

Curriculum Vitae



Yousof Gheisari, MD, PhD

Personal Data

Birth Date: June 18, 1978

Nationality: Iranian

Marital Status: Married

Contact Information

Phone: +98-31-36687087

Email: ygheisari@med.mui.ac.ir, ygheisari@gmail.com

Current Position

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| 2014-Present | Head of the Regenerative Medicine Lab, Kidney Diseases Research Center, Isfahan University of Medical Sciences |
| 2011-Present | Assistant professor of genetics and molecular biology department, faculty of medicine, Isfahan University of Medical Sciences |

Education

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| 2003-2010 | PhD student of medical biotechnology, Pasteur Institute of Iran |
| 2009-2010 | Research fellow in kidney regeneration, Jikei University School of Medicine, Tokyo, Japan |
| 1996-2003 | Medical student, Isfahan University of Medical Sciences |

Field of Interest

Systems biology and regenerative medicine in nephrology

Research Projects

2011-2014	Micro RNA expression profile in diabetic nephropathy using microarray and quantitative PCR followed by analysis of protein-protein interaction network to discover novel drug targets (supported by Iranian council of stem cell technology)
2012-Present	Computational modeling of hypoxia pathway using Petri nets and ODE to describe experimental data on TGF- β pathway behavior in a mouse model of chronic kidney disease (Joint project with the department of electrical engineering of Isfahan University of Technology)
2014- Present	Assessment of the behavior of regenerating perivascular cells in chronic kidney disease (supported by Iranian council of stem cell technology)
2014-2015	Micro RNA target identification for pathway enrichment analysis in gene expression studies
2014-2015	Assessing the significance of topographic parameters of nodes in protein-protein interaction networks for pathway enrichment analysis
2013-2015	Time course analysis of the expression of genes related to hypoxia and TGF- β pathways in human kidney cells subjected to hypoxia and TGF- β stimulation
2011-2014	Computational modeling of hypoxia pathway using Petri nets to describe unpredicted data regarding SDF-1 expression in a mouse model of acute kidney injury (Joint project with the department of electrical engineering of Isfahan University of Technology)
2009-2010	Evaluation of the therapeutic effects of human unrestricted somatic stem cells (USSC) in nude mouse model of cisplatin-induced kidney failure
2006-2010	Evaluation of the therapeutic effects of CXCR4 over-expression in bone marrow mesenchymal stem cells (MSC) in acute renal failure (PhD Thesis)
2008-2009	Determining the time course changes of stromal derived factor (SDF)-1 and hypoxia induced factor (HIF) following ischemia/reperfusion injury
2008-2009	Evaluation of the therapeutic effect of MSC and USSC condition media in renal injury

2004-2008	Isolation and <i>in vitro</i> and <i>in vivo</i> characterization of stem cells from chronic and severely damaged mice kidneys
2006-2007	Comparative analysis of 5 different non-viral methods for gene delivery to mouse bone marrow MSC

Skills and Capabilities

General molecular biology techniques (quantitative and qualitative PCR, gene cloning and manipulation, electrophoresis, ...), mammalian cell culture techniques (isolation and characterization of stem cells, flow cytometry, cell differentiation assays, immunocytochemistry and immunohistochemistry, ELISA, ...), gene delivery methods (viral and non-viral), laboratory animal handling skills, bioinformatics, biostatistics and research methodology, design and establishment of research labs.

