



In the name of God
Summary of the scientific-research certificate of the faculty
members and researchers
Endocrinology and Metabolism Research Institute Shahid
Beheshti University of Medical Sciences



Name: Mahbanoo Family name: Farhadi-Azar	Scopus ID number: 57553071700 https://orcid.org/0000-0003-3769-5160
H-Index: 6	Total number of citations to articles: 162 Number of citations to articles in 2026: 35
Total number of research projects: 25 Number of research projects in the role of executor: 5	Total number of articles: 20 Number of articles by the first author/responsible: 7 Number of articles in 2026: 5



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Endocrinology and Metabolism Research Institute
Shahid Beheshti University of Medical Sciences



1. Personal Information:

Name: Mahbanoo	
Family name: Farhadi-Azar	
Place of Birth: Tehran	Email: farhadi.mahbanoo@gmail.com farhadiazar@endocrine.ac.ir

2. Academic records / training courses

Grade	Education / orientation	Duration of study		GPA	Country / city of study
		Start	End		
Bachelor	Cellular and molecular	2008	2012	Iran	19.40/20
MSC/PhD	Biotechnology	2016	2019	Iran	18.02/20

3. Employment Status:

Faculty members and formal researchers: Formal Researcher			
Contract researchers			
Work start date	contract type	Researcher rank	Last upgrade date
2019	-	Advanced	-

4. Educational experience:

4.1. Teaching in short courses / educational-research workshops

No.	Course / workshop title	Date	Organization	Teaching title
۱	PCOS Animal Modeling	Feb/2026	Islamic Azad University, Science and Research Branch, Tehran	Modeling of rat and mice using estradiol valerate, testosterone, DHEA in practice along with descriptive explanations of various other methods
۲	PCOS Animal Modeling	June/2018	Islamic Azad University, Science and Research Branch, Tehran	Modeling of rat and mice using estradiol valerate, testosterone, DHEA in practice along with descriptive explanations of various other methods
۳	How to get a vaginal smear from rat and Syrian rat	Feb/2017	Islamic Azad University, Science and Research Branch, Tehran	How to get a vaginal smear from rat and mice
۴	Principles and methods of RNA and DNA extraction	Feb/2017	Biocamp research and drug design laboratory	How to extract RNA and DNA from tissue, blood, plant
۵	Principles and methods of RNA and DNA extraction	April/2017	Islamic Azad University, Science and Research Branch, Tehran	How to extract RNA and DNA from tissue, blood, plant
۶	Principles of working with laboratory animals	Sep/2016	Pastor Institute of Iran	How to get a rat and mice gavage and injection drug in different ways and principles of anatomy and treatment of animals

5. Research Activities:

Publications:

5.1. International articles:

1. Noroozzadeh M, Changaei M, **Farhadi-Azar M**, Mousavi M, Ramezani Tehrani F. Alterations in bone-related hormones and genes expression in femoral bone of polycystic ovary syndrome rats. Journal of Bone and Mineral Metabolism. 2026 Feb 15:1-4.

