regenerative medicine, and RNA-based therapeutics for PhD students

The University of Nice Sophia Antipolis, Nice, France

- 2010 – 2011 **Postdoctoral Fellow**, Genetics and Development Department, INSERM U1091
- Studied on RNA-directed epigenetic controls in development and pluripotent stem cells
 - Developed a new RNA microinjection method
 - Developed a method for embryonic stem cell cardiac differentiation
 - Mentor: Prof. Minoou Rassoulzadegan, Director of INSERM U1091
 - Trained and supervised Ph.D. students

Tabriz University of Medical Sciences, Tabriz, Iran

- 2004 – 2006 **Research Assistant**, Drug Applied Research Center
- Conducted research on therapeutic recombinant protein expression
 - Devised and optimized protocols for molecular biology research
 - Trained and supervised trainees in their research projects
 - Trained faculty members in molecular biology protocols
 - Managed the laboratory (observing safety regulations, maintenance of the equipment in GLP compliance)
 - Supervised technicians

EDUCATION

- 2006 – 2010 Doctor of Philosophy in Molecular Cell Biology (Developmental Epigenetics)
Nice Sophia Antipolis University, Nice, France
Thesis title: RNA-directed epigenetic controls from mice to ES cells: induction of cardiac hypertrophy
Mentor: Prof. Minoou Rassoulzadegan, Director of INSERM U1091
- 2000 – 2003 Master of Science in Medical Biotechnology
Department of Medical Biotechnology
Tarbiat Modarres University, Tehran, Iran
Thesis title: The expression of human granulocyte macrophage colony stimulating factor by heat-induction in *Escherichia coli*
Mentor: Dr. Alireza Zomorodipour
- 1997 – 1999 Bachelor of Science in Medical Laboratory Technology
Iran University of Medical Sciences, Tehran, Iran
- 1994 – 1996 Associate Diploma in Medical Laboratory Technology
Ardabil University of Medical Sciences, Ardabil, Iran

AWARDS, HONORS AND SCHOLARSHIPS

1. **Top Entrepreneur** among more than 1000 faculty members at Shahid Beheshti University of Medical Sciences, Tehran, Iran, 2018
2. **Iranian Top Researcher**, Royan Award as a National Winner in the field of Stem Cell Biology and Technology for the research on " RNA-Directed Epigenetic Programming of Embryonic Stem Cell", 2017
3. Campus France Training Scholarship for one month, INSERM U1091/SNRS U7277, Nice, France, 2014

4. Top Educator at Shahid Beheshti University of Medical Sciences, Tehran, Iran, 2013
5. INSERM U1091 Postdoctoral Fellowship, Nice, France, 2010 – 2011
6. Iranian Ministry of Health and Medical Education Fellowship for Ph.D. Program in INSERM U1091, Nice, France (1500 EUR per month), 2006-2010
7. The third ranked student among 300 participants in the National Entrance Competition for Ph.D. Fellowship Award Program, Iran, 2004

