

# CURRICULUM VITAE

**Farhad Mashayekhi**



**Name:** Farhad Mashayekhi

**Gender:** Male

**Nationality:** Iranian

**Place of Birth:** Tonekabon, Mazandaran, Iran

**Address:** Department of Biology- Faculty of Sciences, University of Guilan, Namjoo street- Rasht- Iran. PO Box: 1914

**Tel:** 0098-9113330017

**Fax:** 0098-131-3233647

**E-Mail:** [umistbiology@yahoo.co.uk](mailto:umistbiology@yahoo.co.uk) and [mashayekhi@guilan.ac.ir](mailto:mashayekhi@guilan.ac.ir)

**Current position:** **Professor** in Cell and Developmental Biology; University of Guilan- Department of Biology. Rasht, Iran.

## **ACADEMIC QUALIFICATIONS**

**PhD in Cell and Developmental Biology:** University of Manchester, School of Biological Sciences, Manchester, England (2002).

**Thesis title:** Developmental abnormalities occurring in early onset hydrocephalus

### **Teaching experiences:**

#### **BSc:**

1. Cell and Molecular Biology
2. Principle of Development
3. Embryology
4. Histology

#### **Postgraduate:**

1. Developmental Biology
2. Comparative Embryology
3. Cancer Biology
4. Reproduction and sex determination
5. Advanced Cell Biology
6. Molecular Evolution
7. Cell and Tissue culture

### **Current Research projects:**

1. Developmental neuroscience: Hydrocephalus, Autism
2. Stem cell in Neurodegenerative diseases

3. In vitro fertilization and Embryo transfer
4. Cancer Biology

### **Books:**

**1. Brain Stem Cells** (2001) Chapter 8

Book details: Springer Verlag; 1st edition. October 15, 2001. ISBN: 185996222X

**2. Embryology** 2007 Guilan University press

**3. Organogenesis** 2007 Guilan University press

**4. Applied Developmental Biology** 2013 Guilan University Press

**5. Medical Genetics**, Thompson and Thompson, 2016, (Translation)

**6. Cell and Molecular Biology**, Lodish (2016) (Translation)

### **Editorial Board**

1. Caspian Journal of Neurological Sciences (Editor)
2. International Journal of Molecular and Clinical Microbiology
3. International Aquatic Research (Editor)
4. Iranian Journal of Biology (Editor)
5. Journal of Aquatic Physiology and Biotechnology
6. SM Autism and Epilepsy

## Reviewed Published papers in Journals:

1. Eslaminejad F, **Mashayekhi F**, Osalou MA, Sasani ST, Salehi Z. BMP4 circulating levels and promoter (rs17563) polymorphism in risk prediction of idiopathic male infertility. **British Journal of Biomedical Sciences**. 2019 Apr;76(2):98-100. doi: 10.1080/09674845.2018.1564419.
2. Bahreini F, Ramezani S, Shahangian SS, Salehi Z, **Mashayekhi F**. miR-559 polymorphism rs58450758 is linked to breast cancer. **British Journal of Biomedical Sciences**. 2019 Oct 23.
1. Tabatabaeian K, Simayee M, Fallah-Shojaie A, **Mashayekhi F**. N-doped carbon nanodots@UiO-66-NH<sub>2</sub> as novel nanoparticles for releasing of the bioactive drug, rosmarinic acid and fluorescence imaging. **Daru**. 2019 Jun;27(1):307-315. doi: 10.1007/s40199-019-00276-1.
2. Raad M, Salehi Z, Sasani ST, **Mashayekhi F**, Aminian K, Koutenayi MH. Aberrant methylation of miR-125b1 in gastric cancer: A case-control study. **Neoplasma**. 2019 Jul 23;66(4):603-608. doi: 10.4149/neo\_2018\_180925N716.
3. Maryam Farzaneh Behelgard, Saber Zahri, **Farhad Mashayekhi**, Kamran Mansouri & S. Mohsen Asghari A peptide mimicking the binding sites of VEGF-A and VEGF-B inhibits VEGFR-1/-2 driven angiogenesis, tumor growth and metastasis. **Scientific Reports**. 2018. Article number: 17924 (2018)
4. Shabani S, **Mashayekhi F**, Shahangian SS, Salehi Z. Genetic polymorphism of glial cell derived neurotrophic factor (GDNF) in male infertility. **British Journal of Biomedical Sciences**. 2018 Nov 8. [Epub ahead of print]

5. Mashayekhi S, Salehi Z, Saberi A, Shakiba M, **Mashayekhi F**, Yousefzadeh-Chabok S. Functional variants of p21 gene alter susceptibility to meningioma. **British Journal of Biomedical Sciences**. 2018 Apr;75(2):92-94.
  
6. **Mashayekhi F**, Saberi A, Mashayekhi S. Serum TIMP1 and TIMP2 concentration in patients with different grades of meningioma. **Clinical Neurology and Neurosurgery**. 2018 Jul;170:84-87.
  
7. Mirnoori SM, Shahangian SS, Salehi Z, **Mashayekhi F**, Talesh Sasani S, Saedi HS. Influence of single nucleotide polymorphisms in pri-miR-124-1 and STAT3 genes on gastric cancer susceptibility. **British Journal of Biomedical Sciences**. 2018 Oct;75(4):182-186.
  
8. Vakil Monfared R, **Mashayekhi F**. OX40L gene polymorphism and breast cancer in Iranian population. **Experimental Oncology**. 2018 Jun;40(2):132-135.
  
9. Aminian K, **Mashayekhi F**, Mirzanejad L, Salehi Z. A functional genetic variant in GAS5 lncRNA (rs145204276) modulates p27Kip1 expression and confers risk for gastric cancer. **British Journal of Biomedical Sciences**. 2018 Oct 1. [Epub ahead of print]
  
10. Hosseinpour M, **Mashayekhi F**, Bidabadi E, Salehi Z. Neuropilin-2 rs849563 gene variations and susceptibility to autism in Iranian population: A case-control study. **Metabolic Brain Disease**. 2017 Oct;32(5):1471-1474.
  
