

Curriculum Vitae

Name: Fereshteh Shamsipour

Sex: Female

Date of Birth: 1974

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Work address: Monoclonal Antibody Research Center, Avicenna research Institute.

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Educational Background:

1994-1998 B.Sc. Biology, Shahid Beheshti university, Tehran, Iran.

1998-2001 M.Sc. Biochemistry, Tarbiat Moddares University, Tehran, Iran

2001-2006 PhD Biochemistry, Tarbiat Moddares University, Tehran, Iran

Occupational Background:

2001-2003 Researcher, Dept. of biochemistry and Biophysics, science and biotechnology
Research center, Malec-Ashtar University, Tehran, Iran

2007-present Assistant Professor of biochemistry, Monoclonal Antibody Research
Center, Avicenna research Institute, Tehran, Iran

Research Background:

1. Study of Interferon production in human somatic cells. Tarbiat Moddares University (M.Sc. Thesis), 1378-1380.
2. Purification and evaluation of effective factors in deamidation of recombinant gamma Interferon. Malec-Ashtar University, 1380-1381.
3. Production, purification and Study of enzyme activity in 7D9 monoclonal antibody. Tarbiat Moddares University (PhD. Thesis), 1382-1385.
4. Conjugation of Nanomagnetic Particles to monoclonal antibodies: optimization and application in cancer diagnosis and treatment. Avicenna research Institute, 1385-1387.
5. Study of proteolytic abzymes against h-CG in infertile women and spontaneous abortion. Avicenna research Institute - Tarbiat Moddares University, 1387-1392.
6. Production of antibodies against stem cell markers. Avicenna research Institute, 1388- present
7. MACS column. Avicenna research Institute, 1389- present.
8. Investigation of Anti hCG Antibodies effect on cancer cell lines. Avicenna research Institute - Tarbiat Moddares University, 1389-1392.
9. Using anti-her2 functionalized ORMOSIL (organically modified silica) nanoparticles for breast cancer cells targeting. Avicenna research Institute - Tehran University of Medical Sciences, 1390-1391.
10. Investigation of antitumor activity in Hesperadin derivatives. Avicenna research Institute - Khajeh Nasir Toosi University of Technology, 1390-1391.
11. Cloning, experssion and purification of Helicobacter pylori catalase, fliD and tig genes product and study their potency to detect Helicobacter pylori in serum and stool samples of human by ELISA method. Avicenna research Institute - Tehran University of Medical Sciences and Health Services, 1390-1393.
12. Immobilized trypsin on magnetic nanoparticles and investigation of stability and activity. Avicenna research Institute, 1394.

Technical Expertise:

- Chromatography (Ion exchange, Affinity , gel filtration, ...) & FPLC
- Protein purification & protein stability
- Enzyme Linked Immunosorbent assay(ELISA)
- Immunoblotting
- Cell culture
- Protein conjugation (to FITC, Biotin, Nanoparticles, peptides, ...)
- Electrophoresis (SDS-PAGE,IEP,IF)
- Plus familiarity with: Hybridoma technique and production of monoclonal antibody, PCR, DNA and RNA extraction.

Publication:

