

Parvaneh Afsharian, B.Sc, M.Sc., PhD

Personal details

Name: Parvaneh Afsharian
Gender: Female

Occupations

Assistant professor, PhD

- 1- Deputy Director of Research and Technology, Royan Institute, ACECR, Tehran, Iran
- 2- Head of the Department of Reproductive Genetics & Pharmacogenetics group leader, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- 3- Head of the Department of Genetics, [University of Science and Culture](#), Tehran

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Education

- Apr 2008-Mar 2010 **Postdoctoral fellow II**,
Hematology and Transfusion Medicine, Dept. of Lab Medicine,
Lund University, Lund, **Sweden**
- Dec 2006-March 2008 **Postdoctoral fellow I**,
Experimental Cancer Medicine, Dept. of Lab Medicine,
Karolinska Institutet, Stockholm, **Sweden**
- June 2003- Nov. 2006 **PhD** in **Experimental Medicine** (pharmacogenetics)
Department of Medicine, Karolinska Institutet, **Sweden**,
2007-11-24.
- Feb. 1995- June 1998 **M.Sc.** in **Biology and Genetics**
Department of Biology, Science & Research branch.
Islamic Azad University, Tehran, **Iran**
- Sept. 1987- Dec. 1992 **B.Sc.** in **Biology**, majored in Zoology
Department of Biology, Science faculty,
Ferdowsi University, Mashad, **Iran**
- Jan. 1985- July 1990 **B.Sc.** in **Chemistry**
Department of Chemistry, Science faculty,
Islamic Azad University, Mashad, **Iran**

Degrees' Project-Titles

- Apr 2008-Apr 2010 **Localized targeted therapy by using tissue specific promoter and granules as storage compartments for therapeutic proteins in hematopoietic cells as vehicles in a mouse models.**
Project for postdoc II. Hematology and Transfusion Medicine, Dept. of Lab Medicine, Lund University, Lund, Sweden
- Dec 2006-March 2008 **The effect of S11 and S12 (two trial drugs) on apoptosis and cell viability using AML cell lines (KG1a; M1; NB4, M3; CMK; M7; Jurkat, ALL)- *in vitro* assay – cell viability evaluation by Resazurin (Alamar Blue) as a metabolic assay and evaluation of Apoptosis by using FACS analysis (Annexin V).**
Project for postdoc I. Experimental Cancer Medicine, Dept. of Lab Medicine, Karolinska Institutet, Stockholm, Sweden
- June 2003- Nov. 2006 **Optimization of cyclophosphamide therapy based on pharmacogenetic**
Project for PhD. Division of hematology, Dept. of Medicine, Karolinska Institutet, Stockholm, Sweden
- Feb. 1995 -June 1998 **The role of chromosome abnormalities in infertility, reproductive failure and development of secondary sex characteristics.** Project for M.Sc. in Genetics, Islamic Azad University, Tehran, Iran
- Feb. 1991 - Nov. 1992 **The study of Chromosome Abnormalities in adult leukaemia**
Project for B.Sc. in Biology, Ferdowsi University, Mashad, Iran
- June 1989 - June 1990 **The laboratory synthesis of Normetanephrine hormone** Project for B.Sc. in Chemistry, Islamic Azad University, Mashad, Iran

Research activities

- Mar. 2015-present **Promoter assay of PII, I.3 and I.4 in Aromatase in human granulosa cells by luciferase assay.** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Mar. 2015-Feb. 2017 **Genes expression study of Transforming Growth Factor Beta super family (*TGFβ*) and their receptors in women with Polycystic Ovarian Syndrome (PCOS) undergoing Assisted Reproductive Techniques (ART) referred to Royan Institute.** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Jun. 2015-Dec. 2017 **Evaluation of *CHD5* gene expression in testis tissues of infertile men referred to Royan Institute.** Dept. of Genetics,

Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran

- Apr. 2014-Mar. 2015 **Study of Genetic- Alterations of *STK11* in patients with Polycystic Ovary Syndrome (PCOS), under treatment with ovarian induction with Metformin, Referred to Royan Institute.** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Feb. 2014-Mar. 2015 **Genetic and Epigenetic study of *CYP19* (Aromatase) in ovarian induction in Poly Cystic Ovarian Syndrome (PCOS) patients.** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Feb. 2014-Sep. 2014 **Study of *TLR2* gene polymorphism in patients with endometriosis referred to Royan Institute.** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Dec. 2013-Sep. 2014 **The Analysis of *PGR* polymorphism (+331G/A) and Gene Expression levels in *MMP-2,9* and *PGR* in endometrium tissue of women with Endometriosis Referring to Royan Institute.** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Oct. 2012-present **Genetic variation analysis of *MIF* in endometriosis patients referred to Royan Institute.** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Apr. 2012- present **Genetic and Pharmacogenetic aspects of ovulation induction in anovulatory women (referred to Royan Inst.).** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Feb. 2012-Mar. 2015 **The study of genetic variants and expression of follicular stimulating hormone receptor (*FSHR*) gene in patients with Polycystic Ovary Syndrome (PCOS).** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Oct. 2011- Jun 2017 **Gene expression and gene polymorphism study of the Estrogen receptor (ER) and Aromatase (*CYP19*) in Non Obstructive Azoospermia & sever Oligoastenoteratospermia men (referred to Royan Inst.).** Dept. of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
- Apr. 2008-Apr. 2010 **Postdoc II project.** Hematology & transfusion Medicine, Lund University, Lund, Sweden

- Dec.2006 –Mar.2008 **Postdoc I project.** Experimental Cancer Medicine, Dept. of Laboratory Medicine, Karolinska Institutet, Stockholm, Sweden
- June 2003- Nov. 2006 **PhD project.** Department of Medicine, Karolinska Institutet, Stockholm, Sweden
- Apr. 1999 – Dec. 2002 **Genetic counseling and karyotyping in infertile couples with failure IVF or consanguineous marriage.** Dept. of Clinical & Experimental Genetics, Royan Inst.,Tehran, Iran
- Mar. 1998 – Mar 2000 **Investigation on a family with Persistent Mullerian Duct Syndrome.** Dept. of Clinical & Experimental Genetics, Royan Inst., Tehran, Iran. In collaboration with INSERM, **France.**
- Feb. 1998 - Nov.1998 **Establishment of lymphoblastoid cell lines.** Clinical Genetic Centre, Iranian Blood Transfusion Organisation (IBTO), Tehran
- Aug. 1998 - Sep. 1998 **Establishment of bone marrow cultivation.** Clinical Genetic Centre, IBTO, Tehran, Iran
- Nov. 1996 - Mar. 1997 **Major contribution to establish diagnostic cytogenetic laboratory.** Clinical Genetics Centre, IBTO, Tehran, Iran
- Mar. 1993 - Feb. 1994 **Investigation of herbal antimetabolic and the efficiency by in vivo methods,** Dept. of biology, Ferdowsi Univ., Mashad, Iran
- Nov. 1992 - Mar. 1993 **Develop a new drug formulation from natural sources,** Research Lab, Samen serum manufactory, Mashad, Iran

Publications

1. Mokhtari V, **Afsharian P**, Shahhoseini M, Kalantar M, Moini A. A review on various uses of N-acetyl cysteine. Cell J. 2017 Apr-Jun; 19(1): 11-17.
2. Falahzadeh K, Shahhoseini M, **Afsharian P**. Differential Incorporation of β -actin as A Component of RNA Polymerase II into Regulatory Regions of Stemness/Differentiation Genes in Retinoic Acid-Induced Differentiated Human Embryonic Carcinoma Cells. Cell J. 2016 Jul-Sep; 18(2):214-20.
3. Hosseini E, Mehraein F, Shahhoseini M, Karimian L, Nikmard F, Ashrafi M, **Afsharian P**, Aflatoonian R. Epigenetic alterations of CYP19A1 gene in Cumulus cells and its relevance to infertility in endometriosis. J Assist Reprod Genet. 2016 Aug; 33(8):1105-13.
4. Mirahmadi M, Ahmadiankia N, Naderi-meshkin H, Heirani-tabasi A, Bidkhori H R, **Afsharian P**, Bahrami A R. Hypoxia and laser enhance expression of SDF-1 In muscles cells. Cell Mol Biol 2016; 62(5): 30-36.