11. **Mashayekhi F**, Salehi Z. Administration of vitamin D3 induces CNPase and myelin oligodendrocyte glycoprotein expression in the cerebral cortex of the murine model of cuprizone-induced demyelination. **Folia Neuropathol**. 2016;54(3):259-264.

12. Zare Sahar, **Mashayekhi Farhad** and Bidabadi Elham. The association of CNTNAP2 rs7794745 gene polymorphism and autism in Iranian population. **Journal of Clinical Neuroscience**, 2017 May;39:189-192.
13. Ajabi, **Mashayekhi** and Bidabadi. MTRR 66A>G gene polymorphism in the patients with autism. **Neurology Asia**. 2017; 22(1) : 59 – 64
14. Rosa Haghiri, **Farhad Mashayekhi**, Elham Bidabadi and Zivar Salehi. Analysis of methionine synthase (rs1805087) gene polymorphism in Autism patients in northern Iran population. **Acta Neurobiology Experimentalis**. 2016, 76: 318–323.
15. Hadavi M, Hasannia S, Faghihi S, **Mashayekhi F**, Zadeh HH, Mostofi SB. Novel calcified gum Arabic porous nano-composite scaffold for bone tissue regeneration. **Biochem Biophys Res Commun**. 2017 Jul 8;488(4):671-678.
16. Alipour M, **Mashayekhi F**, Salehi Z. Association of leukemia inhibitory factor gene polymorphism and in vitro fertilization outcome in a population in northern Iran. **Cell Mol Biol (Noisy-le-grand)**. 2017 Mar 31;63(3):58-61.
17. Joulai Veijouyeh S, **Mashayekhi F**, Yari A, Heidari F, Sajedi N, Moghani Ghoroghi F, Nobakht M. In vitro induction effect of 1,25(OH)<sub>2</sub>D<sub>3</sub> on differentiation of hair follicle stem cell into keratinocyte. **Biomed J**. 2017 Feb;40(1):31-38.
18. Mazjin MA, Salehi Z, **Mashayekhi F**, Bahadori M. Evaluation of GPx1 Pro198Leu Polymorphism in Idiopathic Male Infertility. **Molecular Biology**. 2016 Jan-Feb;50(1):89-93.
19. **Mashayekhi F**, Salehi Z. Administration of vitamin D<sub>3</sub> induces CNPase and myelin oligodendrocyte glycoprotein expression in

the cerebral cortex of the murine model of cuprizone-induced demyelination. **Folia Neuropathol.** 2016;54(3):259-264.

20. **Mashayekhi**, Mizban, Bidabadi, Salehi. The association of SHANK3 gene polymorphism and autism. **Minerva Pediatrica.** 2016 Jun 8. [Epub ahead of print]
21. **Mashayekhi F**, Yousefi M, Salehi Z, Pournourali M. The association of -656T>G and 1349T>G polymorphisms of ApE1 gene and the risk of female infertility. **J Obstet Gynaecol.** 2016 May;36(4):544-7.
22. **Mashayekhi**, Golnarnik and Saedi. The E-selectin S149R polymorphisms in breast cancer in a northern Iran population. H. S. Saedi. **Cell and Molecular Biology**, 2016, 62 (1): 34-37
23. Hadiyan, **Mashayekhi** and Salehi, Administration of leukemia inhibitory factor increases Opalin and myelin oligodendrocyte glycoprotein expression in the cerebral cortex of cuprizone-induced model of demyelination, **Folia Neuropathologica**, 2015;53(2):147-52.
24. Hemmati M, **Mashayekhi F**, Firouzi F, Ashori M, Mashayekhi H. Effects of electromagnetic fields on Reelin and Dab1 expression in the developing cerebral cortex. **Neurological Sciences.** 2014 Aug;35(8):1243-7.
25. Hajirostamloo and **Mashayekhi**. A REPORT ON OCCURRENCE OF *Artemia franciscana* Kellogg 1906 IN NOUGH CATCHMENT (IRAN), **IJBPAS**, January, 2016, 5(1): 118-128
26. **Mashayekhi**, Yousefi, Salehi, Saedi and Pournourali. The association of ApE1 -656T>G and 1349T>G polymorphisms with breast cancer

susceptibility in northern Iran, **Cell Molecular Biology**. 2015 Aug 28;61(4):70-4.

27. **Mashayekhi**, Hadiyan and Salehi. Soluble c-Met expression in the serum of patients with different stages of prostate cancer. **European Journal of Oncology**, In Press.

28. F. Karimi karimlo, **Farhad Mashayekhi**, Z. Zahiri Sorouri, M.H. Bahadori, Z. Salehi. Association of GSTM1 and GSTT1 gene polymorphisms and in vitro fertilization outcome in a population in northern Iran, **Journal of Obstetric and Gynecology**. 2015 Jan;35(1):46-8.

29. **Mashayekhi F**, Behrouzi S, Yousefi M, Salehi Z. The association of PON1 192 Q/R polymorphism and the risk of female infertility. **Cell Molecular Biology**. 2015 May 28;61(2):74-7.

30. Yousefi M, Salehi Z, **Mashayekhi F**, Bahadori MH. The association of ApE1 -656T>G and 1349T>G polymorphisms and idiopathic male infertility risk. **Int Urol Nephrol**. 2015 Jun;47(6):921-6.

31. Shabanipour S, **Mashayekhi F**, Bahadori MH, Soruri ZZ. The relationship between MMP-9 promoter polymorphism and IVF outcome. **Cell Molecular Biology**. 2015 Mar 28;61(1):64-7.

32. **Mashayekhi F**, Aryaee H, Mirzajani E, Yasin AA, Fathi A. Soluble CD44 concentration in the serum and peritoneal fluid samples of patients with different stages of endometriosis. **Arch Gynecol Obstet**. 2015 Sep;292(3):641-5.

33. Sara Pishgah Hadyan, Zivar Salehi, **Farhad Mashayekhi**, Hamidi Madani Ali. The association between DAZ T>C polymorphism and



idiopathic male infertility risk in north of Iran. **Molecular Biology**, 2015, Vol. 49, No. 1, pp. 168–170.

