

CURRICULUM VITAE

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Mohammadreza Zamanian

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Affiliation:
Genetics Department,
Reproductive Biomedicine Research Center,
Royan Institute for Reproductive Biomedicine,
ACECR, Tehran, Iran

Born on 04.07.1967, Male, Married, Two children

CURRENT POSITIONS

Head.

Genetics Department, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran (2024)

Head.

Department of Genetics, Faculty of Basic Sciences and Advanced Technologies in biology, University of Science and Culture, ACECR, Tehran, Iran (2021 till now)

Director.

Medical Genetics/PGT Laboratory
Royan Institute for Reproductive Biomedicine
East Hafez Alley, North Bani Hashem Street, Resalat highway, Tehran, Iran (2012 till now)

Assistant Professor,

Genetics Department, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran (2012 till now)

WORK EXPERIENCE

- **2021 till now:** Head of genetics department, mostly involved in educational affairs as well as research projects of postgraduate students in the field of human genetics.
- **2018 till 2024:** Director of medical genetics laboratory (molecular genetics/cytogenetics/PGT divisions).
- **2012-2017:** Worked as the director of medical genetics (molecular division) and Molecular PGT laboratory at Royan institute. During this period, I have been mostly involved in managing the laboratory and guiding the highly qualified personnel in providing medical genetics diagnostics. The range of the provided services includes genetic tests related to male and female infertility, recurrent abortions, premature ovarian failure, fetal aneuploidy detection, cystic fibrosis, hearing loss, spinal muscular atrophy, beta and alpha thalassemia, hereditary thrombophilia, etc. In addition, another important aspect of our work is to provide PGT (Preimplantation Genetic Testing) services for couples affected/carrier to single gene disorders.

During mentioned period and in conjunction to my career as the head of the medical genetics laboratory, I have also worked as the member of genetics department at biomedicine research center, Royan institute. Currently, several postgraduate students are working under my supervision. Their research projects are mostly in the field of “genetics of infertility and pregnancy related disorders”.

- **March 2016:** I established New-Gene medical genetics laboratory which is engaged in providing medical genetics diagnostics (private sector).
- **2014-2017:** Worked as the CEO of Homaye-Salamat Persian company which is mostly involved in importing and distribution of medical devices.
- **1994-2003:** Worked as general practitioner and family medicine doctor.

EDUCATION

- University of Putra, Selangor, Malaysia** **2007 – 2012**
- Ph.D., Human Genetics
 - CGPA: 3.96
- University of Putra, Selangor, Malaysia** **2004 – 2007**
- M.Sc., Molecular Genetics
 - CGPA: 4
- Tehran University of Medical Sciences, Iran** **1988 – 1995**
- M.D., Medicine
 - CGPA: 16.6

RESEARCH PROJECTS

Royan Institute, Iran (As Supervisor) **2014 till now**

Several research projects for MSc students covering different aspects of infertility including polymorphism studies related to recurrent implantation failure, genomic studies on premature ovarian insufficiency as well as azoospermic males, etc (2021 till now).

Genotype/phenotype correlation study in men with obstructive azoospermia by *CFTR* mutation analysis (2019-2021).

Evaluation of *APOE* Gene Polymorphisms in Women with Recurrent Implantation Failure (2017-2021).

Evaluation of AZFc Partial Microdeletions and *DAZ/CDY1* Copy Number Deletions in Azoospermic/Normospermic Men (2017-2021).

Optimization and Set Up of QF-PCR in Simultaneous Detection of Single Gene Disorder and Aneuploidy in Single Blastomere Biopsy (2017).

Evaluation of miRNAs associated to Heat Shock/Oxidative Stress in Infertile Men with Varicocele (2016)

Evaluation of Cell Free Fetal Nucleic Acids as Biomarkers for Pregnancy Related Disorders (2016)

Evaluation of partial AZFc microdeletions of the Y chromosome and its effects on micro TESE results in azoospermic infertile men (2015).

Evaluation of ethnic patterns of AZF microdeletions in infertile men with azoospermia/severe oligospermia referred to Royan institute (2014).

University of Putra, Malaysia, 2012

Ph.D. Research

Advisor: Rozita Rosli Ph.D.

Functional characterization of calreticulin in invasive human breast cancer.

Characterization of flotillin I in human breast cancer tissues.