Language

Persian (native language), English

Teaching Experience

The instructor of systems biology, bioinformatics, molecular biology, and genetic engineering courses for Post Grad students, Isfahan University of Medical Sciences (2011-now)

The instructor of medical biology course for medical students, Isfahan University of Medical Sciences (2011-now)

Several workshops on “lentiviral and non-viral gene delivery to mammalian cells”, “flow cytometry”, “animal handling skills”, “immunehistochemistry”, and “cell culture techniques” (2008-now)

Lectures on “experiment design for biologists” (2008-now)

Director of molecular biology courses for medical students using problem-based learning method (2002-2003)

Director of three “PCR” workshops in Isfahan University of medical Sciences (1999-2002)

Honors

Winner of Razi Festival Award (as co-worker) for studies on bone marrow mesenchymal stem cells (2012)

Research grants from Iranian council of stem cell technology (2009 and 2013)

Travel award from International society of stem cell research (ISSCR) for participation in the 5th ISSCR meeting (2007)

Ranked 1 in PhD entrance exam (2003)

Publications

Rabieian R, Abedi M, **Gheisari Y**. Central nodes in protein interaction networks drive critical functions in transforming growth factor beta-1 stimulated kidney cells. *Cell J*. 2017; 18(4): 514-531.

Gheisari Y, Ahmadbeigi N. Mesenchymal Stem Cells and Endothelial Cells: A Common Ancestor? *Arch Iran Med*. 2016 Aug;19(8):584-587.

Gheisari Y, Vasei M, Shafiee A, Soleimani M, Seyedjafari E, Omidkhoda A, Langroudi L, Ahmadbeigi N. A 3D Scaffold-Based System for Modeling the Bone Marrow Tissue. *Stem Cells Dev*. 2016;25(6):492-8. doi: 10.1089/scd.2015.0182.

Moein S, Javanmard SH, Abedi M, Izadpanahi MH, **Gheisari Y**. Identification of appropriate housekeeping genes for gene expression analysis in long-term hypoxia-treated kidney cells. *Advanced Biomedical Research*. 2016. (Accepted for Publication)

Heidary Z, Ghaisari J, Moein S, Naderi M, **Gheisari Y**. Stochastic Petri Net Modeling of Hypoxia Pathway Predicts a Novel Incoherent Feed-Forward Loop Controlling SDF-1 Expression in Acute Kidney Injury. *IEEE Trans Nanobioscience*. 2016;15(1):19-26. doi: 10.1109/TNB.2015.2509475

Abedi M, **Gheisari Y**. Nodes with high centrality in protein interaction networks are responsible for driving signaling pathways in diabetic nephropathy. *PeerJ*. 2015;3:e1284. doi: 10.7717/peerj.1284. eCollection 2015.

Heydari S, Yamani N, **Gheisari Y**, A Qualitative Needs Assessment of Biomedical Research Training Course. *Iranian Journal of Medical Education* 2015; 14 (11), 957-971 (in Persian)

Moghadasali R, Azarnia M, Hajinasrollah M, Arghani H, Nassiri SM, Molazem M, Vosough A, Mohitmafi S, Najarasl M, Ajdari Z, Yazdi RS, Bagheri M, Ghanaati H, Rafiei B, **Gheisari Y**, Baharvand H, Aghdami N. Intra-renal arterial injection of autologous bone marrow mesenchymal stromal cells ameliorates cisplatin-induced acute kidney injury in a rhesus Macaque mulatta monkey model. *Cytotherapy*. 2014 Jun;16(6):734-49

Gheisari Y, Ahmadbeigi N, Aghaee-Bakhtiari S.H, Nassiri S.M, Amanpour S, Azadmanesh K, Hajarizadeh A, Mobarra Z, Soleimani M. Human Unrestricted Somatic Stem Cell Administration Fails to Protect Nude Mice from Cisplatin-Induced Acute Kidney Injury. *Nephron Exp Nephrol* 2013;123:11-21 (DOI: 10.1159/000353233)

Ahmadbeigi N, Soleimani M, Vasei M, **Gheisari Y**, Mortazavi Y, Azadmanesh K, Omidkhoda A, Janzamin E, Beyer Nardi N. Isolation, Characterization and Transplantation of Bone Marrow derived cell component with Hematopoietic Stem Cell Niche properties. *Stem Cells Dev.* 2013;22(23):3052-61

Ahmadbeigi N, Soleimani M, Babaeijandaghi F, Mortazavi Y, **Gheisari Y**, Vasei M, Azadmanesh K, Rostami S, Shafiee A, Nardi NB. The aggregate nature of human mesenchymal stromal cells in native bone marrow. *Cytotherapy.* 2012 Sep;14(8):917-24.