34. Gheybi E, Amani J, Salmanian AH, **Mashayekhi F**, Khodi S. Designing a recombinant chimeric construct contain MUC1 and HER2 extracellular domain for prediagnostic breast cancer. **Tumour Biology**. 2014 Nov;35(11):11489-97
35. Khoshdelrad N, Salehi Z, **Mashayekhi F**, Abbasi O, Mirzajani E. Soluble c-Met expression in the peritoneal fluid and serum of patients with different stages of endometriosis. **Arch Gynecol Obstet**. 2014 May;289(5):1107-12.
36. Yousefi, Salehi , **Mashayekhi**, Bahadori. Association of ApE1 gene Asp148Glu polymorphism and idiopathic male infertility. Journal of Gorgan University of Medical Sciences. 2015, I 17, 2.
37. Tajbakhsh, **Mashayekhi** , Hamidi Madani, Bahadori. Association of mdr1 gene C1236t polymorphism with idiopathic males' infertility in guilan population. J Shahid Sadoughi Univ Med Sci 2015; 23(1): 1796-1804.
38. Tajbakhsh, **Mashayekhi** , Salehi, Saedi Saedi, Yousefi. The association of ApE1 gene Asp148Glu polymorphism and breast cancer risk in Guilan population. Arak Medical University Journal (AMUJ) 2015; 18(95): 10-16.
39. Marzband, **Mashayekhi**, Salehi, Bahadori. Association of Arg399Gln Polymorphism of XRCC1 with Idiopathic Male Infertility in Guilan Province Arak Medical University Journal (AMUJ)2015; 18(100): 85-91
40. Behrouzi, **Mashayekhi**, Bahadori. The association of PON1 Q192R polymorphism and idiopathic male infertility in Guilan population Arak Medical University Journal (AMUJ) 2014; 17(90): 11-17.
41. Arjmand, Salehi , **Mashayekhi**, Najafi, Mirpoor. Analysis of Glu298Asp eNOS Gene polymorphism in patients with Gastric Cancer in the Guilan population. Arak Medical University Journal (AMUJ) 2014; 17(89): 53-62

42. Eslami, **Mashayekhi**. Effects of Vitamin B12 on Olig2 Expression and Total Protein Concentration in the Cerebral Cortex. J Mazand Univ Med Sci 2013; 23(Supple 1): 2-7
43. Mahdiyeh, Mousavi, **Mashayekhi**. Effects of Leukemia Inhibitory Factor on Myelin Basic Protein, Olig1 and Olig2 Expression in the Cerebral Cortex of Cuprizone Induced Multiple Sclerosis Mice. J Mazand Univ Med Sci 2012; 22(87): 65-73
44. **Mashayekhi**, Faraji, Mousavi. Effects of Ciliary Neurotrophic Factor on Oligodendrocyte Progenitor Cells Differentiation and Induction of Opalin, Olig Expression in the Cuprizone Induced Multiple Sclerosis Mice. J Mazand Univ Med Sci. 2012; 21 (84) :15-21
45. Khoshdel Rad, **Mashayekhi** , Mirzajani . Concentration of soluble form of hepatocyte growth factor receptor in cerebrospinal fluid and serum of patients with bacterial and viral meningitis. mljgoums. Med. Lab. Journal. 2012; 6 (1) :1-6
46. **Mashayekhi** , Rajaei. The Comparison of Leukemia Inhibitory Factor (LIF) Concentration in the Serum and Cerebrospinal Fluid of Children with Bacterial Meningitis. mljgoums. Med. Lab. Journal. 2012; 6 (2) :3-7.
47. Oranus Abbasi, **Farhad Mashayekhi**, Ebrahim Mirzajani, Saba Fakhriyeh Asl and Touraj Mahmoudi and Hamid Saeedi Saedi. Soluble VEGFR1 concentration in the serum of patients with colorectal cancer, **Surgery Today**, 2015 Feb;45(2):215-20.
48. **Mashayekhi F**, Salehi Z, Jamalzadeh HR. Quantitative analysis of cerebrospinal fluid brain derived neurotrophic factor in the patients with multiple sclerosis. **Acta Medica** (Hradec Kralove). 2012;55(2):83-6.
49. Faraji, Mousavi, **Mashayekhi** (2012) Effects of leukemia inhibitory factor on myelin basic protein, Olig1 and Olig2 expression in the cerebral cortex of Cuprizone induced multiple sclerosis mice. Mazandaran Journal of Medical sciences.

50. **Farhad Mashayekhi**, Mahdiyeh Faraji and Zahra Mousavi (2012) Effects of Ciliary neurotrophic factor on oligodendrocyte progenitor cells differentiation and induction of Opalin, Olig expression in the Cuprizone induced multiple sclerosis mice. *Guilan Medical science Journal*.
51. Emamifar B, Salehi Z, Mehrafza M, **Mashayekhi F**. The vascular endothelial growth factor (VEGF) polymorphisms and the risk of endometriosis in northern Iran. ***Gynecol Endocrinol***. 2012; 28(6):447-50.
52. **Mashayekhi F**. and Hadiyan S. A single nucleotide polymorphism in *TP53* may be a genetic risk factor for Iranian patients with idiopathic male infertility, ***Andrologia***, 2012 May;44 Suppl 1:560-4.
53. Honarmand, H., Mirzajani, E., Rahbar-Taromsari, M., Saadat, F., Mirblock, F., **Mashayekhi, F**. The relationship and diagnostic value of CRP and hsCRP for myocardial infarction. ***Journal of Microbiology Research*** 5 (20), pp. 3215-3219.
54. **Mashayekhi F**, Gholizadeh L. Administration of Hepatocyte Growth Factor Increases Reelin and Disabled 1 Expression in the Mouse Cerebral Cortex: An In Vivo Study. ***Cellular and Molecular Neurobiology***. 2011 Nov;31(8):1267-70.
55. **Mashayekhi F**, Salehi Z. Expression of leukemia inhibitory factor in the cerebrospinal fluid of patients with multiple sclerosis. ***J Clin Neurosci***. 2011 Jul;18(7):951-4.
56. **Mashayekhi F**. and Gholizadeh L. Expression and phosphorylation of eIF4E by intravenous administration of hepatocyte growth factor in the cerebral cortex. ***Romanian Journal of Biochemistry***. **48**, 1, 33–40 (2011).