- 1- **Fereshteh Shamsipour**, Saeideh Hosseinzadeh,Seyed Shahriar Arab, Sedigheh Vafaei, Samira Farid, Mahmood Jeddi-Tehrani,Saeed Balalaie. Synthesis and investigation of new Hesperadin analogues antitumor effects on HeLa cells. *J Chem Biol* .2014; 7: 85–91.
- 2- M Khalifeh Gholi, B Kalali, L Formichella, Göttner, **F Shamsipour**, A.H Zarnani , M Hosseini, D. H. Busch, M H Shirazi, M Gerhard. Helicobacter pylori FliD protein is a highly sensitive and specific marker for serologic diagnosis of H. pylori infection. *International Journal of Medical Microbiology*. 2013; 303(8): 618-623.
- 3- Vahid Shirshahi, **Fereshteh Shamsipour**, Amir Hassan Zarnani, Javad Verdi, Reza Saber. Active targeting of HER2-positive breast cancer cells by Herceptin-functionalized organically modified silica nanoparticles. *Cancer Nano*. 2013; 4 (1-3): 27-37.
- 4- M. Khalifeh gholi, **F. Shamsipour**, H. Ajhdarkosh, N. Ebrahimi Daryani, M. R. Pourmand, M. Hosseini, A. ghasemi, M. H. Shirazi. Comparison of five diagnostic methods for Helicobacter pylori. *Iranian Journal of Microbiology*. 2013; 5 (4): 396-401.
- 5- Gharaati M.R., Mirshahi M., Rabbani H., Saifi-Abolhassan M., Behmanesh M. and **Shamsipour F**. Cloning and expression of a scFv from an anti-human plasminogen monoclonal antibody. *Iranian journal of biology*. 2013; 26(1):52-60.
- 6- M. A. Oghabian, M. Jeddi-Tehrani, A. Zolfaghari, **F. Shamsipour**, S. Khoei, and S. Amanpour. Detectability of Her2 Positive Tumors Using Monoclonal Antibody Conjugated

Iron Oxide Nanoparticles in MRI. *Journal of Nanoscience and Nanotechnology*. 2011; 11:5340–5344.

- 7- M.Mirzaei Saleh-Abady, H. Naderi-Manesh, A. Alizadeh, **F.Shamsipour**, S. Balalaie, S.A.Arabanian. Anticancer activity of a new Gonadotropin releasing hormone analogue. *Biopolymers Peptide Science Journal*, 2009; 94(3):292-297.
- 8- **F. Shamsipour**, A. H. Zarnani, R. Ghods, M.Chamankhah, F.Forouzes, S.Vafaei, A.A. Bayat, M. M.Akhondi, M. A. Oghabian, M.Jeddi-Tehrani. Conjugation of Monoclonal Antibodies to Super Paramagnetic Iron Oxide Nanoparticles for Detection of her2/neu Antigen on Breast Cancer Cell Lines. *Avicenna Journal of Medical Biotechnology*.2009; 1: 27-31 .
- 9- Mohammad Mirzaei Saleh-Abady, Abdolali Alizadeh, **Fereshteh Shamsipour**, and Hossein Naderi-Manesh. The Anticancer Activity Compared Between Triptorelin and a New Gonadotropin Releasing Hormone Analogue. *Avicenna Journal of Medical Biotechnology*.2009; 1(2): 105-110 .
- 10- Rahimzadeh M, Mirshahi M, **Shamsipour F** and Mohammadi M. Proteolytic antibodies in the sera of pregnant woman: a case control study. *Tehran University Medical Journal*, 2008 Volume 66(4): 251-256 .
- 11- Mannoucher Mirshahi, **Fereshteh shamsipour**, Tooran Mirshahi, Khosro Khajeh and Hossein Naderi-Manesh. A novel monoclonal antibody with catalytic activity against beta human chorionic gonadotropin. *Immunology Letters*. 2006; 106(1): 57-62.

Congress Abstracts:

1. **Shamsipour F.**, Mirshahi M., Rahimzadeh M., Vafaei S., Mohammadzadeh.A, Farid S., Jeddi- Tehrani M. Autoantibodies with hydrolytic activity against hCG in infertile women and spontaneous abortion. 12th International Congress of Immunology & Allergy of Iran. Milad Tower-Tehran.Iran.29th April-2nd May, 2014.
2. **Shamsipour F.**, Mirshahi M., Rahimzadeh M., Vafaei S., Farid S., Bayat A.A. , Mahmoodi A.R., Jeddi- Tehrani M. Investigation of Monoclonal antibodies against hCG and subunits on the proliferation of cancer cell lines in vitro. 12th International Congress of Immunology & Allergy of Iran. Milad Tower-Tehran.Iran.29th April-2nd May, 2014.