University of Putra, Malaysia, 2007

M.Sc. Research

Advisor: Patimah Ismail Ph.D.

RT in situ PCR expression patterns of p53, cyclin E and Rb in different stages of breast cancer.

Tehran University of Medical Sciences, Iran, 2007

M.D. Research

Advisor: Hamid Khorsandi M.D.

Evaluation of surgical masses in head and neck regions

AWARDS & FELLOWSHIPS

Graduate Research Fellowship: School of Graduate Studies, University of Putra, Selangor, Malaysia, 2008-2010 (22 months).

PUBLICATIONS

Melika Hossein Garakani, Kianoush Kakavand, Marjan Sabbaghian, Azadeh Ghaehri, Najmeh Sadat Masoudi, Maryam Shahhoseini, Vahideh Hassanzadeh, **Mohammadreza Zamanian**, Anahita Mohseni Meybodi, Shabnam Zarei Moradi. Comprehensive analysis of chromosomal breakpoints and candidate genes associated with male infertility: insights from cytogenetic studies and expression analyses. *Mamm Genome* (2024). <https://doi.org/10.1007/s00335-024-10074-z>

Darabi N, Mashayekhy M, Borjian Boroujeni P, Mohtasebi P, Rokhsat Talab Z, **Zamanian MR**. *APOE-E4* allele as a potential marker for implantation failure: A comparison between fertile women, ART success and RIF patients. *Int J Gynecol Obstet*. 2024; 00: 1-8. doi:[10.1002/ijgo.15537](https://doi.org/10.1002/ijgo.15537)

Seydabadi S, Nikukar H, Ghotbizadeh Vahdani F, Ramezanali F, Shahhoseini M, Favaedi R, Ghaheri A, Etesami E, **Zamanian M.** *TIMPs* Expression as A Maternal Cell Free Plasma Biomarker of Severe Preeclampsia: A Case-Control Study. *Cell J.* 2023 Jan 1;25(1):45-50.

Borjian Boroujeni P, **Zamanian MR**, Roodgar Saffari J, Mohseni Meybodi A. The association between thrombophilic genes alterations and poor ovarian response in infertile women: a retrospective case-control study. *J Obstet Gynaecol.* 2022 Jan;42(1):127-132.

Zamanian MR, Asadi F, Sadighi-Gilani MA, Ghaheri A, Borji P. Evaluation and comparison of the frequency of Y-chromosome microdeletions in different ethnicities of Iranian infertile men. *Razi J Med Sci.* 2021; 28(9): 45-57.

Mohtasebi, P, Eslami, M, Ramezanali, F, Borjian Boroujeni, P, Rokhsat Talab, Z, **Zamanian, M.** *APOE* polymorphism status (E4) may help in predicting the risk of recurrent implantation failure. *Int J Gynecol Obstet.* 2021; 00: 1– 6. doi:[10.1002/ijgo.14022](https://doi.org/10.1002/ijgo.14022)

Seyedin, A, Kazeroun, MH, Namipashaki, A, Qobadi-Nasr, S, **Zamanian, M**, Ansari-Pour, N. Association of MSY haplotype background with nonobstructive azoospermia is AZF-dependent: A case-control study. *Andrologia.* 2021; 00:e13946.

Amir Mahdi Ashrafzade, Mohammad Ali Sadighi Gilani, Tohid Rezaei Topraggaleh, Mina Khojasteh, Mahdi Sepidarkish, Parinaz Borjian Boroujeni, **Mohammadreza Zamanian.** Oxidative stress-related miRNAs in spermatozoa may reveal the severity of damage in grade III varicocele. *Andrologia.* 2020; 00: e13598.

Maryam Hafezi, Zahra Chekini, **Mohammadreza Zamanian.** Which One Is More Prominent in Recurrent Hydatidiform Mole, Ovum or Sperm? *International Journal of Fertility & Sterility.* Volume 14, Number 2, Jul-Sep 2020 Pages: 154-158

Fakhredin Reihani-Sabet, Poopak Eftekhari-Yazdi, Parnaz Borjian Boroujeni, Javad Roodgar Saffari, Navid Almadani, Shirin Boloori, **Mohammadreza Zamanian.** Birth of Healthy Boy following Preimplantation Genetic Diagnosis for Congenital Adrenal Hyperplasia. *JBRA Assisted Reproduction* 2020 May 1; 24(2): 227-230.