57. **Mashayekhi F.** and Gholizadeh L Administration of anti-c-kit antibody into the cerebrospinal fluid leads to increased cell death in the developing cerebral cortex. **Saudi Journal of Biological Sciences** (2011) 18, 261–266.
58. **Farhad Mashayekhi**, Elham Dianati, Lotfali Masomi Moghadam Quantitative analysis of nerve growth factor in the amniotic fluid during chick embryonic development. **Saudi Journal of Biological Sciences** (2011) 18, 209–212.
59. Ebrahim Mirzajani, Saeedeh Dejagah, **Farhad Mashayekhi**, Ali Nikpay and Shohreh Siyam. Amniotic fluid TGF- $\beta$ 1 concentration during chick embryonic development. **Annals of Biological Research**, 2011, 2 (5) :185-190.
60. **Farhad Mashayekhi**, Mahdiyeh Sadeghi and Farzad Rajaei, Induction of perlecan expression and neural cell proliferation by FGF-2 in the developing cerebral cortex; an *in vivo* study. **Journal of Molecular Neuroscience**. 2011 Oct;45(2):87-93.
61. **Farhad Mashayekhi**, Shariat Zahiri, Ebrahim Mirzajani and Ali Nickpay. Developmental changes in amniotic fluid vascular endothelial growth factor levels of chick embryos. **Annals of Biological Research**, 2011, 2 (1) :94-99.
62. Zahra Hossien Zadeh, **Farhad Mashayekhi** and Ziba Zahiri Sorouri. Association between *GSTM1* gene polymorphism in Iranian patients with endometriosis. **Gynecological Endocrinology**. 2011 Mar;27(3):185-9.
63. **Farhad Mashayekhi**, Gholamreza Shafiee, Masood Kazemi, and Parviz Dolati, Lumbar disc degeneration disease and aggrecan gene polymorphism in northern Iran, **Biochemical Genetics**. 2010 Aug;48(7-8):684-9.

64. Aghajanjpour L, **Mashayekhi F**, Rajaei F. Intercellular adhesion molecule-1 (ICAM-1) gene polymorphism and endometriosis in northern Iran. *Arch Gynecol Obstet*. 2011 May;283(5):1035-9.
65. **Mashayekhi F**, Mirzajani E, Naji M, Azari M. (2010) Expression of insulin-like growth factor-1 and insulin-like growth factor binding proteins in the serum and cerebrospinal fluid of patients with Parkinson's disease. *J Clin Neurosci*. 2010 May;17(5):623-7.
66. **Farhad Mashayekhi**, Majid Azari, Lotfali Masomi Moghadam, Meysam Yazdankhah, Mohammad Naji and Zivar Salehi. (2009) Changes in the cerebrospinal fluid nerve growth factor levels during chick embryonic development, *Journal of Clinical Neuroscience*, 16(10):1334-7.
67. Rajaei F, Borhani N, Sabbagh-Ziarani F, **Mashayekhi F**. (2010) Effects of extremely low-frequency electromagnetic field on fertility and heights of epithelial cells in pre-implantation stage endometrium and fallopian tube in mice. *Journal of Chinese Integrative Medicine*. 8(1):56-60.
68. **Farhad Mashayekhi**, Mahvash Hadavi, Hamid Reza Vaziri and Mohammad Naji, (2010) Increased acidic fibroblast growth factor concentrations in the serum and cerebrospinal fluid of patients with Alzheimer's disease, *Journal of Clinical Neuroscience*. 17(3):357-9.
69. Zivar Salehi, **Farhad Mashayekhi**, Mohammad Naji and Sareh Pandamooz, (2009) Insulin like growth factor-1 and Insulin like growth factor binding proteins concentrations in the cerebrospinal fluid during mouse embryonic development, *Journal of Clinical Neuroscience*. 16(7):950-3.
70. Zivar Salehi, **Farhad Mashayekhi** and Mohammad Naji, (2008) Insulin like growth factor-1 and insulin like growth factor binding proteins in the cerebrospinal fluid and serum from patients with Alzheimer's disease, *Bio Factor*, 33(2):99-106.

71. Salehi Z, **Mashayekhi F.** (2009) Brain-derived neurotrophic factor concentrations in the cerebrospinal fluid of patients with Parkinson's disease. *J Clinical Neuroscience.* 16(1): 90-3.
72. Salehi Zivar, Halimi Mohammad, Rassa Mehdi, Ahaki Moheb, Molla Salehi Hamid Reza and **Mashayekhi Farhad.** (2009) Helicobacter pylori cagA status and peptic ulcer disease in Iran, *Digestive Disease and Sciences,* 54(3):608-13.
73. Salehi Z. and **Mashayekhi F.** (2009) Cerebrospinal fluid brain derived neurotrophic factor concentrations in the patients with Parkinson disease, *Journal of Clinical Neuroscience.* Jan;16(1):90-3.
74. **Mashayekhi F.** (2008) Neural cell death is induced by neutralizing antibody to nerve growth factor: An in vivo study. *Brain & Development.* 30: 112–117.
75. Salehi Z. and **Mashayekhi F.** (2007) Eukaryotic translation initiation factor 4E (eIF4E) expression in the brain tissue is induced by infusion of nerve growth factor into the mouse cisterna magnum: an in vivo study. *Molecular and Cellular Biochemistry.* 304(1-2):249-53.
76. Salehi Z, **Mashayekhi F,** Shahosseini F. (2007) Significance of eIF4E expression in skin squamous cell carcinoma. *Cell Biology International.* 31(11):1400-4.
77. **Farhad Mashayekhi** and Zivar Salehi, (2007) Cerebrospinal fluid stem cell factor concentrations in the children with meningitis. *Journal of Biological Sciences.* 7 (7); 1244-1248.

