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Positions:

<i>Assistant professor at Research Deputy, Oncopathology Research Centre· Iran University of Medical Sciences (IUMS), Tehran, Iran·</i>	<i>2025-NOW</i>
<i>Postdoctoral Scholar at the University of Chicago, Biological Science Division, Department of Obstetrics and Gynecology, in NIH-funded project related to Understanding Cellular & Molecular Uterine Fibroid Pathogenesis Through Patient-Derived Myometrial Stem Cell 3D Organoid System·</i>	<i>2022-2024</i>
<i>CEO in Fidar Gostaran Farjad Company·</i>	<i>2016-2022</i>
<i>Chairman of the Board of Directors in Pooya Vision Pargas Company·</i>	<i>2012-2015</i>
<i>Lecturer in Zarandieh Branch Azad University of Iran·</i>	<i>2011-2013</i>

Educational Background:

<i>Ph.D· In Molecular Medicine, Iran University of Medical Science (IUMS)· Thesis: Investigation and comparison of gene expression profiles of circulating tumor cells (CTCs) and circulating exosomes in patients with metastatic colorectal cancer, 19/20·</i>	<i>2014-2020</i>
<i>M.Sc· In Cellular and Molecular Biology-Microbiology, Islamic Azad University Tehran Science & Research Branch· Thesis: Antibiotic resistance patterns and the prevalence of ESBLs (blaCTX-M, Bla-OXA, and bla-IMP) among strains of Acinetobacter baumannii isolated from clinical specimens, 19/20·</i>	<i>2010-2013</i>
<i>B.Sc· In Cellular and Molecular Biology-Microbiology, AL Zahra University, 15·5/20·</i>	<i>2006-2009</i>

Editorial and Reviewer Role:

- ❖ *Cancer Studies & Molecular Medicine - Open Journal (ISSN 2377-1518)*
- ❖ *Frontier in Gynecology*

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- ❖ *Frontier Chemistry*
- ❖ *Frontiers in Reproductive Health*
- ❖ *Frontiers in Genetics*
- ❖ *Frontiers in Pharmacology*
- ❖ *Pharmaceuticals*
- ❖ *Cellular & Molecular Biology Letters*
- ❖ *Gynecology and Pelvic Medicine*

Publications (Articles):

1. "Increased expression of PDGFA and RAF1 in Tumor-derived exosomes in human colorectal cancer
S Vafaei, Y Gao, M Naseri, M Zöller, LS Zanjani, R Karamzadeh, ...
Cellular and Molecular Biology 71 (3), 1-13
2025
2. "Utilizing Human Myometrial and Uterine Fibroid Stem Cell-Derived Three Dimensional Organoids as a Robust Model System for Understanding the Pathophysiology of Uterine Fibroids
MM Omran, S Vafaei, S Alkhrait, FL Ali, MV Bariani, T Bai, WE Thompson, ...
Cell Proliferation, e70025
3. "The Role Of Bromodomain And Extra-Terminal Proteins In Inflammation And Uterine Fibroids".
Yang Q, Falahati A, Khosh A, **Vafaei S**, Omran MM, Bariani vm, Ali M, Boyer TG, Al-Hendy A.
Fertility and Sterility, Volume 122, Issue 4, e417, 2024. DOI: 10.1016/j.fertnstert.2024.08.256.
4. "Uterine fibroids: current research on novel drug targets and innovative therapeutic strategies. Expert Opinion on Therapeutic Targets".
Ciebiera, M., Kociuba, J., Ali, M., Madueke-Laveaux, O. S., Yang, Q., Bączkowska, M., Włodarczyk, M., Lubecka, N.Z., Zarychta, E., Corachán, A., Alkhrait, S., **Vafaei, S.**, Malasevskaia, L., Łoziński, T., Łudański, P., Spaczynski, R., Jakiel, G. & Al-Hendy, A. *Expert Opinion on Therapeutic Targets*, 2024, 1-19. DOI: 10.1080/14728222.2024.2390094.
5. "Targeting Bromodomain-Containing Protein 9 in Human Uterine Fibroid Cells".
Yang Q, Falahati A, Khosh A, **Vafaei S**, Al-Hendy A. *Reproductive Sciences*, 2024 Jun 10. DOI: 10.1007/s43032-024-01608-6.
6. "A Comparative Analysis of Naïve Exosomes and Enhanced Exosomes with a Focus on the Treatment Potential in Ovarian Disorders".
Mousaei Ghasroldasht M, Liakath Ali F, Park HS, Hadizadeh M, Weng SHS, Huff A, **Vafaei S**, Al-Hendy A. *Journal of Personalized Medicine*, 2024 Apr 30;14(5):482. DOI: 10.3390/jpm14050482.
7. "Empowering strategies for Lifestyle interventions, Diet modifications, and Environmental Practices for Uterine Fibroid Prevention; unveiling the LIFE UP awareness".
Vafaei S, Alkhrait S, Yang Q, Ali M, Al-Hendy A. *Nutrients*. 2024 Mar 12;16(6):807. DOI: 10.3390/nu16060807.
8. "Graphene Oxide Synthesized Using Mild Reduction Method Improved the Anti-Tumor Efficacy on Human Cervical Cancer"
Naiwei L, Dinesh K.S., Jabbari H, **Vafaei S**, Guluzar O, Coronel R Alexis A, Akhavan-Sigari R. *Journal of Biomedical Nanotechnology*, 19 (12), 2137-2141(5).
9. "A. Evidence-Based Approach for Secondary Prevention of Uterine Fibroids (The ESCAPE Approach)".
Vafaei S, Ciebiera M, Omran M.M, Ghasroldasht M.M, Yang Q, Leake T, Wolfe R.; Ali M.; Al-Hendy A, *Int. J. Mol. Sci.* 2023, 24, 15972. DOI: 10.3390/ijms242115972.