Gheisari Y, Azadmanesh K, Ahmadbeigi N, Nassiri SM, Fahim Golestaneh A, Naderi M, Vasei M, Arefian E, Mirab-Samiee S, Shafiee A, Soleimani M, Zeinali S. Genetic modification of mesenchymal stem cells to overexpress CXCR4 and CXCR7 does not improve the homing and therapeutic potentials of these cells in experimental acute kidney injury. *Stem Cells Dev.* 2012 Nov 1;21(16):2969-80.

Yazdani SO, Pedram M, Hafizi M, Kabiri M, Soleimani M, Dehghan MM, Jahanzad I, **Gheisari Y**, Hashemi SM. A comparison between neurally induced bone marrow derived mesenchymal stem cells and olfactory ensheathing glial cells to repair spinal cord injuries in rat. *Tissue Cell.* 2012 Aug;44(4):205-13.

Matsumoto K, Yokoo T, Matsunari H, Iwai S, Yokote S, Teratani T, **Gheisari Y**, Tsuji O, Okano H, Utsunomiya Y, Hosoya T, Okano HJ, Nagashima H, Kobayashi E. Xenotransplanted Embryonic Kidney Provides A Niche for Endogenous Mesenchymal Stem Cell Differentiation into Erythropoietin-Producing Tissue. *Stem Cells.* 2012 Jun;30(6):1228-35

Gheisari Y, Baharvand H, Nayernia K, Vasei M. Stem Cell and Tissue Engineering Research in the Islamic Republic of Iran. *Stem Cell Rev.* 2012 Sep;8(3):629-39.

Shafiee A, Soleimani M, Chamheidari GA, Seyedjafari E, Dodel M, Atashi A, **Gheisari Y**. Electrospun nanofiber-based regeneration of cartilage enhanced by mesenchymal stem cells. *J Biomed Mater Res A.* 2011 Dec 1;99(3):467-78

Arefian E, Kiani J, Soleimani M, Shariati SA, Aghaee-Bakhtiari SH, Atashi A, **Gheisari Y**, Ahmadbeigi N, Banaei-Moghaddam AM, Naderi M, Namvarasl N, Good L, Faridani OR. *Analysis of microRNA signatures using size-coded ligation-mediated PCR.* *Nucleic Acids Res.* 2011 Jul;39(12):e80.

Ahmadbeigi N, Shafiee A, Seyedjafari E, **Gheisari Y**, Vassei M, Amanpour S, Amini S, Bagherizadeh I, Soleimani M. *Early spontaneous immortalization and loss of plasticity of rabbit bone marrow mesenchymal stem cells*. Cell Prolif. 2011 Feb;44(1):67-74

Ahmadbeigi N, Soleimani M, **Gheisari Y**, Vasei M, Amanpour S, Bagherizadeh I, Shariati SA, Azadmanesh K, Amini S, Shafiee A, Arabkari V, Nardi NB. *Dormant Phase and Multinuclear Cells: Two Key Phenomena in Early Culture of Murine Bone Marrow Mesenchymal Stem Cells*. Stem Cells Dev. 2010 Nov 17

Gheisari Y, Ahmadbeigi N, Naderi M, Nassiri SM, Nadri S, Soleimani S. *Stem Cell Conditioned Medium Does Not Protect Against Kidney Failure*. Cell Biol Int. 2010 Oct 18.

Gheisari Y, Yokoo T, Matsumoto K, Fukui A, Sugimoto N, Ohashi T, Kawamura T, Hosoya T, Kobayashi E. *A thermoreversible polymer mediates controlled release of glial cell line-derived neurotrophic factor to enhance kidney regeneration*. Artif Organs. 2010 Aug;34(8):642-7.