78. **Farhad Mashayekhi**, (2007) Cerebrospinal fluid hepatocyte growth factor levels in the children with congenital non-communicating hydrocephalus. *Journal of Biological Sciences*. 7 (7); 1249-1253.
79. **F. Mashayekhi** and Z. Salehi , (2007) Infusion of anti-nerve growth factor into the cisternum magnum of chick embryo leads to decrease cell production in the cerebral cortical germinal epithelium. *European Journal of Neurology*. 14:181-186.
80. **Farhad Mashayekhi** and Zivar Salehi, (2006) Cerebrospinal fluid nerve growth factor level in the patients with Alzheimer disease. *Annals of Saudi Medicine*. 26(4):278-82.
81. Miyan JA, Zendah M, **Mashayekhi F**, Owen-Lynch PJ. (2006) Cerebrospinal fluid supports viability and proliferation of cortical cells in vitro mirroring *in vivo* development. *Cerebrospinal Fluid Research*. Mar 20;3(1):2 .
82. Z. Salehi and **F. Mashayekhi**, (2006) Expression of the Eukaryotic Translation Initiation Factor eIF4E and 4E-BP1 in esophageal cancer. *Clinical Biochemistry*.; 2006 Apr;39(4):404-9.
83. Z. Salehi and **F. Mashayekhi**. (2006) The role of cerebrospinal fluid on neural cell survival in developing cerebral cortex. *European Journal of Neurology*. 2006, 13: 760–764.
84. **Mashayekhi F.** and Salehi Z. (2006) The importance of cerebrospinal fluid on neural cell proliferation in developing chick cerebral cortex. *European Journal of Neurology* 13 (3): 266–272.
85. **F. Mashayekhi** and Z. Salehi, (2005) Purification of *Saccharomyces cerevisiae* eIF4E/eIF4G/Pab1p complex with capped mRNA. *Iranian International Journal of Science*. 16(1): 25-31.

86. **Mashayekhi F.** and Salehi. (2005) Expression of nerve growth factor in cerebrospinal fluid of congenital hydrocephalic and normal children . *European Journal of Neurology*. **12**: 632-637.
87. Owen-Lynch PJ, Draper CE, **Mashayekhi F**, Bannister CM, Miyan JA. (2003) Defective cell cycle control underlies abnormal cortical development in the hydrocephalic Texas rat. *Brain*. 126(Pt 3):623-3.
88. **Mashayekhi F**, Draper CE, Bannister CM, Pourghasem M, Owen-Lynch PJ, Miyan JA. (2002) Deficient cortical development in the hydrocephalic Texas (H-Tx) rat: a role for CSF. *Brain*. 125(Pt 8):1859-74.
89. Miyan JA, **Mashayekhi F**, Bannister CM. (2001) Developmental abnormalities in early-onset hydrocephalus: clues to signalling. *Symp Soc Exp Biol*. (53):91-106.
90. **Mashayekhi F**, Bannister CM, Miyan JA. (2001) Failure in cell proliferation in the germinal epithelium of the HTx rats. *Eur J Pediatr Surg*. 11 Suppl 1:S57-9.
91. Pourghasem M, **Mashayekhi F**, Bannister CM, Miyan J. (2001) Changes in the CSF fluid pathways in the developing rat fetus with early onset hydrocephalus. *Eur J Pediatr Surg*.11 Suppl 1:S10-3.
92. **Mashayekhi F**, Bannister CM, Miyan JA. (2000) Possible role of CSF in a developmental abnormality associated with early-onset hydrocephalus. *Eur J Pediatr Surg*. 10 Suppl 1:39-40.
93. Khoshdel, **Mashayekhi**, Mirzajani. (2012) Concentration of soluble form of hepatocyte growth factor receptor in cerebrospinal fluid and



serum of patients with bacterial and viral meningitis. Journal of Laboratory sciences,

94. **Mashayekhi** and Rajaei. (2012). Expression of leukemia inhibitory factor in the serum and cerebrospinal fluid of children with bacterial meningitis. Journal of Laboratory sciences,

## **Conferences** (last updated 2009)

1. How does blockage of cerebrospinal fluid interfere in the development of the cerebral cortex? Society for Research into Hydrocephalus & Spina Bifida (SRHSB) 44th Annual Scientific Meeting, 2000, **Atlanta, USA.**
2. Developmental abnormalities occurring in early onset hydrocephalus. Clues to signaling. Brain syem cell meeting, 2000, Cambridge university, **Cambridge, England.**
3. Teratogenic effects of Cadmium chloride on the organogenesis of Balb/c mice. The 6th Biology meeting, 1376, Kerman University, **Kerman Iran.**
4. The importance of cerebrospinal fluid in brain development. 2002, Westminster, **London, England.**
5. Failure in cell proliferation in the germinal epithelium of the HTx rats. Society for Research into Hydrocephalus & Spina Bifida. 45th Annual Scientific Meeting, 2001 **Uppsala, Sweden.**
6. Changes in the CSF fluid pathways in the developing rat fetus with early onset hydrocephalus. Society for Research into Hydrocephalus & Spina Bifida. 45th Annual Scientific Meeting, 2001 **Uppsala, Sweden.**
7. Deficient neural stem cell proliferation in the germinal epithelium of hydrocephalic brain. The first cell biology and Genetics meeting, 2002, **Ahwaz, Iran.**
8. Cah1, a new cap associated protein, has a homology with the human tumour repressor protein Fhit. The first cell biology and Genetics meeting, 2002, **Ahwaz, Iran.**
9. Abnormal development of cerebral cortex in congenital hydrocephalus. Biology meeting, 2003, **Uromia, Iran.**