<https://link.springer.com/article/10.1007/s00774-025-01688-7>

<https://doi.org/10.1007/s00774-025-01688-7>

2. Noroozzadeh M, Naz MS, Mousavi M, **Farhadi-Azar M**, Farahmand M, Amirshakari S, Azizi F, Tehrani FR. Polycystic Ovary Syndrome and Cardiometabolic Health Across Generation: Insights from 25 Years of the Tehran Lipid and Glucose Study (TLGS). *International Journal of Endocrinology and Metabolism*. 2026 Jan 31;24(1):e167151.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC13187691/>
<https://doi.org/10.5812/ijem-16715>
3. Farahmand M, Mousavi M, Naz MS, **Farhadi-Azar M**, Noroozzadeh M, Azizi F, Tehrani FR. Legacy of Tehran Lipid and Glucose Study; Evidence on Reproductive Lifespan and Cardiometabolic Health. *International Journal of Endocrinology and Metabolism*. 2026 Jan 31;24(1):e167142.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC13182279/>
<https://doi.org/10.5812/ijem-167142>
4. Naz MS, Farahmand M, Noroozzadeh M, **Farhadi-Azar M**, Mousavi M, Azizi F, Amirshakari S, Tehrani FR. Adverse Pregnancy Outcomes and Long-Term Risk of Chronic Diseases: Evidence from the Findings of the Tehran Lipid and Glucose Study During a Quarter of a Century. *International Journal of Endocrinology and Metabolism*. 2026 Jan 31;24(2):e167128.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC12933972/>
<https://doi.org/10.5812/ijem-167128>
5. **Farhadi-Azar M**, Mahboobifard F, Mousavi M, Naz MS, Farahmand M, Yaghmaei P, Tehrani FR. Therapeutic efficacy of *Rosa damascena* Mill. on oxidative stress parameters and cyclooxygenase-2 gene expression in estradiol valerate-induced polycystic ovarian syndrome in Wistar rats. *Scientific Reports*. 2025 Oct 2;15(1):34428.
<https://www.nature.com/articles/s41598-025-17484-2>
<https://doi.org/10.1038/s41598-025-17484-2>
6. **Farhadi- Azar M**, Noroozzadeh M, Mousavi M, Saei Ghare Naz M, Ramezani Tehrani F. Impaired glucose tolerance and insulin resistance in a prenatally- androgenized rat model of polycystic ovary syndrome in later life. *Experimental Physiology*. 2025 Mar;110 (3):410-23.
<https://physoc.onlinelibrary.wiley.com/doi/full/10.1113/EP091912>
<https://doi.org/10.1113/EP091912>
7. Farahmand M, Rahmati M, Saei Ghare Naz M, Amiri M, Noroozzadeh M, **Farhadi-Azar M**, Azizi F, Ramezani Tehrani F. Fracture incidence in women: the impact of reproductive characteristics. *BMC Public Health*. 2024 Dec 18;24(1):3409.
<https://link.springer.com/article/10.1186/s12889-024-20890-2>
<https://doi.org/10.1186/s12889-024-20890-2>

8. Saei Ghare Naz M, **Farhadi-Azar M**, Noroozzadeh M, Farahmand M, Ramezani Tehrani F Follicle-Stimulating Hormone and Diabetes in Postmenopausal Women: A Systematic Review and Meta-analysis. The Journal of Clinical Endocrinology & Metabolism. 2024 Mar 30;dgae198.
<https://academic.oup.com/jcem/advance-article-abstract/doi/10.1210/clinem/dgae198/7637768>
<https://doi.org/10.1210/clinem/dgae198>
9. Noroozzadeh M, Rahmati M, **Farhadi-Azar M**, Saei Ghare Naz M, Azizi F, Ramezani Tehrani F. Maternal androgen excess increases the risk of metabolic syndrome in female offspring in their later life: A long-term population-based follow-up study. Archives of Gynecology and Obstetrics. 2023 Nov;308(5):1555-66.
<https://link.springer.com/article/10.1007/s00404-023-07132-3>
<https://doi.org/10.1007/s00404-023-07132-3>
10. **Farhadi-Azar M**, Noroozzadeh M, Ghahremani M, Rahmati M, Saei Ghare Naz M, Azizi F, Ramezani Tehrani F. Maternal androgen excess increases the risk of pre-diabetes mellitus in male offspring in later life: a long-term population-based follow-up study. Journal of Endocrinological Investigation. 2023 Sep;46(9):1775-85.
<https://link.springer.com/article/10.1007/s40618-022-01972-7>
<https://doi.org/10.1007/s40618-022-01972-7>
11. **Farhadi-Azar M**, Ghahremani M, Mahboobifard F, Noroozzadeh M, Yaghmaei P, Tehrani FR. Effects of *Rosa damascena* on reproductive improvement, metabolic parameters, liver function and insulin-like growth factor-1 gene expression in estradiol valerate induced polycystic ovarian syndrome in Wistar rats. biomedical journal. 2023 Jun 1;46(3):100538.
<https://www.sciencedirect.com/science/article/pii/S2319417022000762>
<https://doi.org/10.1016/j.bj.2022.05.003>
12. **Farhadi-Azar M**, Naz MS, Ghahremani M, Mousavi M, Azizi F, Tehrani FR. Self-reported Male Infertility and Metabolic Disturbance: A Cross-Sectional Study. International Journal of Endocrinology and Metabolism. 2023 Apr;21(2).
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10467580/>
13. **Farhadi-Azar M**, Saei GN, Noroozzadeh M, Ramezani TF. The role of gut microbiota in the development of common metabolic disorders in polycystic ovary syndrome: a narrative review.
14. Dovom MR, Noroozzadeh M, Mosaffa N, Zadeh-Vakili A, Piryaee A, Rahmati M, **Farhadi-Azar M**, Tehrani FR. Continued exposure to D-galactose in postnatal period may inhibit excessive primordial follicle reduction in rats exposed prenatally to D-galactose. Birth Defects Research. 2022 Oct

15;114(17):1112-22.