Elham Etesami, Habib Nikukar, Fariba Ramezanali, Fahimeh Ghotbizadeh Vahdani, Maryam Shahhoseini, Raha Favaedi, Azadeh Ghaheri, Sara Seydabadi, **Mohammadreza Zamanian.** Gene expression analysis of MMPs in women with preeclampsia using cell-free fetal RNA in maternal plasma. *Pregnancy Hypertension.* Volume 17, 2019, Pages 261-268, ISSN 2210-7789.

Miraghazadeh A., Sadighi Gilani M. A., Reihani-Sabet F., Ghaheri A., Borjian Boroujeni P. and **Zamanian M.** Detection of partial AZFc microdeletions is not informative on micro TESE results in azoospermic infertile men. *International Journal of Fertility & Sterility.* Vol. 12, No. 4, Jan-Mar 2019.

Sabaghian M., Meybodi A.M., Rafae A., Saba S., **Zamanian M.**, Sadighi Gilani M.A. (2018) Sperm retrieval rate and reproductive outcome of infertile men with azoospermia factor c deletion. *Andrologia.* 0(0):e13052.

Mohammadpour Lashkari, F., Sadighi Gilani, M. A., Ghaheri A., **Zamanian M.**, Borjian Boroujeni, P., Mohseni Meybodi, M., Sabbaghian, M. Clinical aspects of 49 infertile males with 45,X/46,XY mosaicism karyotype: A case series. *Andrologia*. 2018; e13009.

Mohammadpour Lashkari, F, Totonchi, M, **Zamanian, MR**, et al. 46,XX males: A case series based on clinical and genetic evaluation. *Andrologia*. 2017; 49:e12710.

Borjian Boroujeni P, Sabbaghian M, Vosough Dizaji A, Zarei Moradi S, Almadani N, Mohammadpour Lashkari F, **Zamanian M**, Mohseni Meybodi A. Clinical aspects of infertile 47,XYY patients: a retrospective study. *Hum Fertil (Camb)*. 2017 Jul 18:1-6.

Asadi, F., Sadighi Gilani, M. A., Ghaheri, A., Roodgar Saffari, J., & **Zamanian, M.** (2017). The Prevalence of Y Chromosome Microdeletions in Iranian Infertile Men with Azoospermia and Severe Oligospermia. *Cell Journal (Yakhteh)*, 19(1), 27–33.

Zamanian, M., Qader Hamadne, L. A., Veerakumarasivam, A., Abdul Rahman, S., Shohaimi, S., & Rosli, R. (2016). Calreticulin mediates an invasive breast cancer phenotype through the transcriptional dysregulation of p53 and MAPK pathways. *Cancer Cell International*, 16, 56.

Zamanian, M., Veerakumarasivam, A., Syahril, A., Rosli, R. (2013). Calreticulin and cancer. *Pathology and Oncology Research*. 2013, 19(2):149-54.

PRESENTATIONS

1. Genetic Evaluations in Recurrent Implantation Failure. 20th Royan international congress, Royan institute, ACECR, Tehran, Iran, August 2019.
2. Molecular diagnosis in premature ovarian failure. POF symposium, 5th January 2018. Royan Institute, Tehran, Iran.
3. Genetic Aspects of Recurrent Implantation Failure. 18th Royan international congress, Royan institute, ACECR, Tehran, Iran, September 2017.
4. Circulatory TIMPs/MMPs Expression as Potential Biomarkers for Preeclamptic Pregnancies. 18th Royan international congress, Royan institute, ACECR, Tehran, Iran, September 2017.
5. Genetic Variation Analysis of HIST1H1T Regulatory Region in Non-Obstructive Azoospermic Men. Mollaei Zh, Mohseni Meybodi A, Shahhoseini M, Afsharian P, Zamanian MR, Sabaghian M 18th Royan international congress, Royan institute, ACECR, Tehran, Iran, September 2017.
6. Expression analysis of MMP-15 in women with preeclampsia using cell free fetal RNA in maternal plasma. Etesami E, Shahhoseini M, Favaedi R, Ghaheri A, Nikookar H, Zamanian M. 7th Yazd International Congress and Student Award in Reproductive Medicine with 2nd Congress of Reproductive Genetics and Congress of Reproductive Immunology. April 2017.

