Curriculum Vitae

Education:

1999, Post-doct. Prohormone convertases, Clinical Research Institute of Montreal (IRCM), University of Montreal
1994, Ph.D. Neuroscience, Montreal Neurological Institute (MNI), McGill University
1988, M.Sc. Histology and Embryology, Faculty of Medicine, Tarbiat Modarres University (IRAN)
1983, B.Sc. Biology, Faculty of Science, Mashhad University (IRAN)

Awards and Honours:

1- The National prize winner of the10th Royan International Research Award with the research paper entitled: “OCT4 Spliced Variants Are Differentially Expressed in Human Pluripotent and Nonpluripotent Cells” September 23-25, 2009, Tehran, Iran.

2- Winner of the 14th Razi research award, 2008

3- 1st researcher in the Iranian Academy of Medical Sciences, 2008

4- The Best Researcher of Tarbiat Modares University, 2008

5- Winner of the 3rd Bu Ali Sina research Award with the project entitled: Evaluating the expression of OCT-4 as a new molecular marker in bladder cancer

6- The Best Author of Tarbiat Modares University, 2004

7- Winner of the 4th Research Award of Shahid Beheshti Medical University, 2003 with the project entitled: Comparison of gene expression profiles in unfertile patients with low sperm movement with control group

8- The National prize winner of the: 6th Royan International Research Award with the research paper entitled: “The Profile of Gene Expression Changes during the Neural

Differention of Bone Marrow Stromal Cells (BMSCs)” September 7-9, 2005, Tehran, Iran.

9- The National prize winner of the: 5th Royan International Research Award with the research paper entitled: “CatSper Gene Expression in Postnatal Development of Mouse Testis and in Subfertile Men With Deficient Sperm Motility“ September 1-3, 2004, Tehran, Iran.

Editorial Board of:
Yakhteh Journal
JDUBS (Journal of Damghan university of Basic Sciences)

English Papers

1) Atlasi Y, Mowla SJ, Ziaee SAM (2009) Differential Expression of survivin and its splice variants, survivin- Ex3 and survivin-2B, in Bladder cancer. Cancer Detection and Prevention.
2) Mazoochi T, Salehnia M, Pourbeiranvand S, Forouzandeh M, Mowla SJ, Hajizade E. (2009) Analysis of apoptosis and expression of genes related to apoptosis in cultures of follicles derived from vitrified and non-vitrified ovaries. Mol Hum Reprod.
3) Nouraee N, Mowla SJ, Ozhand A, Parvin M, Ziaee SAM, Hatefi N (2009) Expression of survivin and its spliced variants in bladder tumors as a potential prognostic marker. Urology Journal.
4) Koruji M, Movahedin M, Mowla SJ, Gourabi H, Jabbari A (2009) Efficiency of Adult Mouse Spermatogonial stem Cell Colony Formation under Several Culture Conditions. In Vitro Cellular & Developmental Biology - Animal.
5) Rezaian J, Movahedin M, Mowla SJ (2009) Study of CatSper genes expression, semen characteristics and testis histology in a contusive spinal cord injured mouse model. Spinal Cord. 47:76-81.
6) Fathi F, Murasawa S, Hasegawa S, Asahara T, Jafari Kermani A, Mowla SJ (2009). Cardiac Differentiation of P19cl6 Stem Cells by Oxytocin. Interntional journal of cardiolog.y
7) Amiri S, Mowla SJ, Movahedin M, Hajebrahimi Z, Tavallaee M (submitted) Differential gene expression and alternative splicing of survivin during the course of regeneration in injured mouse Sciatic nerves.
8) Fathi F , Altiraihi T, Mowla SJ, Movahedin M (in press) Transplantation of Murine Embryonic Stem Cells treated by retinoic acid Improves Behavioral Deficit in Parkinsonian Rats. The Indian Journal of Medical Research.
9) Atlasi Y, Mowla SJ, Ziaee SAM, Gokhale PJ, Andrews PW (2008) OCT4 spliced variants are differentially expressed in human pluripotent and non-pluripotent cells. Stem Cells. 26: 3068-3074.
10) Jafarnejad SM, Mowla SJ, Matin M (2008) Knocking-down the Expression of Nucleostemin Significantly Decreased the Rate of Proliferation in rat Bone Marrow Stromal Stem Cells in an apparently p53-independent manner. Cell proliferation, 41:28-35.
11) Jafari Kermani A, Fathi F and Mowla SJ (2008) Characterization and genetic manipulation of human umbilical cord vein mesenchymal stem cells; potential application in cell-based gene therapy. Rejuvenation Research, 11(2):379-86.
12) Malekzadeh A, Mowla SJ, Ziaee SAM, Bahrami AR, Atlasi Y, Malakootian M (2008) Overexpression of MMI1, a polycomb group repressor protein, in bladder tumors. Urology