3. Shirshahi V. , **Shamsipour F.** , Zarnani A. , Verdi J. ,Vafaei S. ,Farid S., Saber R.Using functionalized ORMOSIL (organically modified silica) nanoparticles for breast cancer cells targeting in vitro. The 17th national & 5th international Iranian Biology Conference. Shahid Bahonar University.Kerman. 5-7 September 2012.
4. **Shamsipour F.** , Hosseinzadeh S. ,Vafaei S. ,Farid S. , Jeddi Tehrani M., Barajanian M, Balalae S. Investigation of antitumor activity in Hesperadin derivatives. The 17th national & 5th international Iranian Biology Conference. Shahid Bahonar University.Kerman. 5-7 September, 2012.
5. **Shamsipour F**, Zarnani A.M, Chamankhah M, Ghods R, Javan M, Forozesh F, Bayat A.A, Oghabian M.A, Jeddi-Tehrani M. Conjugation of antibodies to magnetic nanoparticales for detection and treatment of breast cancer. 15th Iranian Congress and third International Congress of biology. Tehran University. Tehran, Iran. 19-21August 2008.
6. **Shamsipour F**, Mirshahi M, Khajeh K. Peroxidase-like activity in monoclonal antibody 7D9. 33rd FEBS congress and 11th IUBMB Conference, June 28-3 July, 2008 Athens-GREECE.
7. Rahimzadeh M, Mirshahi M, **Shamsipour F** and Mohammadi M. HCG hydrolyzing antibodies in sera of healthy pregnant women. 9th Iranian Congress of Biochemistry and 2nd International Congress of biochemistry and molecular biology. Shiraz-Iran, Oct.29-Nov.1, 2007.
8. **Shamsipour F**, Mirshahi M, Khajeh K and Rahimzadeh M. Catalytic activity of 7D9 monoclonal antibody against beta human chorionic gonadotropin.31st FEBS CONGRESS June 24-29,2006 ISTANBUL- TURKEY.
9. Rahimzadeh M, Mirshahi M and **Shamsipour F.** Proteolytic activity of IgG antibodies from blood of healthy pregnant women. 31st FEBS CONGRESS June 24-29, 2006 ISTANBUL- TURKEY.
10. **Shamsipour F**, Mirshahi M, Khajeh K and Rahimzadeh M. Catalytic activity of 7D9 monoclonal antibody against beta human chorionic gonadotropin. 5th National Biotechnology Congress.Iran, Nov 2007.
11. **Shamsipour F**, Mirshahi M, Khajeh K and Rahimzadeh M. Study of enzymatic activity in 7D9 monoclonal antibody against beta human chorionic gonadotropin. 14th

Iranian Congress and 2th International Congress of biology. Tarbiat Moddares University. Tehran, Iran. August 2006.

12. Rahimzadeh Jahromi M, Mirshahi M, **shamsipour F**. Study of proteolytic activity of antibodies in sera of healthy pregnant wome. 14th Iranian congress and 2nd International Congress of biology. Tarbiat Moddares University. Tehran, Iran. August 2006.
13. Kazemi B, Doustdar F, Falah F, **Shamsipour F** and Ghazi M. Purification and molecular analysis of antigen 60 of BCG .3th National Biotechnology Congress, Ferdosi University, Mashhad, Iran. 9-11 September 2003.
14. **Shamsipour F**, Mohammadian J, Ebrahimi M and Maghsodi N. evaluation of effective factors in deamidation of recombinant gamma interferon.1th Iranian congress of cellular and molecular biology. Ahvaz, Iran. March 2002.
15. Bidoki S.K, **Shamsipour F** and Naderi-Manesh H. Production and extraction of interfrons from human somatic cells. 6th Congress of Biochemistry. Medical science of Iran University. Tehran, Iran. October 2001.