7. Expression patterns of TIMP2 gene in preeclamptic women using cell free fetal RNA. Seyed Abadi S, Ramazanali F, Shahhoseini M, Favaedi R, Ghaheri A, Nikookar H, Zamanian M. 7th Yazd International Congress and Student Award in Reproductive Medicine with 2nd Congress of Reproductive Genetics and Congress of Reproductive Immunology. April 2017.
8. Effects of partial AZFc microdeletions on micro TESE results in azoospermic infertile men. ESHG 2016, Barcelona, Spain.
9. Preimplantation genetic diagnosis for single gene disorders: Beta Thalassemia. 16th Royan international congress, Royan institute, ACECR, Tehran, Iran, September 2015.
10. Evaluation of ethnic patterns of AZF microdeletions in infertile men with azoospermia/severe oligospermia referred to Royan institute. 15th Royan international congress, Royan institute, ACECR, Tehran, Iran, September 2014.
11. Noninvasive prenatal (genetic) diagnosis: current status and the future, 14th Royan international congress, Royan institute, ACECR, Tehran, Iran, September 2013.
12. Calreticulin promotes migrative and invasive potentials in MCF7 cells, Oral presentation in 5th National Breast Cancer Congress, Breast Cancer Research Center, ACECR, Tehran, Iran, December 2012.
13. Calreticulin: a novel biomarker of invasive breast cancer, Poster presentation in 3rd Malaysia Tissue Engineering and Regenerative Medicine Scientific Meeting, Faculty of medicine and health sciences, Universiti of Putra Malaysia, Malaysia, October 2010.
14. RT *in situ* PCR expression patterns of *retinoblastoma* gene in different stages of breast cancer, Oral presentation, 4th Malaysia-Indonesia-Brunei Conference on Medical Sciences, Hospital of University Kebangsaan Malaysia, Kuala Lumpur, Malaysia, July 2008.
15. RT *in situ* PCR expression patterns of *p53* gene in different stages of breast cancer, Poster Presented in International Medical and Health Congress, University of Science Malaysia, Kelantan, Malaysia May 2007.
16. RT *in situ* PCR expression patterns of *cyclin E* gene in different stages of breast cancer, Poster Presented in 7th National Congress on Genetics, University of Science Malaysia, Kelantan, Malaysia, May 2007.
17. Lipoprotein Lipase *S477X* gene polymorphism is not associated with type II diabetic patients in Malaysian population, Poster presentation, 7th National Congress on Genetics, University of Science Malaysia, Kelantan, Malaysia, May 2007.
18. Lack of association between angiotensin converting enzyme *T3892C* gene polymorphism and essential hypertensive patients in Malaysian population, Poster presentation, International Medical and Health Congress, University of Science Malaysia, Kelantan, Malaysia May 2007.

TEACHING EXPERIENCE

Postgraduate Training Course

Royan Institute, Tehran, Iran (2018-2024)

- Course title: Human Genetics
- Student level: MSc

Postgraduate Training Course

Royan Institute, Tehran, Iran (2016-2017)

- Course title: Genetics
- Student level: PhD

Postgraduate Training Course

Royan Institute, Tehran, Iran (2015-2016)

- Course title: Molecular Genetics
- Student level: MSc

Postgraduate Training Course

Royan Institute, Tehran, Iran (2014-2018)

- Course title: Cancer genetics
- Student level: MSc

Postgraduate Training Course

Royan Institute, Tehran, Iran (2012-2013)

- Course title: Molecular Genetics
- Student level: PhD

Teaching Assistant for Postgraduate Research Project (2010 - 2011)

University of Putra, Malaysia

- Training and managing postgraduate students for the lab activities

Teaching Assistant for Undergraduate Research Project (2009)

University of Putra, Malaysia

- Training and managing undergraduate students for their day to day activities

AS REVIEWER

- Royan Twin International Congress, Royan institute, ACECR, Tehran, Iran, (Since 2013).
- Cell Journal (Yakhteh), since 2013.

- International Journal of Fertility and Sterility (IJFS), Since 2016.
- Journal of Assisted Reproduction and Genetics (JARG), since 2016.

LANGUAGE SKILLS

Mother language: Persian

Translational competence: English (IELTS band score 7)

Reading and basic competence: Arabic, Malay

REFERENCES

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Rozita Rosli PhD

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