Journal. 5(2):99-105.

13) Fathi F, Jafari Kermani A, Pirmoradi L and Mowla SJ (2008) Characterizing endothelial cells derived from a murine embryonic stem cell line, CCE. Rejuvenation Research, 11(2):371-8.
14) Hajebrahimi Z, Mowla SJ, Movahedin M, Tavallaee M (2008) Gene expression alterations of neurotrophins, their receptors and prohormone convertases in a rat model of spinal cord contusion. Neuroscience Letters. 441(3):261-6.
15) Mazouchi T, Salehnia M, Rezazadeh Valojerdi M, Mowla SJ (2008) Morphologic, ultrastructural, and biochemical identification of apoptosis in vitrified-warmed mouse ovarian tissue. Fertility and sterility. 90:1480-1486.
16) Amiri S, Movahedin M, Hajebrahimi Z, Mowla SJ (2008) Survivin is differentially expressed and spliced during the course of regeneration of damaged sciatic nerve in mice. Journal of Neurology. 255 (Suppl. 2): 69-69.
17) Boroujeni MB, Salehnia M, Valojerdi MR, Mowla SJ, Forouzandeh M, Hajizadeh E (2008) Comparison of gene expression profiles in erythroid-like cells derived from mouse embryonic stem cells differentiated in simple and co-culture systems, Am J Hematol. 83:109–115.
18) Korouji M, Movahedin M, Mowla SJ, Gourabi H, Jabari A (2008) The Morphological Changes of Adult Mouse Testes after 60Co -Radiation. Iranian Biomedical Journal. 12(1):35-42.
19) Mohandesan E, Mowla SJ, Hejbari Noobari A, Hofreiter M (2008)Ancient DNA from Human and Animal Remains from North-West Iran. Journal of Sciences, Islamic Republic of Iran 19(1): 3-8.
20) Absalan F, Movahedin M, Mowla SJ (2008) Assessment of testis histological changes and sperm parameters in experimentally-induced unilateral and bilateral cryptorchid mouse model. Iranian Journal of Reproductive Medicine. 6(3):143-148.
21) Koruji M, Movahedin M, Mowla SJ, Gourabi H, Arfaee AJ (2008) The morphological changes of adult mouse testes after 60Co gamma-Radiation. Iran Biomed J. 12(1):35-42.
22) Koruji M, Movahedin M, Mowla SJ, et al. (2007) Effects of co-culture system on efficiency of frozen-thawed spermatogonial cells colony formation. Human Reproduction. 22: I63-I63.
23) Koruji M, Movahedin M, Mowla SJ, et al. (2007) Colony formation ability of frozen thawed spermatogonial stem cell from adult mouse. Iraninan Journal of Reproductive Medicine. 5(3): 109-115.
24) Atlasi Y, Mowla SJ, Ziaee SAM, Bahrami AR (2007) OCT-4, an Embryonic Stem Cell Marker, is Highly Expressed in Bladder Cancer. International Journal of Cancer 120 (7): 1598-1602.
25) Marandi M, Mowla SJ, Tavallaei M, Yaghoobi MM and Jafarnejad SM (2007) Proprotein convertases 1 and 2 (PC1 and PC2) are expressed in neurally differentiated rat bone marrow stromal stem cells (BMSCs). Journal of Neuroscience Letters, 420:198-203.
26) Hatami L, Valojerdi MR, Mowla SJ (2007) Effects of oxytocin on cardiomyocyte differentiation from mouse embryonic stem cells. International Journal of Cardiology 117: 80–89.
27) Anjamrooz SH, Movahedin M, Mowla SJ and PourBairanvand S (2007) Assessment of Morphological and Functional Changes in the Mouse Testis and Epididymal Sperms Following Busulfan Treatment Iranian Biomedical Journal 11 (1): 15-22.
28) Taha MF, Valojerdi MR, Mowla SJ (2007) Effect of bone morphogenetic protein-4 (BMP-4) on cardiomyocyte differentiation from mouse embryonic stem cell. International Journal of Cardiology 120(1): 92-101.
29) Azadbakht M, Valojerdi MR, Mowla SJ (2007) Development of mouse embryos co-cultured with polarized or non-polarized uterine epithelial cells using sequential culture media. Anim Reprod Sci. 100(1-2):141-57.
30) Esmaeili F, Tiraihi T, Movahedin M, Mowla SJ)2006 (Selegiline Induces Neuronal Phenotype and Neurotrophins Expression in Embryonic Stem Cells. Rejuvenation Res. 9(4):475-484.