CONTRIBUTION IN RESEARCH PROJECTS

I) Principal Investigator and Grant Holder

1. “RNA- mediate induction of neutrophils and macrophages function”, Submitted for funding, Shahid Beheshti University of Medical Sciences, 2020.
2. “RNA- directed epigenetic programming of mesenchymal stem cells cartilage differentiation”, Submitted for funding, Shahid Beheshti University of Medical Sciences, 2018. Note: collaborating with Dr. Kay-Dietrich Wagner's lab., Group leader INSERM, Faculty of Medicine, Nice Sophia Antipolis University, Nice, France
3. “Short non coding RNA-mediated SIRT1 induction to attenuate mesenchymal stem cells senescence”, Supported by Iran National Science Foundation (INSF), 2018
4. “Efficient lentiviral transduction of human adipose- derived mesenchymal stem cells”, Supported by Shahid Beheshti University of Medical Sciences, 2018
5. “RNA-mediated heredity of type 2 diabetes and inhibition of trans-generational inheritance of diabetes in mice”, Supported by Iranian National Institute for Medical Research Development (NIMAD), 2017
6. “High-efficient induction of pluripotent stem cells from human fibroblasts using microfluidic devices”, Supported by Iranian Council for Stem cell Science and Technologies, 2016
7. “Investigation of *Cdk9* locus specific induction on *in vivo* and *in vitro* mouse embryonic stem cells differentiation into cardiomyocytes”, Supported by Shahid Beheshti University of Medical Sciences, 2015. Note: collaborated with Prof. Minoo Rassoulzadegan's lab., INSERM U1091, Nice Sophia Antipolis University, Nice, France
8. “*In vivo* and *in vitro* evaluating of exosomes and microvesicles derived from miR-10a and miR-29b overexpressing mesenchymal stem cells on differentiation of naïve CD4+ T cells”, Supported by Iranian Council for Stem cell Science and Technologies, 2015
9. “*Rn7SK*-mediated embryonic stem cell neural differentiation”, Supported by Shahid Beheshti University of Medical Sciences, 2014
10. “Skin substitute scaffold designing using amnion membrane and silk fibroin for repairing of third degree burn in animal model”, Supported by Shahid Beheshti University of Medical Sciences, 2013
11. “Blood cancer animal model production with microRNA-92a injection into mouse zygote”, Supported by Iran National Science Foundation (INSF), 2012. Note: collaborated with Prof. Minoo Rassoulzadegan's lab., INSERM U1091, Nice Sophia Antipolis University, Nice, France
12. “Growth inhibitory effects of 7SK non-coding RNA on human cancer cell lines”, Supported by Shahid Beheshti University of Medical Sciences, 2011

II) Supervisor of Graduate Student Projects (2011- present)

1. A study on neuroprotective effects of SIRT1-antagoNAT in an in vitro model of Parkinson's disease using SH-SY5Y cell line
2. “In vitro investigation of SIRT1-antagoNAT -mediated attenuation of the senescence in THP-1 monocyte/ macrophage cells”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2023- present
3. “In-vitro and in-vivo evaluation of the therapeutic effects of exosomes loaded with SIRT1-antagoNAT on fatty liver” Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2023- present
4. “In vivo and In vitro evaluation of exosomes containing 7SK non-coding-RNA on inhibition of 4T1 cancer cells proliferation and metastasis”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2022- present
5. “Investigating the therapeutic effects of exosomes enriched with 7SK non-coding RNA on human glioblastoma cancer in vitro”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2022- present
6. “The therapeutic effects of human umbilical cord mesenchymal stem cells-derived exosomes loaded with Rn7SK on human breast, lung, and colon cancer cell lines in a microfluidic device”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2020-present
7. “Evaluating an inhibitory effect of mesenchymal stem cells-derived exosomes loaded with 7SK non-coding RNA on human breast cancer cell line proliferation and metastasis In vitro”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2019-2023
8. “Short non coding RNAs- mediated *SIRT1* induction to attenuate mesenchymal stem cells senescence”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2016- 2020
9. “Short non coding RNA- mediated locus specific *SOX9* gene activation: induction of mesenchymal stem cell cartilage differentiation”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2015- 2020
10. “*In vitro* evaluating of exosomes and microvesicles derived from miR-10a and miR-29b overexpressing mesenchymal stem cells on differentiation of naïve CD4+ T cells”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2015-2019
11. “Investigation of 7SK non-coding RNA regulatory roles on attenuation of mesenchymal stem cells senescence”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2016- 2019
12. “Direct regulatory roles of *Cdk9* on myocardial differentiation by modulation of cardiac microRNAs”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2014- 2017

13. “*Rn7SK*-mediated embryonic stem cell neural differentiation”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2014- 2017
14. “*Rn7SK*-mediated human cell lines apoptosis induction”, Medical Biotechnology P.hD. thesis, Tabriz University of Medical Sciences, Tabriz, Iran. 2014- 2017
15. “Identification of ncRNAs regulated by KSRP in endothelial-mesenchymal transition”, Molecular Medicine P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2014- 2017
16. “Evaluation of the apoptosis and proliferative effects of the microRNA miR-92a on various human cancer cells”, Molecular and cellular biology M.Sc. thesis, Azad Univ. Research and Technology branch, Tehran, Iran. 2014- 2016
17. “Skin substitute scaffold designing using amnion membrane and silk fibroin for repairing of third degree burn in animal model”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2012- 2016
18. “Electrochemical based biosensor for detection of mir-106a in gastric cancer patients using magnetic nanoparticles as labels”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2012- 2016
19. “Evaluation of the expression of *7SK* non-coding RNA in human cancer cells”, Biotechnology M.Sc. thesis, Tehran University, Tehran, Iran. 2012- 2014