10. Proliferation and apoptosis in the developing cerebral cortex. Biology meeting, 2003, **Uromia, Iran.**
11. Analysis of the interaction of eIF4E and Cah1 with capped and uncapped mRNA. Biology meeting, 2003, **Uromia, Iran.**
12. The role of Cajal Retzius cells and expression of reelin during rat cerebral cortex development. 1st cell and Developmental biology meeting. 2003, Tehran university, **Tehran, Iran.**
13. Heparan sulfate potentiates the mitogenic effect of fibroblast growth factor (FGF-2) on the developing cerebral cortex cells. 1st cell and Developmental biology meeting. 2003, Tehran university, **Tehran, Iran.**
14. Cloning and purification of eIF4E/eIF4G/PABP complex. Biotechnology meeting, 2003, **Mashad, Iran.**
15. The role of cerebrospinal fluid on normal and abnormal brain development. Neurosciences meeting. January 2004. University of Jaddah, **Jaddah, Saudi Arabia.**
16. The Role of Cerebrospinal Fluid on Chick Cerebral Cortex Development. Society for Research into Hydrocephalus and Spina Bifida, **Dublin , Ireland ,** June 2004.
17. Nerve Growth Factor Level in the Cerebrospinal Fluid in Hydrocephalus. Society for Research into Hydrocephalus and Spina Bifida ,Dublin , **Ireland ,** June 2004
18. Expression of nerve growth factor in the cerebrospinal fluid with congenital hydrocephalus, 15th International society for Developmental Neurosciences (ISDN) **Edinburgh, United Kingdom.** August 2004.
19. The role of cerebrospinal fluid on neural cell survival in the developing chick cerebral cortex: An **in vivo** study. Bioscience- From genes to systems, **Glasgow, United Kingdom (2005)**
20. Nerve growth factor regulates the death of neurons in developing cerebral cortex. Bioscience- From genes to systems, **Glasgow, United Kingdom (2005)**
21. 4E-Binding protein 1 expression is inversely correlated to the progression of prostate cancer. First international Biology Conference , Guilan University ,Rasht ,**Iran .** August **2005.**

22. Analysis of eukaryotic initiation factor 4E expression in brain tumor. First international Biology Conference ,Guilan University ,Rasht ,**Iran** . August **2005**
23. Analysis of eIF4E over expression in skin cancers. First international Biology Conference ,Guilan University ,Rasht ,**Iran** .August **2005**.
24. An in vivo study of the role of cerebrospinal fluid on neuronal proliferation and survival in chick embryogenesis. First international Biology Conference ,Guilan University ,Rasht ,**Iran** .August **2005**.
- 25.** Study of pituitary gland development in *Rutilus frisi kutum* before hatching. First international Biology Conference ,Guilan University , Rasht ,**Iran** .August **2005**
- 26.** The importance of neurotrophin-3 in neural cell proliferation during cerebral cortical development. 33<sup>rd</sup> Annual meeting of the Fetal and Neonatal physiological Society, (2006) **Cambridge, England**
27. The vital role of cerebrospinal fluid on cerebral cortical development, 33<sup>rd</sup> Annual meeting of the Fetal and Neonatal physiological Society, (2006) **Cambridge, England**
28. Neural cell death is induced by neutralising antibody to basic fibroblast growth factor; An *in vivo* study. 33<sup>rd</sup> Annual meeting of the Fetal and Neonatal physiological Society, (2006) **Cambridge, England**
29. Expression of stem cell factor in cerebrospinal fluid of non-communicating Hydrocephalus. 33<sup>rd</sup> Annual meeting of the Fetal and Neonatal physiological Society, (2006) **Cambridge, England**.
30. Study of pituitary gland development in *Rutilus frisi kutum* larger than 1 gr. Up to adult stage, 14th Biology Conference, Tarbiat Modares university, **Tehran, Iran**.August-2006.
31. Microsatellite DNA analysis of *Esox lucius lineus* in Anzali Lagoon population, 14th Biology Conference, Tarbiat Modares university, **Tehran, Iran**.August-2006.

32. Micro satellite DNA analysis of *Salmo trutta caspius* in West Mazandaran population, 14th Biology Conference, Tarbiat Modares university, **Tehran, Iran**. August-2006.
33. Genetic diversity of Caspian Sea *Salmo trutta caspius* in Tonekabon area population using microsatellite markers, 14th Biology Conference, Tarbiat Modares university, **Tehran, Iran**. August-2006.
34. Electrophoretical analysis of cerebrospinal fluid proteome in late developmental stages in chick embryos. 2<sup>nd</sup> National meeting, Animal sciences, **Guilan University**, 5-7 september 2007
35. Cell death in the developing chick cerebral cortex. 2<sup>nd</sup> National meeting, Animal sciences, Guilan University, 5-7 september 2007
36. BDNF plays an important role in embryonic cerebrospinal fluid trophic properties over chick embryo neuroepithelial stem cells, 2<sup>nd</sup> National meeting, Animal sciences, **Guilan University**, 5-7 september 2007
37. Cerebrospinal fluid total protein concentration and cerebral cortical development in the chick fetuses, 2<sup>nd</sup> National meeting, Animal sciences, **Guilan University**, 5-7 september 2007
38. Neural cell death is induced by neutralizing antibody to nerve growth factor; an in vivo study, British society for Developmental biology, Sheffield, **England**, September 2007
39. Brain derived neurotrophic factor induces chondroitin sulfate expression in the developing chicken brain tissue, British society for Developmental biology, Sheffield, **England**, September 2007
40. Eukaryotic translation initiation factor 4E (eIF4E) expression in the brain tissue is induced by infusion of nerve growth factor into the mouse cisterna magnum: an in vivo study. British society for Developmental biology, Sheffield, **England**, September 2007
41. Administration of anti-stem cell factor antibody into the cerebrospinal fluid leads to increased cell death in the developing cerebral cortex, British society for Developmental biology, Sheffield, **England**, September 2007

42. Significance of cerebrospinal fluid in cerebrospinal cortical development, British society for Developmental biology, Sheffield, **England**, September 2007
  
43. THE CORRELATION BETWEEN HELICOBACTER PYLORI INFECTION AND GASTRIC CARCINOGENESIS IN IRAN, International Biochemistry and Molecular Biology, Shiraz, **Iran**, 2007
  
44. THE INVOLVEMENT OF AGGREGAN POLYMORPHISM IN DEGENERATION OF HUMAN INTERVERTEBRAL DISC, International Biochemistry and Molecular Biology, Shiraz, **Iran**, 2007
  
45. RELATIONSHIP BETWEEN MUTATIONS OF MITOCHONDRIAL DNA ND1 GENE AND TYPE 2 DIABETES, International Biochemistry and Molecular Biology, Shiraz, **Iran**, 2007
  
46. Expression of eIF4E in non-small cell lung cancer in response to IGF-1, An *in vitro* study, International Lung Cancer Conference, , Arena & Convention Centre, Liverpool, **England**, 9<sup>th</sup> – 12<sup>th</sup> July 2008
  
47. eIF4E expression and 4EBP1 phosphorylation status in lung cancer, International Lung Cancer Conference, Arena & Convention Centre, Liverpool, **England**, 9<sup>th</sup> – 12<sup>th</sup> July 2008.
  