31) Atlasi Y, Mowla SJ, Ziaee SAM, Differential Expression of survivin and its splice variants, survivin- Ex3 and survivin-2B, in Bladder cancer. Submitted.
32) Fathi F, Tiraihi T, Mowla SJ, Movahedin M. (2006) Transfection of CCE Mouse Embryonic Stem Cells with EGFP and BDNF Genes by the Electroporation Method. Rejuvenation Res. 9(1):26-30.
33) Mowla SJ, Atlasi Y, Ziaee AM, Bahrami AR (2006) OCT3/4 is highly expressed in bladder cancer: further evidence for stem-cell origin of cancer hypothesis FEBS Jornal , 273: 128-128 Suppl. 1 JUN
34) Atlasi Y, Babaei E, Baygi ME, et al. (2006) Evaluating the expression of survivin, a regulator of cell proliferation and death, in bladder and bone tumors FEBS Jornal, 273: 226-226 PP553 Suppl. 1 JUN
35) Taha MF, Valojerdi MR, Mowla SJ (2006) Effect of Bone Morphogenetic Protein-4 (BMP-4) on Adipocyte Differentiation from Mouse Embryonic Stem Cells. Anatomia, Histologia, Emryologia, 35(4):271-8.
36) Anjamrooz SH, Movahedin M, Tiraihi T, Mowla SJ (2006) In vitro effects of epidermal growth factor, follicle-stimulating hormone and testosterone on mouse spermatogonial cell colony formation. Reproduction, Fertility and Development. 18(6): 709-720.
37) Yaghoobi MM, Mowla SJ (2006) Differential Gene Expression Pattern of neurotrophins and their receptors during neural differentiation of Rat Bone Marrow Stromal Cells. Journal of Neuroscience Letters. 397(1-2):149-54.
38) Anjamrooz SH, Movahedin M, Tiraihi T, Mowla SJ (2006) Graft Efficiency of Co-Cultured Spermatogonial Cells Using Sperm Assay in Epididymal Lumen of Recipient Mice. Yakhteh 28:242-249.
39) Asadi MH, Mowla SJ, Nikpoor P. (2006) Gene Expression profile of CatSper3 and CatSper4 during Postnatal Development of Mouse Testis. Iranian Biomedical Journal. 10 (2):111-115.
40) Babaei E, Mowla SJ, Shariat Torbaghan S, Emadi Bayegi M. (2006) Detection of survivin gene expression in formalin-fixed paraffin-embedded tissues of human osteosarcoma: its potential usefulness in diagnosis and prognosis of bone tumors. Iranian Biomedical Journal. 10 (1):39-45.
41) Mowla SJ, Emadi Baygi M, Ziaee AM, Nikpoor P (2005) Evaluating Expression and Potential Diagnostic and Prognostic Values of Survivin in Bladder Tumors. Urology Journal. 2(3):141-147.
42) Mowla SJ, Emadi Baygi M, Ziaee AM, Atlasi Y, Nikpoor P (2005) Evaluation of sensitivity and specificity of urine survivin as a new molecular marker in diagnosis of bladder tumors. Iranian Journal of Biotechnology. 3 (3): 163-169.
43) Yaghoobi MM, Mowla SJ, Tiraihi TM. (2005) Nucleostemin, a coordinator of self-renewal, is expressed in rat stromal cells and turns off after induction of neural differentiation. Journal of Neuroscience Letters 390(2):81-86.
44) Azadbakht M, Valogerdi MR, Mowla SJ (2005) Comparison of mouse embryos development in sequential culture media G1.3/G2.3 with nonpolarized and polarized mouse endometrial epithelial cell co-culture. Fertility and Sterility 84: S401-S401. Suppl.
45) Anjamrooz SH, Movahedin M, Tiraihi T, Mowla SJ (2005) The in vitro effect of EGF, FSH and testosterone on spermatogonial cells colonization. Biology of Reproduction 176-176 Sp. Iss. SI.
46) Ziaee S., Emadi Baygi M., Nikpoor P. and Mowla S (2005) The suitability of survivin expression assay as a new molecular marker for detection of bladder cancer. European Urology Supplements, Volume 4, Issue 3, Page 161.
47) Babaei E, Mowla S, Torbaghan SS. (2005) Evaluation of expression of survivin as a specific tumor marker for prognosis of human osteosarcoma. BONE 36: S80-S80 Suppl.
48) Mohandesan E, Mowla SJ, Hejebri Nobari A, Yaghoobi MM, Mesbah Namin SA (2004) Extraction and analysis of ancient DNA from human remains of Masjede Kabood burial site. Iranian Journal of Biotechnology. 2(4):236-242.
49) Nikpoor P, Mowla SJ, Movahedin M, Ziaee SA, Tiraihi TM.)2004) CatSper gene expression in