5. Nazouri AS, Khosravifar M, Akhlaghi AA, Shiva M, **Afsharian P**. No relationship between most polymorphisms of steroidogenic acute regulatory (StAR) gene with polycystic ovarian syndrome. Int J Reprod Biomed (Yazd). 2015; 13(12):771-8.
6. El-Serafi I, **Afsharian P**, Moshfegh A, Hassan M, Terelius Y. Cytochrome P450 Oxidoreductase Influences CYP2B6 Activity in Cyclophosphamide Bioactivation. PLoS One. 2015; 10(11):e0141979.
7. Modaresi-nejad N, Tarahomi N, Shiva M, **Afsharian P**. Novel +90G>A intronic polymorphism of CYP2D6. Cell Journal, 2015; 17(1): 83-88
8. El-Serafi I, Fares M, Abedi-Valugherdi M, **Afsharian P**, Moshfegh A, Terelius Y, Potáčová Z, Hassan M. Cytochrome P450 2J2, a new key enzyme in cyclophosphamide bioactivation and a potential biomarker for hematological malignancies. Pharmacogenomics J. 2015 Jan 20. doi: 10.1038/tpj.2014.82.
9. Mahdian S, Aflatoonian R, Salman Yazdi R, Yaghmaei P, Ramazanali F, **Afsharian P**, Shahhoseini M. Macrophage migration inhibitory factor as a potential biomarker of endometriosis. Fertil Steril. 2015 Jan;103(1):153-159
10. Niknejadi M, Ahmadi F, Akhbari F, **Afsharian P**. Sonographic findings in partial type of trisomy 18: A case report. International Journal of Fertility and Sterility, 2014 April; 7(4): 349-352
11. El-Serafi I, Abedi-Valugherdi M, Potáčová Z, **Afsharian P**, Mattsson J, Moshfegh A, Hassan M. Cyclophosphamide alters the gene expression profile in patients treated with high doses prior to stem cell transplantation. PLoS One. 2014; 9(3): e93239
12. **Afsharian P**, Terelius Y, Nilsson C, Hassan Z, Lundgren S and Hassan M. The effect of repeated administration of cyclophosphamide on CYP2B in rat. Clinical Cancer research, 2007; 13(14): 4218-4224.
13. **Afsharian P**, Möllgård L, Hassan Z, Xie H, Kimby E and Hassan M. The effect of ciprofloxacin on cyclophosphamide pharmacokinetics in patients with non-Hodgkin lymphoma. Eur J Haematol, 2005; 75(2): 206-211
14. Xie H, **Afsharian P**, Terelius Y, Mirghani RA, Yasar U, Hagbjörk AL, Lundgreen S, Hu Y, Rane A and Hassan M. Cyclophosphamide induces mRNA and enzyme activity of cytochrome P450 in rat. Xenobiotica, 2005 March; 35(3): 239-251.
15. Farhadi M, Kazemi Ashtiani S, Sadoghi M, Forootan SS, **Afsharian P**, Baharvand H. Separation of X and Y bearing mouse spermatozoa by puresperm gradient method. Kowsar Medical Journal, 2004 Spring, 9(Part 1):39-44 (in Persian).
16. Sadighi Gilani MA, **Afsharian P**, Hajianpour AK, Sayar H. Chromosome study in Azoospermic men. The Iranian Journal of Urology, 2002; 8(32): 15-20 (in Persian).

Persian).

Book

Baharvand H, Sheikhan A, Mirhabibi B, Pooyan M, **Afsharian P** et al. Essential Cell Biology, An Introduction to the Molecular Biology of the Cell, eds : Alberts B. et al. First Edition (1998): House of Biology Press (Tabeshe Andisheh).Iran (translated from English to Persian 2003).

Award

- Postdoc Scholarship in Targeted Therapy from Lund University, Lund, Sweden (2008-2010)
- PhD scholarship in Pharmacogenetics of bone marrow Transplantation from Karolinska Institutet, Stockholm, Sweden (2003-2006).
- The winner of 10th university student's year book award in part of translation (**Dec. 2003**). Book title was: Alberts B, Bray D, Johnson A, Lewis J, Raff M, Roberts K, Walter P; Essential Cell Biology (*An Introduction in the Molecular Biology of the Cell*), Translated by: Baharvand H, Sheikhan A, Mirhabibi B, Pooyan M, **Afsharian P**, Farzaneh P;House of Biology (Tabesh-e Andisheh) Press, 2003.

Mentorship

Spring 2006: Eileen J. O'Mahony, School of Biological Sciences, Dublin Institute of Technology, Ireland

Project for **BSc in biomedical Sciences** in title: Pharmacokinetic studies of cyclophosphamide, in order to optimize treatment prior to stem cell transplantation

2012- Present: Supervisors of more than 10 MSc students' projects in Cellular and Molecular biology, Developmental Biology and Genetics. Advisor of 2 PhD projects in Reproductive Biology

Merit

Reviewer in the *Journal of Cellular and Molecular Medicine*; since **May 2009**.