48. *TP53* and *P21* polymorphisms and risk of lung cancer in Iranian population, International Lung Cancer Conference, Arena & Convention Centre, Liverpool, **England**, 9<sup>th</sup> – 12<sup>th</sup> July 2008.
  
49. P53 codon 72 polymorphism in Non-small cell lung cancer of patients from Iran, International Lung Cancer Conference, Arena & Convention Centre, Liverpool, **England**, 9<sup>th</sup> – 12<sup>th</sup> July 2008.
  
50. CYP17 gene polymorphisms and endometriosis in an Iranian population, The First National Congress on Endometriosis, Avicenna Research Institute, Nov. 12-13, 2008, Tehran, **Iran**

51. Endometriosis and Intercellular adhesion molecule-1 (ICAM-1) gene polymorphisms, The First National Congress on Endometriosis, Avicenna Research Institute, Nov. 12-13, 2008, **Tehran, Iran**
52. Insulin like growth factor-1 level in the cerebrospinal fluid from patients with astrocytomas, National Cancer research Institute, The International convention centre, 5-8 October 2008, **Birmingham, UK,**
53. Eukaryotic translation initiation factor 4E and angiogenesis in human astrocytomas, National Cancer research Institute, The International convention centre, 5-8 October 2008, Birmingham, UK,
54. Expression of eIF4E in non-small cell lung cancer in response to IGF-1, An *in vitro* study, International Lung Cancer Conference, , Arena & Convention Centre, Liverpool, England, 9<sup>th</sup> – 12<sup>th</sup> July 2008 (Oral)
55. eIF4E expression and 4EBP1 phosphorylation status in lung cancer, International Lung Cancer Conference, Arena & Convention Centre, Liverpool, England, 9<sup>th</sup> – 12<sup>th</sup> July 2008. (Oral)
56. *TP53* and *P21* polymorphisms and risk of lung cancer in Iranian population, International Lung Cancer Conference, Arena & Convention Centre, Liverpool, England, 9<sup>th</sup> – 12<sup>th</sup> July 2008 (Poster)
57. CYP17 gene polymorphisms and endometriosis in an Iranian population, The First National Congress on Endometriosis, Avicenna Research Institute, Nov. 12-13, 2008, Tehran, Iran – (Oral),
58. Endometriosis and Intercellular adhesion molecule-1 (ICAM-1) gene polymorphisms, The First National Congress on Endometriosis, Avicenna Research Institute, Nov. 12-13, 2008, Tehran, Iran. (Poster)
59. Cerebrospinal fluid proteome study during chick embryonic development Tehran, Iran
60. Expression of transforming growth factor beta-1(TGF-β1) and total protein concentration in amniotic fluid during early chick embryonic development.
61. Expression of eukaryotic translation initiation factor 4E and protein synthesis in the developing cerebral cortex due to exposure to cadmium chloride.
62. Vascular endothelial growth factor expression in the amniotic fluid and yolk sac blood vessels formation during early chick embryonic development

63. The effects of thermal manipulation on insulin-like growth factor-I and insulin-like growth factor binding protein-1 levels in the amniotic fluid during late chick embryonic development
64. Cerebrospinal fluid total protein concentration and insulin like growth factor-1 levels in the patients with meduloblastoma"
65. Brain derived neurotrophic factor expression in the serum and cerebrospinal fluid of patients with hydrocephalus.
66. Cystic fibrosis transmembrane conductance regulator gene mutations in men with azospermia in northern Iran
67. Estrogen receptor- $\alpha$  gene polymorphism and endometriosis in a population in north of Iran
68. Vascular endothelial growth factor expression in the amniotic fluid and yolk sac blood vessels formation during early chick embryonic development, Mashhad, Iran, 2010, Biology conference.
69. Expression of transforming growth factor beta-1(TGF- $\beta$ 1) and total protein concentration in amniotic fluid during early chick embryonic development, , Mashhad, Iran, 2010, Biology conference.
70. Cerebrospinal fluid proteome study during chick embryonic development, Mashhad, Iran, 2010, Biology conference.
71. Cerebrospinal fluid total protein concentration and insulin like growth factor-1 levels in the patients with meduloblastoma. 2010, Liverpool, Cancer Conference NCIR.
72. Brain derived neurotrophic factor expression in the serum and cerebrospinal fluid of patients with hydrocephalus. 2011. Mashhad, Iran, 12th Iranian Congress of Biochemistry and 4th International Congress of Biochemistry and Molecular Biology.
73. Cystic fibrosis transmembrane conductance regulator gene mutations in men with azospermia in northern Iran. 2011, Mashhad. 4th International Congress of Biochemistry and Molecular Biology.
74. Soluble vascular endothelial growth factor receptor concentration in the serum of patients with colorectal cancer. 7<sup>th</sup> Biology conference, Kerman, Iran. 2014
75. Expression of soluble L-selectin in the serum of patients with colon cancer. 7<sup>th</sup> Biology conference, Kerman, Iran. 2014

76. Expression of soluble e-cadherin in the serum of patients with the esophageal cancer. 7<sup>th</sup> Biology conference, Kerman, Iran.
77. Effect of electromagnetic field on cell migration in developing cortex. 7<sup>th</sup> Biology conference, Kerman, Iran.
78. Genetic Polymorphisms in GSTM1, GSTT1, GSTP1 and the Susceptibility to Basal Cell Carcinoma in Iranian population. European Human Genetic. 2014. **Milan, Italy.**
79. The impact of E-selectin gene polymorphism on breast cancer. NCRI Cancer Conference. 2015, **United Kingdom**
80. Expression of soluble CD44 in the serum and peritoneal fluid of patients with different stages of endometriosis. 2015. 22nd world congress on controversies in obstetric gynaecology and infertility. **Hungary.**
81. OX40L gene polymorphism and breast cancer in a population in northern Iran. NCRI Cancer Conference. 2015, United Kingdom
82. Application of antisense oligonucleotides (AS-ODs) against VEGF mRNA in human esophageal cancer cells. NCRI Cancer Conference. 2011, United Kingdom.
83. Eukaryotic initiation factor 4E binding protein (4E-BP) expression in the patients with melanoma. NCRI Cancer Conference. 2011, United Kingdom.
84. Association of intercellular adhesion molecule-1 (ICAM-1) gene polymorphism and squamous cell carcinoma in a population in northern Iran. NCRI Cancer Conference. 2012, United Kingdom.