postnatal development of mouse testis and in subfertile men with deficient sperm motility. Human Reproduction 19:124-128.
50) Esmaili F, Tiraihi T, Movaheddin M, Mowla SJ (2003) Isolation of mouse embryonic stem cells using vero cells—as a feeder layer—and their
differentiation into neuron-like cells. Fertility and Sterility, Volume 80 (Supplement 3):263-264.
51) Nikpoor P, Mowla SJ, Movahedin M, Al-Tiraihi T, Ziaee SAM.)2003) Evaluation of CatSper gene expression in mouse testis at different ages. Journal of Urology 169 (4): 1556 Suppl. S.
52) Mowla SJ, Murphy RA and Seidah NG. Site-directed mutagenesis defines the cleavage specificity of the pro-protein convertase SKI-1. submitted.
53) Morris SJ, Laliberte J, Mowla SJ and Murphy RA. Targeting of Brain-derived Neurotrophic Factor to the Regulated Secretory Pathway Arises from a Pro-Domain Sorting Signal. Submitted
54) Mowla SJ, Farhadi HF, Pareek S, Atwal JK, Morris SJ, Seidah NG, Murphy RA. (2001) Biosynthesis and post-translational processing of the precursor to brain-derived neurotrophic factor. J. Biol. Chem. 276(16):12660-12666.
55) Farhadi HF¶, Mowla SJ¶, Petrecca K, Morris SJ, Seidah NG, and Murphy RA (2000) Neurotrophin-3 Can Be Diverted From the Constitutive to the Regulated Secretory Pathway of Hippocampal Neurons by Dimerization with Brain-Derived Neurotrophic Factor. Journal of Neuroscience 20:4059-4068.
¶ The first two authors contributed equally to this work.
56) Mowla SJ, Pareek S, Farhadi HF, Petrecca K, Fawcett JP, Seidah NG, Morris SJ, Sossin WS, Murphy RA (1999) Differential sorting of nerve growth factor and brain-derived neurotrophic factor in hippocampal neurons. Journal of Neurosci 19:2069-2080.
57) Seidah NG, Mowla SJ, Hamelin J, Mamarbachi AM, Benjannet S, Toure BB, Basak A, Munzer JS, Marcinkiewicz J, Zhong M, Barale JC, Lazure C, Murphy RA, Chretien M, Marcinkiewicz M (1999) Mammalian subtilisin/kexin isozyme SKI-1: A widely expressed proprotein convertase with a unique cleavage specificity and cellular localization. Proc Natl Acad Sci USA 96:1321-1326.
58) Zhong M, Munzer JS, Basak A, Benjannet S, Mowla SJ, Decroly E, Chretien M, Seidah NG (1999) The Prosegments of Furin and PC7 as Potent Inhibitors of Proprotein Convertases. In vitro and ex vivo assessment of their efficacy and selectivity. J Biol Chem 274:33913-33920.