III) Advisor of Graduate Student Projects (2011- present)

1. “microRNA- mediated apoptosis induction in *Leishmania major*-infected macrophages”, Medical Parasitology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2016- 2019
2. “Topographical and surface properties of scaffolds with clay nanoparticles on bone differentiation”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2016- 2019
3. “Design and construction of a bioactive nano-composite hydrogel scaffold as a three-dimensional medium to optimize the differentiation of mesenchymal stem cells to bone-like cells”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2016- 2019
4. “Evaluation of the antitumor effect of dendritic cells modified with texosome (miRNA-155) in BALB/c mice with colorectal cancer induced by CT-26 cell lines”, Medical Immunology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2015- 2019
5. “Designing of amnion membrane covered with beeswax as a skin substitute for prevention of hypertrophic scar in rabbit ear model”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2015- 2019
6. “miRNA- mediated mesenchymal stem cell osteoblast differentiation”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2015- 2019
7. “microRNA-mediated Induced Pluripotent Stem Cell (IPSC) Chondrocyte differentiation”, Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2014- 2017

8. "Dietary regulation of miR-33b and miR-29a in relationship to metabolic biomarkers of glucose and lipids in obese diabetic women: a randomized clinical controlled study", Medical Nutrition P.hD. thesis, Tabriz University of Medical Sciences, Tabriz, Iran. 2013- 2016
9. "Study of correlation between miR-21, miR-29b and miR-142-3p expression levels and progression of tubulointerstitial Fibrosis/Tubular Atrophy (IF/TA) in kidney transplant recipients", Medical Biotechnology P.hD. thesis, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2012-2016

IV) Co-Investigator in Granted Projects (2011- present)

1. "Brain on chip: human iPSC derived neural cell culture on microfluidic devices as a platform for neurotoxicity testing, disease modeling and drug discovery- FAST TRACK ", Supported by Iranian National Institute for Medical Research Development (NIMAD), 2017. (Project 957049)
2. "Evolution of activity of mouse peritoneal macrophage after phagocytosis of apoptotic mesenchymal stem cells", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2017 (Project 12679)
3. "Optimization of topography and surface properties of PAN-clay scaffold via nonoclay concentrations and investigation of its effects on bone differentiation of human mesenchymal stem cells ", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2017 (Project 12622)
4. "Preparation of three-dimensional hydrogel scaffolds with high porosity on the basis of polyvinyl alcohol-polytetrafluoroethylene-graphene oxide for application in bone tissue engineering", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2017 (Project 12620)
5. "In vitro production of T lymphocyte expressing chimeric auto antibody receptor (CAAR) against MBP", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2016 (Project 12246)
6. "In vitro evaluating of exosomes derived from miRNAs overexpressing mesenchymal stem cells on angiogenesis", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2016 (Project 12985)
7. "Evaluation the effect of texosome (enriched with HSP) of Heated colorectal tumor cell in maturation of dendritic cell differentiated from bone marrow BALB/c mice in vitro", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2015 (Project 10059)
8. "Designing of a novel strategy for regeneration of deep thickness wound in animal model using hydrogel made from chitosan and lacto-N-neotetraose oligosaccharide antigen of schistosoma parasite ", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2015 (Project 9417)
9. "microRNA- mediated apoptosis induction in Iranian strain Leishmania major (MRHO/IR/75/ER)-infected macrophages", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2014 (Project 9065)
10. "Effects of dendritic cells primed with texosome (miRNA-155) on antitumor response in BALB/c mice with colorectal cancer", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2014 (Project 8993)
11. "microRNA- mediated human mesenchymal stem cell osteoblast differentiation", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2013 (Project 7673)
12. "Effects of amnion membrane covered with electrospun silk fibroin protein as a skin substitute in prevention of scar formation in deep-partial wounds created in a rabbit ear model", Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2012 (Project 5066)

SELECTED PUBLICATIONS**I) Peer-Reviewed Articles****Lead Authorships (* Corresponding Author)**