Reviewer in the *Cell Journal*; since **April. 2011** (www.celljournal.org)

Reviewer in the *International Journal of Fertility & Sterility*; since **Feb. 2011**

Reviewer in the *Journal of Assisted Reproduction and Genetics*; since **2012**

Registration of New Allele of CYP2D6 in Iranian population entitled: GenBank: KF225465.1 in NCBI, Sept. 24, 2013

Oral and Poster presentations: more than 50 abstracts, Appendix

Teaching experiences

Transcription & Translation course to Master of Sciences students in Cellular and Molecular biology. University of Science and Culture, Tehran, Iran. Since 2011-present

Advanced Molecular Genetics course to PhD students in Biology and Genetics. Royan Institute, Tehran, Iran, Autumn 2012

The Principles of Clinical Cytogenetics training courses and workshops to MSc and PhD students in Biology. Iranian Biological Resource Center, Tehran, Iran. Since 2012-present

Method expertise

- Cell culture (primary cells and cell line)
- Molecular Biology methods (PCR, Cloning, functional analysis)
- Real time qPCR
- Cytogenetic studies, (cultivation, analysis and karyotyping), different banding techniques and breakage study
- Enzyme assays (*in vivo*, *ex vivo* & *in vitro*)
- HPLC analysis (biological samples)
- Western Blot
- FACS

Professional experience

Feb. 1999 – Dec. 2002 **Manager of education/administration and Researcher**, Royan Inst., Tehran

- 1- Executive member & **Administrative Manager** of Infertility Annual Meeting.
- 2- Genetics Lab Instructor.

Mar. 1997 - Oct.1998 **Research & development technologist of Cytogenetic Lab**, Clinical Genetics Center, Iranian Blood Transfusion Organization, Tehran

- 1- Performing the tissue culturing in lymphocytes and bone marrow
- 2- Preparation of metaphase chromosomes making use of different banding techniques, microscopic analysis, interpretation of results.
- 3 - Investigation of chromosome breakage studies in Fanconi Anemia and Ataxia Telangiectasia
- 4- **Teaching** of cytogenetic techniques & chromosome analysis to:
I-Hemato-Oncology Fellowships, **II**-Pathology students & **III**-Cytogenetic technologist

Workshops and Training courses

Sep. 2014 Next Generation Sequencing (NGS): RNA-Seq, National Institute of Genetic Engineering and Biotechnology, Tehran, Iran

Dec. 2008: Mass Spectroscopy and proteomics, Nordic Quantitative Proteomics & Lund University, Sweden

Nov. 2005: Basic flow course, for FACSCalibur™. Becton Dikenson AB, Stockholm, Sweden

Sep.2003- Jun 2005: Laboratory animal science (3 points), Cytostatic drugs in research and cancer treatment (2), Molecular techniques in biology (1), Bioinformatics on the internet-introduction for molecular biologists (1), Molecular bio-technology in oncology (1), How to write and publish a Scientific paper in English (1), Core course in general science (5), Applications of Nanoparticles in biomedicine (1), Basic course in tumor biology-oncology, part I (2), Seminar (2); Animal models of cancer (1).Karolinska Institutet, Stockholm, Sweden

Dec. 19 – 23, 2001: Workshop of the Methodology in Research. ACECR, Tehran, Iran

Sep. 2002: Workshop in Preimplantation Genetic Diagnosis. Royan Institute, Tehran, Iran

May 2000: Workshop of the GEN CLONING. Tehran University, Iran

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References

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& Head of Genetics Department,
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ACECR, PO.BOX:19395-4644, Tehran, **Iran**

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2. Moustapha Hassan, Professor

Head of ECM group,
KFC, NOVUM, Experimental Cancer Medicine (ECM),
Dept. of Lab Medicine,
Karolinska University Hospital. Huddinge
Stockholm 141 86, **Sweden**

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3. Markus Hansson, MD. PhD

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22184, Lund, **Sweden**

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4. Dr. Atieh Hajianpour, MD, FACMG

Cytogeneticist / Molecular Geneticist
Director, Cytogenetics Laboratory Genzyme Genetics,
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Monrovia, CA 91016, **USA**

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