Gene discoveries

Human OCT-4B1 variant
GeneBank accession EU518650

Mus musculus subtilisin/kexin isozyme SKI-1 precursor, mRNA, complete cds
gi|4679092|gb|AF094820.1|AF094820[4679092]

Rattus norvegicus subtilisin/kexin isozyme SKI-1 precursor, mRNA, complete cds
gi|4679094|gb|AF094821.1|AF094821[4679094]

Homo sapiens membrane-bound transcription factor protease, site 1 (MBTPS1), mRNA
gi|4506774|ref|NM_003791.1|[4506774]

Protein discoveries

A truncated form of pro-Brain-Drived Neurotrofic Factor (28 kDa BDNF). Entrez protein (access number: P23560).

Patents:

1) Generating genetically engineered bone marrow stromal stem cells with reduced rate of cell death after induction of neural differentiation by means of knocking down the expression of p75NTR receptor
Provisional Application. Patent Act.number 2008902724, 3 Jun 2008.
2) Diagnostic kit: detection of Oct4 as a valuable molecular marker in diagnosis, progonsis and treatment of bladder tumors. Provisional patent application number 2005905163. 21 Sep 2005
3) A diagnostic kit to detect a novel variant of Survivin in urine as a non-invasive method for bladder cancer diagnosis. New Australian
Provisional Application. Patent Act 1990 (041003). 23 January 2004.

Book
Mowla SJ, Jafarnejad AM and Atlasi Y, Detection of OCT-4 in bladder cancer: evidence in support of cancer stem cell hypothesis. In: Hayat MA Bladder Cancer. Springer Co.

Invited speaker in:

7th Iranian Congress of Anatomical Sciences, 10-12 May 2006, Kashan university of Medical Sciences, Kashan, Iran

Title of lecture: Evaluating the expression of survivin, a regulator of cell proliferation and death, in bladder and bone tumors.
6th IBRO-Associated SDchool and 1st Neuroscience orientation summer program, Aug 26-September 21, 2006, Tehran, Iran
Title of lecture: Differential gene expression of Neurotrophins, their receptors and pro-protein convertases in brain, spinal cord and neurally differentiated bone marrow stromal stem cells.

7th royan international research award, 13-15 september 2006, Tehran, Iran
Title of lecture: Expression of embryonic stem cell markers, OCT4, Nucleostemin and BMI-1 in bladder and brain tumors: further evidence in support of the stem cell theory of cancer.