<https://onlinelibrary.wiley.com/doi/abs/10.1002/bdr2.2083>

<https://doi.org/10.1002/bdr2.2083>

15. Noroozzadeh M, Amiri M, **Farhadi-Azar M**, Tehrani FR. Bone health in women with polycystic ovary syndrome: a narrative review. *Journal of clinical densitometry*. 2022 Oct 1;25(4):606-14.
<https://www.sciencedirect.com/science/article/abs/pii/S1094695022000117>
<https://doi.org/10.1016/j.jocd.2022.02.005>
16. Dovom MR, Noroozzadeh M, Mosaffa N, Piryaee A, Zadeh-Vakili A, Aabdollahifar MA, Rahmati M, **Farhadi-Azar M**, Tehrani FR. Maternal exposure to D-galactose reduces ovarian reserve in female rat offspring later in life. *International Journal of Endocrinology and Metabolism*. 2022 Apr;20(2).
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9383541/>
<https://doi.org/10.5812/ijem-123206>
17. **Farhadi-Azar M**, Behboudi-Gandevani S, Rahmati M, Mahboobifard F, Khalili Pouya E, Ramezani Tehrani F, Azizi F. The prevalence of polycystic ovary syndrome, its phenotypes and cardio-metabolic features in a community sample of Iranian population: Tehran lipid and glucose study. *Frontiers in Endocrinology*. 2022 Mar 1;13:825528.
<https://www.frontiersin.org/journals/endocrinology/articles/10.3389/fendo.2022.825528/full>
<https://doi.org/10.3389/fendo.2022.825528>

5.2. National articles:

1. **Farhadi-Azar M**, Saei Ghare Naz M, Noroozzadeh M, Tehrani FR. The role of gut microbiota in the development of common metabolic disorders in polycystic ovary syndrome: a narrative review. 2023 fa401-fa409.
<http://ijem.sbm.ac.ir/article-1-3063-en.html> <https://doi.org/10.5555/20230404239>
2. Saei Ghare Naz M, **Farhadi-Azar M**, Tehrani FR. Polycystic ovary syndrome and primary headaches: a narrative review study. 2022 fa94-fa108. https://ijogi.mums.ac.ir/article_21190.html
<https://doi.org/10.22038/ijogi.2022.62110.5146>

5.3. Congress, Symposiums and Webinars:

1. **Farhadi-Azar M**, Noroozzadeh M, Saei Ghare Naz M, Farahmand M, Ramezani Tehrani F. Risk of Pre-Hypertensionm Overweight and Obesityin Sons of Women With PCOS. A Long Term Population Based Study. 25th Royan International Congress on Reproductive Biomedicine, Tehran, Iran. Presentation/ Poster.
2. **Farhadi-Azar M**, Farahmand M, Noroozzadeh M, Saei Ghare Naz M, Mousavi M , Ramezani Tehrani F. Prevalence of Diabetes Risk in Infertile Men. 25th Royan International Congress on Reproductive Biomedicine, Tehran, Iran. Presentation/ Poster.
3. Noroozzadeh M, **Farhadi Azar M**, Ramezani Tehrani F. Cardiac tolerance to ischemia/reperfusion injury in a rat model of polycystic ovary syndrome. 13th International Congress of Endocrine Disorders, Tehran, Iran. Presentation/ Poster