- 1- Shohreh Farhadi, Samira Mohammadi-Yeganeh, Jafar Kiani, Seyed Mahmoud Hashemi, Ameneh Koochaki, Kazem Sharifi, **Hossein Ghanbarian***. Exosomal delivery of 7SK long non-coding RNA suppresses viability, proliferation, aggressiveness and tumorigenicity in triple negative breast cancer cells. *Life Sciences* 2023. 322, 121646
- 2- Neda Mokhberian, Kazem Sharifi, Ehsan Soleimanejad, Mohamad Eftekhary, Seyed Mahmoud Hashemi, Shohreh Farhadi, Satomi Miwa, **Hossein Ghanbarian***. RNAa-mediated epigenetic attenuation of the cell senescence via locus specific induction of endogenous SIRT1. *Scientific Reports* 2022. 12 (1), 15826
- 3- Shahin Aghamiri, Pourya Raei, Sam Talaei, Samira Mohammadi-Yeganeh, Shiva Bayat, Delsuz Rezaee, Afshin A Ghavidel, Alireza Teymouri, Soheil Roshanzamiri, Shohreh Farhadi, **Hossein Ghanbarian***. Nonviral siRNA delivery systems for pancreatic cancer therapy. *Biotechnology and Bioengineering* 2021. 118 (10), 3669-3690
- 4- **Ghanbarian H**, Eftekhary M, Wagner KD*. Small activating RNAs: towards development of new therapeutic agents and clinical treatments. *Cells* 2021. 10 (3), 591
- 5- Zandsalimi F, Aghamiri S, Roshanzamiri S, Shahmohamadnejad S, **Ghanbarian H***. The emerging role of cold atmospheric plasma in glioblastoma therapy. *Plasma Processes and Polymers* 2020. e1900189
- 6- Khoramgah M.S, Ranjbari J, Abbaszadeh H.A, Tabatabaei-Mirakabad F.S, Hatami S, Hosseinzadeh S, **Ghanbarian H***. Freeze-dried multiscale porous nanofibrous three dimensional scaffolds for bone regenerations. *BioImpacts* 2020. 10(2), 73-85
- 7- Eftekhary M, Mohammadi-Yeganeh S, Bolandi Z, Hashemi S.M, Mokhberian N, Sharifi K, **Ghanbarian H***. A novel natural antisense transcript at human SOX9 locus is down-regulated in cancer and stem cells. *Biotechnology Letters* 2020. 42 (2), 329-339
- 8- Mokhberian N, Hashemi S.M, Jajarmi V, Eftekhary M, Koochaki A, **Ghanbarian H***. *Sirt1* antisense transcript down-regulates in human tumors and stem cells. *Molecular biology reports* 2019. 46 (2), 2299-2305
- 9- Tarhriz V, Eyvazi S, Musavi , Abasi M, Sharifi K, **Ghanbarian H***, Hejazi M.S, Transient induction of Cdk9 in the early stage of differentiation is critical for myogenesis. *Journal of Cellular Biochemistry* 2019. 120 (11), 18854-18861
- 10- Musavi M, Kohram F, Abbasi M, Bolandi Z, Ajoudanian M, Mohammadi-Yeganeh S, Hashemi S.M, Sharifi K, Fathi H, **Ghanbarian H***. *Rn7SK* small nuclear RNA is involved in cellular senescence. *Journal of Cellular Physiology* 2019. 234 (8), 14234-14245
- 11- Bolandi Z, Hosseini-Rad S.M.A, Hashemi S.M, Souidi S, **Ghanbarian H***. A simple and highly efficient method for transduction of human Adipose-Derived Mesenchymal Stem Cells (hAD-MSCs). *Journal of Cellular Biochemistry* 2019. 120(2): 1726-1734