Gheisari Y, Nassiri SM, Arefian E, Ahmadbeigi N, Azadmanesh K, Jamali M, Jahanzad I, Zeinali S, Vasei M, Soleimani M. *Severely damaged kidneys possess multipotent renoprotective stem cells*. Cytotherapy. 2010 May;12(3):303-12.

Ahmadbeigi N, Seyedjafari E, **Gheisari Y**, Atashi A, Omidkhoda A, Soleimani M. *Surface expression of CXCR4 in unrestricted somatic stem cells and its regulation by growth factors*. Cell Biol Int. 2010 Jul 1;34(7):687-92.

Gheisari Y, Soleimani M, Zeinali S, Arefian E, Atashi A, Zarif MN. *Isolation of stem cells from adult rat kidneys*. Biocell. 2009 Apr;33(1):33-8.

Javanmard SH, **Gheisari Y**, Soleimani M, Nematbakhsh M, Monajemi A. *Effect of L-arginine on circulating endothelial progenitor cells in hypercholesterolemic rabbits*. Int J Cardiol. 2010 Aug 20;143(2):213-6.

Hashemi SM, Soleimani M, Zargarian SS, Haddadi-Asl V, Ahmadbeigi N, Soudi S, **Gheisari Y**, Hajarizadeh A, Mohammadi Y. *In vitro differentiation of human cord blood-derived unrestricted somatic stem cells into hepatocyte-like cells on poly(epsilon-caprolactone) nanofiber scaffolds*. Cells Tissues Organs. 2009;190(3):135-49.

Gheisari Y, Soleimani M, Azadmanesh K, Zeinali S. *Multipotent mesenchymal stromal cells: optimization and comparison of five cationic polymer-based gene delivery methods*. *Cytherapy*. 2008;10(8):815-23.

Mamishi S, Shahmahmoudi S, Tabatabaie H, Teimourian S, Pourakbari B, **Gheisari Y**, *et al*. Novel BTK mutation presenting with vaccine-associated paralytic poliomyelitis. *Eur J Pediatr*. 2008 Nov;167(11):1335-8

Presentations

Gheisari Y, Soleimani M, Zeinali S, Arefian E, Nikougoftar Zarif M. Isolation and characterization of mouse adult stem cells from kidney. 5th Annual Meeting of International Society for Stem Cell Research (ISSCR), (2007).

Haghjooy javanmard S, **Gheisari Y**, Soleimani M, Monajemi A, Nematbakhsh M. L-Argenin enhances endothelial progenitor cells number in hypercholesterolemic rabbits. 5th Annual Meeting of International Society for Stem Cell Research (ISSCR), (2007).

Soleimani M, **Gheisari Y**. Isolation of mesenchymal stem cells from adult rat kidney and differentiation to neural cells. 4th Annual Meeting of International Society for Stem Cell Research (ISSCR), (2006).

Gheisari Y, Salehi R, Hosseini SM, Sayyedyahosein S. Molecular biology education for medical students using PBL method; an innovative change. 5th national conference on medical education, Shiraz, Iran, (2003).

Gheisari Y, Hadizadeh F, Talaei M, Rafieeyan S. Introduction of an educational method for medical student research. 5th national conference on medical education, Shiraz, Iran, (2003).

Referees

Mohammad Vasei, MD. Pathology Department, Tehran University of Medical Sciences. mvasei@tums.ac.ir

Masoud Soleimani, PhD. Hematology Department, Tarbiat Modares University. soleim_m@modares.ac.ir

Kayhan Azadmanesh, MD, PhD, Virology Department, Pasteur Institute of Iran. Tel: +98-9121482986, azadmanesh@pasteur.ac.ir

Takashi Yokoo, MD, PhD. Division of Nephrology and Hypertension, Department of Internal Medicine, The Jikei University School of Medicine, Tokyo, Japan. tyokoo@jikei.ac.jp