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10. "Bromodomain containing 9 regulates signaling pathways and reprograms the epigenome in human uterine fibroid cells."
Yang Q, **Vafaei S**, Falahati A, Khosh A, Bariani MV, Ali M, Omran MM, Bai T, Siblini H, He Ch, CSMMOJ Boyer TG, Al-Hendy A. *Int. J. Mol. Sci.* 2024, 25(2), 905. DOI:10.3390/ijms25020905.
11. "Endocrine-disrupting chemicals and epigenetic reprogramming in developmental origin of uterine fibroids".
Yang Q, Ali M, Bariani MV, **Vafaei S**, Al-Hendy A. *Science Progress* 106 (4). DOI:10.1177/00368504231215601.
12. "Elegance to Complexity: The Intricate Dance of Myometrial Stem Cells Transforming into Leiomyoma Stem Cells: Unraveling the Symphony of Genetic and Epigenetic Refinement. "
Vafaei S, CSMMOJ. 8. 10-18. DOI: 10.17140/CSMMOJ-8-136.
13. "Progesterone Signaling 6and Uterine Fibroid Pathogenesis; Molecular Mechanisms and Potential Therapeutics."
Ali M, Ciebiera M, **Vafaei S**, Alkhrait S, Chen HY, Chiang YF, Huang KC, Feduniw S, Hsia SM and Al-Hendy A, *Cells* 2023, 12(8), 1117; DOI: 10.3390/cells12081117.
14. "Identification of necroptosis-related genes as prognostic indicators for lower-grade glioma."
Xiaowan Huang JZ, **Vafaei S**, Lingxia Li, Wang Y, Sun J, Gao Y, *Am J Cancer Res* 13 (2), 692-708, 2023, PMID: 36895971.
15. "Synthesis and electrochemical study of enzymatic graphene oxide-based nanocomposite as stable biosensor for determination of bevacizumab as a medicine in colorectal cancer in human serum and wastewater fluids."
Wang X, Mohammadzadehsaliani S, **Vafaei S**, Ahmadi L, Iqbal A, Alreda AB, Al-Naqeeb BZT, Hadis Kheradjoo, *Chemosphere*, 2023; DOI: 10.1016/j.chemosphere.2023.139012.
16. "Prevention of Uterine Fibroids; Molecular mechanisms and potential clinical application."
Ali M, Bariani MV, **Vafaei S**, Omran MM, Yang Q, Madueke-Laveaux OS, and Al-Hendy A, *Journal of Endometriosis and Uterine Disorders*, 2023, 100018, DOI: 10.1016/j.jeud.2023.100018.
17. "Synthesis of poly (L-cysteine)/g-C3N4 modified glassy carbon electrodes for electrochemical detection of methotrexate as a medicine for the treatment of breast cancer in pharmaceutical fluid samples."
Wang Y, Li S, Gao Y, Du B, **Vafaei S**, Li M, Wu H, Tong X, Chen Y, *Chemosphere*, 2023, 331; DOI: 10.1016/j.chemosphere.2023.138769.
18. "The potential use of mesenchymal stem cells-derived exosomes as microRNA delivery systems in different diseases."
Oveili E, **Vafaei S**, Bazavar H, Eslami Y, Mamaghanizadeh E, *Cell Communication and Signaling*, 21 (1), 1-26, 2023. DOI: 10.1186/s12964-022-01017-9, PMID: 36690996.
19. "Effect of flaxseed supplementation on blood pressure: a systematic review, and dose-response meta-analysis of randomized clinical trials."
Li L, Hanzhang Li H, Gao Y, **Vafaei S**, Zhang X, Yang M, *Food & Function*, 2023 Jan 9. DOI: 10.1039/d2fo02566c, PMID: 36622248.
20. "Prognostic value of Talin-1 in renal cell carcinoma and its association with B7-H3".
Zanjani LS, **Vafaei S (co-first author)**, Abolhasani M, Fattahi F, Madjd Z, *Cancer Biomarkers*, 1-24, 2022, DOI: 10.3233/CBM-220018, PMID:36245369.
21. "The role of NLRP3 inflammasome in colorectal cancer: a potential therapeutic target."
Vafaei S, Taheri H, Hajimomeni Y, Fakhre Yaseri A, Abolhasani Zadeh F, *Clinical and Translational Oncology*, 1-9. DOI: 10.1007/s12094-022-02861-4, PMID: 35689136.
22. "Combination Therapy with Immune Checkpoint Inhibitors (ICIs); a New Frontier."
Vafaei S, Zekiy A, Ado Khanamir R, Zaman BA, Ghayourvahdat A, Azimizonuzi H, Zamani M, *Cancer Cell Int* 22, 2 (2022), DOI: 10.1186/s12935-021-02407-8, PMID: 34980128.