- 12- Bazi Z, Bertacchi M, Abasi M, Mohammadi-Yeganeh S, Soleimani M, Wagner N, **Ghanbarian H***. *Rn7SK* small nuclear RNA is involved in neuronal differentiation. *Journal of Cellular Biochemistry* 2018. 119(4):3174-3182
- 13- Gholipour-malekabadi G, Seifalian M.A, Urbanska M.A, Omrani M.D, Hardy J.G, Madjd Z, Hashemi S.M, **Ghanbarian H***, Milan P.B, Mozafari M, Reis R.L, Kundu S.C, Samadikuchaksaraei A. 3D Protein-Based Bilayer Artificial Skin for the Guided Scarless Healing of Third-Degree Burn Wounds in Vivo. *Biomacromolecules* 2018.
- 14- Kohram F, Fallah P, Shamsara M, Bolandi Z, Rassoulzadegan M, Soleimani M, **Ghanbarian H***. Cell type-dependent functions of microRNA-92a. *Journal of Cellular Biochemistry* 2018.
- 15- Tarhriz V, Wagner K.D, Masoumi Z, Molavi O, Hejazi M.S, **Ghanbarian H***. *CDK9* regulates apoptosis of myoblast cells by modulation of microRNA-1 expression. *Journal of Cellular Biochemistry* 2018. 119 (1), 547-554
- 16- **Ghanbarian H**, Wagner K.D, Wagner N, Cuzin F, Rassoulzadegan M. Small RNA-directed epigenetic programming of embryonic stem cell cardiac differentiation. *Scientific Reports* 2017, 7: 41799
- 17- Abasi M, Kohram F, Fallah P, Arashkia A, Soleimani M, Zarghami N, **Ghanbarian H***. Differential maturation of miR-17~92 cluster members in human cancer cell lines. *Applied Biochemistry and Biotechnology* 2017, 182(4):1540-1547
- 18- Daneshpour M, Omidfar K, **Ghanbarian H***. A novel electrochemical nanobiosensor for the ultrasensitive and specific detection of femtomolar-level gastric cancer biomarker miRNA-106a. *Beilstein Journal of Nanotechnology* 2016, 7(1):2023-2036
- 19- **Ghanbarian H**, Wagner N, Baudouy D, Kiani J, Michiels J.F, Cuzin F, Rassoulzadegan M, Wagner K.D. Dnmt2/Trdm1 as Mediator of RNA Polymerase II Transcriptional Activity in Cardiac Growth. *Plos One* 2016, 11(6): e0156953
- 20- Abasi M, Bazi Z, Mohammadi-Yeganeh S, Soleimani M, Haghpanah V, Zargami N, **Ghanbarian H***. *7SK* small nuclear RNA transcription level down-regulates in human tumors and stem cells. *Medical Oncology* 2016, 33 (11):128
- 21- Mohammadi S, Ebrahimi-Mameghani M, Arefhosseini S.R, Fallah P, Jafarabadi M.A, Zununi S, Soleimani M, Banitalebi-Dehkordi M, **Ghanbarian H***. Dietary Regulation of miR-33b and miR-29a in Relationship to Metabolic Biomarkers of Glucose and Lipids in Obese Diabetic Women: A Randomized Clinical Controlled Study" *Iranian Red Crescent Medical Journal* 2016, 19 (1)
- 22- Gholipourmalekabadi M, Mozafari M, Bandehpour M, Salehi M, Sameni M, Hugo Caicedo H, Mehdipour A, Ghasemi H, Samadikuchaksaraeim A, **Ghanbarian H***. Optimization of nanofibrous silk fibroin scaffolds as a delivery system for bone marrow adherent cells. *Biotechnology and Applied Biochemistry* 2014, 62(6):785-794
- 23- Keramati F, Seyedjafari E, Fallah P, Soleimani M, **Ghanbarian H***. *7SK* small nuclear RNA inhibits cancer cell proliferation through apoptosis induction. *Tumor Biology* 2014, 36(4):2809-2814
- 24- **Ghanbarian H**, Grandjean V, Cuzin F, and Rassoulzadegan M. A network of regulations by small non-coding RNAs: the P-TEFb kinase in development and pathology. *Frontiers in Genetics* 2011, 2(95):1-6

- 25- **Ghanbarian H**, Zomorodipour A, Ataei F, Shojai S, and Yakhchali B. The expression of Human Granulocyte Macrophage Colony Stimulating Factor by Heat-induction in *Escherichia coli*. *Journal of Sciences, Islamic Republic of Iran* 2004, 15(3): 203-210