5.4. Research projects:

1. Evaluation of the therapeutic effects of mesenchymal stem cells and liraglutide in a rat model of polycystic ovary syndrome (PCOS).
2. Design, fabrication and characterization of a hyaluronic acid-based hydrogel carrier for encapsulating mesenchymal stem cells and evaluating its therapeutic effect on a mouse model of galactosemia-induced premature ovarian failure.
3. Design and Characterization of Mesenchymal Stem Cells Derived Exosomes Loaded With 17-beta Estradiol and Its Therapeutic Effect on a Rat model of premature Ovarian Filure Following Prenetal Galactose Exposure.
4. Study of metabolic indices in first-degree relatives of women with a history of early menopause and primary ovarian insufficiency and educational needing
5. Investigating the risk of cardiovascular events in first-degree relatives of women with early menopause: Tehran Lipid and Glucose Study
6. The association between endometriosis and human papilloma virus: Systematic review and meta-analysis
7. Association study of some female reproductive factors and all-cause, cancer and cardiovascular disease (CVD) mortality: a systematic review and meta-analysis
8. Designing the Registry Program for premature ovarian insufficiency
9. Investigating the effect of *Rosa damascena* extract on oxidative stress variables in polycystic ovary syndrome induced rat model: Secondary data analysis

10. The comparison effect of metformin on the clinical and biochemical parameters in obese women compared to non-obese women with polycystic ovary syndrome: a systematic review and meta-analysis
11. Study of Changes in Obesity Indices in Women with Endometriosis: Tehran Lipid and Glucose Study
12. Comparison of learning, histological and molecular changes in the hippocampus of middle-aged rats with and without polycystic ovary syndrome
13. Quality control of disease registry program of premature ovarian failure
14. Investigating the effect of *Rosa damascena* extract on some of oxidative stress index and COX-2 gene expression in the rat model of polycystic ovary syndrome: secondary data analysis
15. Effect of *Rosa damascena* extracts on biochemical and histological parameters and gene expression of IGF-1 in Wistar rats model of polycystic ovary syndrome
16. Design and Characterization of Mesenchymal Stem Cells Derived Exosomes Loaded With 17-beta Estradiol and Its Therapeutic Effect on a Rat model of premature Ovarian Failure Following Prenatal Galactose Exposure
17. Prevalence of Metabolic Syndrome in Women with Polycystic Ovarian Syndrome, Based on Rotterdam Criteria: Tehran Lipid and Glucose Study
18. Bone metabolism in polycystic ovary syndrome: A narrative review
19. Examination of Perception, cognition, memory, and incidence of Alzheimer's disease in polycystic ovary syndrome (Narrative Review)
20. Comparison of Incidence of Alzheimer's disease symptoms in a rat model of polycystic ovary syndrome with controls in premenopausal status
21. The Examination of Survival of Metabolic Changes in a rat Model of Polycystic Ovary Syndrome from Fertility to Post Menopause periods
22. Examination of cardiovascular risk factors in men participating in Tehran Lipid and Glucose Study (TLGS) with maternal hyperandrogenemia history.
23. Inducing premature ovarian insufficiency experimental model through in utero exposure to galactose and comparison of the reproductive, metabolic, and immunological characteristics of female first-generation rats with controls.
24. Prevalence of male infertility and its affecting factors: Tehran Lipid and Glucose Study.
25. Assessment of bone mass in polycystic ovary syndrome (PCOS) rats compared to controls.

26. The Examination of Survival of Metabolic Changes in a rat Model of Polycystic Ovary Syndrome from Fertility to Post Menopause periods.

6. Executive records (responsibilities):

No.	Title of responsibility	Organization / Institute	Year
1	Executive Director of the Quality Control Registry Project for the Premature Ovarian Failure Disease Registry Program	Research Institute for Endocrine Molecular Biology, Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran	۲۰۲۵-Present
2	Responsible for the research center site	Research Institute for Endocrine Molecular Biology, Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran	2023-Present
3	Researcher & Laboratory expert	Research Institute for Endocrine Molecular Biology, Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran	2019- Present
4	The author is in charge of the monthly magazine of medicine and treatment	Biocomp research and drug design laboratory	Feb/2017
5	Responsible for biotechnology booths and selected achievements	Exhibition of Research and Technology Achievements of Islamic Azad University, Science and Research Branch, Tehran	Dec/2017