## **Postgraduate (PhD and MSc) thesis supervisor:**

1. Analysis of methionine synthase in the patients with autism
2. Effects of EGCG on MOG and MBP gene expression in the cerebral cortex of EAE model of multiple sclerosis
3. Effects of green tea extracts on Opalin and Olig 1 expression in the cortex of EAE mouse model of MS
4. Impact of MTHFR gene polymorphisms on the autism
5. MTRR gene polymorphism and the risk of breast cancer
6. importance of IL-1a polymorphic site in idiopathic male infertility
7. The importance of MTRR polymorphism in Autism
8. Analysis of GSTM1 expression in the serum of patients with endometriosis
9. Study of E-selectin gene on breast cancer
10. Association of OX40L gene polymorphism and Breast cancer
11. The association of SHANK3 gene variation and Autism disorder
12. Vascular endothelial growth factor gene polymorphism in colorectal cancer
13. Analysis of MMP-9 gene in patients with colorectal cancer
14. CYP1A1 gene polymorphism and breast cancer
15. APE gene polymorphism in men with idiopathic infertility
16. Association of TNFR1 gene polymorphism and idiopathic male infertility
17. Association of Cyclin D1 (A 870 G ) Polymorphism with Breast Cancer
18. Analysis of genetic variants of XRCC1 in men with idiopathic male infertility
19. RAD51 Gene polymorphism and Colorectal Cancer

20. FAS Gene Polymorphism on male infertility
21. Analysis of SHBG gene polymorphism and idiopathic male infertility
22. Analysis of MDR1 gene polymorphism in idiopathic male infertility
23. Soluble epidermal growth factor receptor levels in the patients with breast cancer
24. MMP9 genetic variation in breast cancer patients
25. Evaluation of the effect of 1.25(OH)<sub>2</sub>D<sub>3</sub> on differentiation of hair follicle stemcell of rat to keratinocyte cells in vitro
26. Genetic variant of UBC9 gene and breast cancer
27. Analysis of PON genetic variation in men with idiopathic infertility
28. Association of COX2 gene polymorphism and IVF-ET
29. UBC9 gene variation in the patients with colorectal cancer
30. Analysis of sEGFR in the serum of patients with colorectal cancer
31. SRY gene variation and gender identity
32. The relationship of matrix metalloproteinase-9 (MMP9) gene and In Vitro Fertilization and embryo transfer outcome
33. A study of fibroblastic factors of Vimentin and Fibronectin expression in the breast cancer patients
34. Effect of electro- magnetic field on the neuronal cells death in cerebral cortex
35. The effect of electromagnetic fields on electrophoretic pattern of amniotic fluid proteins
36. Effects of Electromagnetic Fields on developing chick Cerebral Cortex
37. Analysis of Leukemia Inhibitory Factor (LIF) gene polymorphism and IVF-ET outcome
38. Soluble hepatocyte growth factor receptor protein concentration in patients with lung cancer

39. Soluble VEGFR concentration in the serum of patients with colon cancer
40. The effect of electromagnetic fields on eIF4E expression in the cerebral cortex
41. Effect of magnetic field on cerebral cortex during embryonic period
42. Effect of magnetic field on the gene expression pattern of the cerebral cortex during early postnatal period
43. GSTT1 gene polymorphism and outcome of In Vitro Fertilization and Embryo Transfer
44. Serum levels of soluble CD44 in the endometriosis
45. The effect of vitamin D in myelin formation in cerebral cortex
46. Analysis of cerebrospinal fluid in different central nervous system compartment during embryonic development
47. Analysis of soluble c-met concentration in the serum of patients with colon cancer
48. The association of intercellular adhesion molecule-1(ICAM-1) gene polymorphism and endometriosis
49. The investigation of glutathione S-transferase M1 gene polymorphism and endometriosis in a population
50. Effect of Cadmium chloride on eIF4e expression in the developing cerebral cortex
51. DAZ gene polymorphism in the men with idiopathic infertility
52. effects of Vitamin B12 on myelin formation in the cerebral cortex
53. Effects of green tea extract on myelin expression in the cerebral cortex
54. Protein pattern of Cerebrospinal fluid in mouse embryo
55. The effects of electromagnetic fields on the expression of IGF-I in the amniotic fluid
56. Expression of TGF- $\beta$ 1 in amniotic fluid during embryonic development

57. Vascular endothelial growth factor expression in the amniotic fluid during early chick embryonic development.
58. The impact of transforming growth factor beta receptor (TGF- $\beta$ 2) (rs764522) and Mucin 1 (MUC1) (rs146950322) gene polymorphism on in vitro fertilization and embryo transfer
59. The association of rs744166 polymorphism of the STAT3 gene with in vitro fertilization and embryo transfer in a population in northern Iran
60. The impact of FoxO3a (rs4946936) and tissue inhibitor metalloproteinase-2 (TIMP-2) (rs2277698) gene polymorphism on in vitro fertilization and embryo transfer
61. The impact of TIMP-1 and VEGF gene polymorphism on in vitro fertilization and embryo transfer outcome

## **Research projects:**

1. Role of insulin like growth factor-1 and Leukemia inhibitory factor in multiple sclerosis
2. The impact of Vitamin D on MOG and CNPase expression in multiple sclerosis
3. Insulin like growth factor-1 concentrations in the cerebrospinal fluid during mouse embryonic development
4. Cerebrospinal fluid proteome analysis and its effects on neural stem cells in early onset hydrocephalus
5. The application of ASO in cancer treatment
6. Treatment of multiple sclerosis using intra-cerebrospinal fluid application of mesenchymal stem cell

7. Analysis of nerve growth factor in the amniotic fluid during chick embryonic development.
8. The role of cerebrospinal fluid in normal cerebral cortical development
9. Cerebrospinal fluid proteome analysis .
10. Micro RNA in neurological disorders