Co-Authorships

- 26- Farhadhosseinabadi B, Gholipourmalekabadi M, Salimi M, Abdollahifar M.A, Bagheri M, Samadikuchaksaraei A, **Ghanbarian H**, Mozafari M, Kazemi B, Niknejad H. The in vivo effect of Lacto-N-neotetraose (LNnT) on the expression of type 2 immune response involved genes in the wound healing process. *Scientific Reports* 2020. Accepted
- 27- Shojai S, Hashemi M.S, **Ghanbarian H**, Salehi M, Mohammadi-Yeganeh S. Effect of mesenchymal stem cells-derived exosomes on tumor microenvironment: Tumor progression versus tumor suppression. *Journal of cellular physiology* 2019. 234 (4), 3394-3409
- 28- Farhdhosseinabadi B, Salimi M, Kazemi B, Samadikuchaksaraei A, **Ghanbarian H**, Mozafari M, Niknejad H. Inducing Type 2 Immune Response, Induction of Angiogenesis, and Anti-Bacterial and Anti-Inflammatory Properties Make Lacto-n-Neotetraose (LNnT) a Therapeutic Choice to Accelerate the Wound Healing Process. *Medical hypotheses* 2019. 134, 109389
- 29- Asadirad A, Hashemi S.M, Baghaei K, **Ghanbarian H**, Mortaz E, Zali M.R, Amani D. Phenotypical and functional evaluation of dendritic cells after exosomal delivery of miRNA-155. *Life sciences* 2019. 219, 152-162
- 30- Hossein-Khannazer N, Hashemi S.M, Namaki S, **Ghanbarian H**, Sattari M, Khojasteh A. Study of the immunomodulatory effects of osteogenic differentiated human dental pulp stem cells. *Life sciences* 2019. 216, 111-118
- 31- Tabatabaei Mirakabad F.S, Hosseinzadeh S, Abbaszadeh H.A, Khoramgah M.S, **Ghanbarian H**, Ranjbari J, Kazemi B. The Comparison between the Osteogenic Differentiation Potential of Clay-Polyacrylonitrile Nanocomposite Scaffold and Graphene-Polyacrylonitrile Scaffold in Human Mesenchymal Stem Cells. *Nano Biomed. Eng* 2019. 11 (3), 238-253
- 32- Mahboudi H, Soleimani M, Hanaee-Ahvaz H, **Ghanbarian H**, Bandehpour M, Enderami, Bahram SE, Kazemi B. New approach for differentiation of bone marrow mesenchymal stem cells toward chondrocyte cells with overexpression of MicroRNA-140. *Asaio Journal* 2018. 64 (5), 662-672
- 33- Gholipour-malekabadi M, Samadikuchaksaraei A, Seifalian A.M, Urbanska A.M, **Ghanbarian H**, Hardy J.G, Omrani M.D, Mozafari M, Reis R.L, Kundu S.C. Silk fibroin/amniotic membrane 3D bi-layered artificial skin. *Biomedical Materials* 2018, 13(3):035003
- 34- Mahboudi H, Kazemi B, Soleimani M, Hanaee-Ahvaz H, **Ghanbarian H**, Bandehpour M, Enderami S.E, Kehtari M, Barati G. Enhanced chondrogenesis of human bone marrow mesenchymal Stem Cell (BMSC) on nanofiber-based polyethersulfone (PES) scaffold. *Gene* 2018, 643:98-106
- 35- Mahboudi H, Soleimani M, Enderami S.E, Kehtari M, Hanaee-Ahvaz H, **Ghanbarian H**, Bandehpour M, Nojehdehi S, Mirzaei S, Kazemi B. The effect of nanofibre-based polyethersulfone (PES) scaffold on the chondrogenesis of human induced pluripotent stem cells. *Artificial cells, nanomedicine, and biotechnology* 2018. 46 (8), 1948-1956