7. Grant support:

- 1) 2022 Shahid Beheshti University of Medical Sciences, Tehran, Iran (PIs: Ramezani Tehrani F, and **Farhadi Azar M**) “Effect of *Rosa damascena* extracts on biochemical and histological parameters and gene expression of IGF-1 in Wistar rat model of polycystic ovary syndrome”
- 2) 2025 Shahid Beheshti University of Medical Sciences, Tehran, Iran (PIs: Ramezani Tehrani F, and **Farhadi Azar M**) “ Investigating the effect of *Rosa damascena* extract on some of oxidative stress index and COX-2 gene expression in the rat model of polycystic ovary syndrome: secondary data analysis”
- 3) 2025 Shahid Beheshti University of Medical Sciences, Tehran, Iran (PIs: Ramezani Tehrani F, and **Farhadi Azar M**) “Study of Changes in Obesity Indices in Women with Endometriosis: Tehran Lipid and Glucose Study”

8. Academic Awards:

- Top student in Bachelor's degree
- Top student in Master's degree

9. Membership in scientific forums and associations:

- Member of the Biotechnology Society of the Islamic Republic of Iran (IRBIC).
- Member of Iranian Society of Embryology & Reproductive Biology (ISERB).
- Member of Universal Scientific Education and Research Network (USERN).
- Member of Iranian Genetics Society (IGS).
- Member of Iranian Society of Physiology and Pharmacology (ISPP).
- Member of Iranian Bioinformatics Society (IBIS).

10. Membership in the editorial board:

11. Refereeing for international magazines:

- Scientific Reports
- Obesity Surgery
- BMC Pregnancy and Childbirth
- Journal of Ovarian Research
- Lipid and Health and Disease
- BMC women's health
- Frontiers in endocrinology
- Gynecological endocrinology
- Journal of reproductive immunology
- Life sciences

12. Skills (mastering foreign languages, software or device, ...) (with full specifications):

- **Animal Laboratory Experiences;**

- Animal (rat) modeling of polycystic ovary syndrome
- Animal (rat) modeling of premature ovarian menopause
- Working with a laboratory animal (rat) (surgery, intraperitoneal injection, subcutaneous injection, blood sampling)
- Mastering the preparation of tissue sections for microscopic examination (histopathology)
- Working with a tissue microtome
- Examination of rat ovarian tissue and ovarian follicles under light microscope
- Performing insulin tolerance test in rats
- Performing glucose tolerance test by intraperitoneal and intravenous methods in rats
- Isolation of bones in rats
- Performing a behavioral test (water maze) in rats
- Isolation of brain and hippocampus in rats
- Hormone measurement by ELISA method
- Determining sexual cycle phases in rats
- **Molecular Laboratory Experiences;**
 - DNA, RNA & protein Extraction purification (from blood, tissues & cell line),
 - PCR techniques (RT-PCR, ARMS, Real-Time PCR),
 - RFLP (restriction fragment length polymorphism),
 - Electrophoresis technique (Protein and DNA agarose and polyacrylamide),
 - Western Blotting, DNA Methylation, cDNA Synthesis.
- **Cell Culture Laboratory Experiences;** Preparation of Medium, Recovery of Cryopreserved Cells, Cryopreservation, Media changes, Passaging cells, Transfection and transduction, Cell Counting, Drug Treatment, MTT Assay.
- **Assisted Reproductive Technology (ART);** Microscopy, ICSI, IVF, Blastomere biopsy, Zona hatching, Sperm extraction and capacitation protocol for IVF technique, Mature and immature oocyte extraction for IVF and IVM techniques.
- **Bioinformatics;** Bioinformatics analysis of DNA, RNA, and Protein sequences (Blast, Alignment), Primer design for mutation detection, expression, and methylation.
- **Microsoft Office,** Word, Excel, PowerPoint, Access, Visio.
- **Statistical analysis software;** EndNote, SPSS, GraphPad prism, Mendeley reference manager.

- **Primer Design Soft wares;** Gene runner, Allele ID, Primer3.
- **Bioinformatics analysis software;** REST software, GenEX, Progeny 7.
- Writing proposal and scientific paper

13. Laboratory set ups/setting up data recording system/preparation of data bank:

- Preparation of data bank from rat model with polycystic ovary syndrome (PCOS).
- Preparation of data bank from rat model with premature ovarian failure (POF).
- Visiting and recording medical information of premature ovarian failure (POF) patients.
- Preparing a databank of premature ovarian failure (POF) patients.