- 36- Ghahremani Piraghaj M, Souidi S, **Ghanbarian H**, Bolandi Z, Namaki S, Hashemi S.M. Effect of efferocytosis of apoptotic mesenchymal stem cells (MSCs) on C57BL/6 peritoneal macrophages function. *Life sciences* 2018. 212, 203-212
- 37- Hosseini V, Mohammadi-Yeganeh S, **Ghanbarian H**, Hashemi S.M, Khojasteh A. The power of precise bioinformatics prediction of miRNA: mRNA interactions: miR-4699 as a potential inducer of Wnt signaling pathway. *Journal of cellular biochemistry* 2018, 119(7):5960-5969
- 38- Zununi V.S, Poursadegh Z.A, **Ghanbarian H**, Ghojazadeh M, Samadi N, Ardalan M. Upregulated Expression of Circulating MicroRNAs in Kidney Transplant Recipients With Interstitial Fibrosis and Tubular Atrophy. *Iranian journal of kidney diseases* 2017,11(5):393-393
- 39- Zununi V.S, Poursadegh Z.A, **Ghanbarian H**, Ghojazadeh M, Samadi N, Omidi Y, Ardalan M. Differential expression of circulating miR-21, miR-142-3p and miR-155 in renal transplant recipients with impaired graft function. *International Urology and Nephrology* 2017, 49(9):1681-1689
- 40- Eshkiki Z.S, Ghahremani M.H, Shabani P, Firuzjaee S.G, Sadeghi A, **Ghanbarian H**, Meshkani R. Protein tyrosine phosphatase 1B (PTP1B) is required for cardiac lineage differentiation of mouse embryonic stem cells. *Molecular and cellular biochemistry* 2017, 425(1-2):95-102
- 41- Mohammadi-Yeganeh S, Paryan M, Arefian E, Vasei M, **Ghanbarian H**, Mahdian R, Karimipoor M, Soleimani M. MicroRNA-340 inhibits the migration, invasion, and metastasis of breast cancer cells by targeting Wnt pathway. *Tumor Biology* 2016, 37(7):8993-9000
- 42- Gholipourmalekabadi M, Mozafari M, Salehi M, Seifalian A, Bandehpour M, **Ghanbarian H**, Urbanska A.M, Sameni M, Samadikuchaksaraei A, Seifalian A.M. Development of a Cost-Effective and Simple Protocol for Decellularization and Preservation of Human Amniotic Membrane as a Soft Tissue Replacement and Delivery System for Bone Marrow Stromal Cells. *Advanced Healthcare Materials* 2015, 4(6):918-926
- 43- Gholipourmalekabadi M, Mozafari M, Bandehpour M, Sameni M, **Ghanbarian H**. How ethanol treatment affects the physico-chemical and biological characteristics of silk fibroin nanofibrous scaffolds. *Adv. Mater. Lett.* 2015, 6(5):391-394
- 44- Gholipourmalekabadi M, Bandehpour M, Mozafari M, Hashemi A, **Ghanbarian H**, Sameni M, Salimi M, Gholami M, Samadikuchaksaraei A. Decellularized human amniotic membrane: more is needed for an efficient dressing for protection of burns against antibiotic-resistant bacteria isolated from burn patients. *Burns* 2015, 41(7):1488-1497
- 45- Kiani J, Grandjean V, Liebers R, Tuorto F, **Ghanbarian H**, Lyko F, Cuzin F, Rassoulzadegan M. RNA-Mediated Epigenetic Heredity Requires the Cytosine Methyltransferase Dnmt2. *Plos Genetics* 2013, 9(5):1-9
- 46- Wagner K.D, Wagner N, **Ghanbarian H**, Grandjean V, Gounon P, Cuzin F, Rassoulzadegan M. RNA induction and inheritance of epigenetic cardiac hypertrophy in the mouse. *Developmental Cell* 2008, 14(6): 962-9
- 47- Ataei F, **Ghanbarian H**, Zomorodipour A, and Yakhchali B. Construction of an Escherichia coli – specific heat-inducible expression plasmid. *Modares Journal of Medical Science* 2005, 8(1):37-44

II) Presentations in Scientific Meetings

Approx. 30 abstracts and congress contributions

- Keynote Speaker, "Epigenetic Memory Workshop", Wiston House, West Sussex, UK, 24-26 June 2012. **Invited by Sir John B. Gurdon, Winner of the Nobel Prize for Medicine**
- Invited Speaker, The 13th Royan International Congress on Stem Cell Biology and Technology, Royan Award as a **National Winner in the field of Stem Cell Biology and Technology** for the research on "RNA Directed Programming of Embryonic Stem Cell", Tehran, Iran, September 2017
- Keynote Speaker, The first National Symposium on Genetic and Stem Cells, National Institute of Genetic Engineering and Biotechnology, Tehran, Iran, 25 February 2016
- Keynote Speaker, The 2th International Congress on Reproduction, Tehran, Iran, May 2016
 - Keynote Speaker, The first National Symposium on Induced Pluripotent Stem Cells (iPSCs), Tarbiat Modares University, Tehran, Iran, 2018