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23. "Effectiveness of Baduanjin exercise on quality of life and psychological health in postoperative patients with breast cancer: A systematic review and meta-analysis."
Ye X, Ren Z, **Vafaei S**, Song Y, Wang Y, and Song P. *Integrative cancer therapies*, 2022, (21), 1-13. DOI: 10.1177/15347354221104092, PMID: 35699146.
24. "Co-expression of cancer-testis antigens of MAGE-A6 and MAGE-A11 is associated with tumor aggressiveness in patients with bladder cancer".
Mohsenzadegan M, Razmi M, **Vafaei S**, Abolhasani M, Madjd Z, Saeednejad Zanjani L, Sharifi L, *Sci Rep*, 2022 Jan 12;12(1):599. DOI: 10.1038/s41598-021-04510-2, PMID: 35022469.
25. "A Chemoresistance lncRNA Signature for Recurrence Risk Stratification of Colon Cancer Patients with Chemotherapy."
Wang H, Gao Y, **Vafaei S**, Zhang J, and Wang L, *Molecular Therapy: Nucleic Acid*, Volume 27, 8 March 2022, Pages 427-438, DOI: 10.1016/j.omtn.2021.12.015, PMID: 35036055.
26. "Relationship Between Low Expressions of tRNA-Derived Fragments with Metastatic Behavior of Colorectal Cancer."
Sahlolbei M, Fattahi F, **Vafaei S**, Rajabzadeh R, Shirali pour A, Madjd Z, Kiani J, *J Gastrointest Cancer*, 2021 Nov 26, DOI: 10.1007/s12029-021-00773-0, PMID: 34837147.
27. "Increased cytoplasmic expression of delta-like ligand 4 (DLL4) is associated with favorable prognosis and decreased tumor progression in colorectal cancer patients."
Naseri M, Saeednejad Zanjani L, **Vafaei S**, Gheytnanchi E, Abolhasani M, Bozorgmehr M, Ranaei Pirmardan E, Madjd Z, *Future Oncol*, 2021 Jun 22, DOI: 10.2217/fon-2020-0840, PMID: 34156260.
28. "The Prognostic value of Plasma Cell-free DNA Concentration in the Prostate Cancer: A Systematic Review and Meta-Analysis"
Liu H, Gao Y, **Vafaei S**, Gu X, Zhong X, *Frontiers in Oncology* 11, 299, DOI: 10.3389/fonc.2021.599602, PMID: 33777743.
29. "Expressions of TWIST1 and CD105 Markers in Colorectal Cancer Patients and their Association with Metastatic Potential and Prognosis"
Fattahi F and Saeednejad Zanjani L; **Vafaei S**; Habibi Shams Z; Kiani J; Naseri M; Gheytnanchi E; Madjd Z, *Diagn Pathol*, 2021 Mar 22;16(1):26, DOI: 10.1186/s13000-021-01088-1, PMID: 33752711.
30. "Clinical and prognostic significances of cancer stem cell markers in gastric cancer patients: a systematic review and meta-analysis"
Razmi M, Ghods R, **Vafaei S**, Sahlolbei M, Zanjani LS, Madjd Z, *Cancer Cell Int*, 2021 Feb 27, 21(1):139, DOI: 10.1186/s12935-021-01840-z, PMID: 33639931.
31. "High expression of tumor susceptibility gene 101 (TSG101) is associated with more aggressive behavior in colorectal carcinoma."
Gheytnanchi E, Zanjani LS, Ghods R, Abolhasani M, Shahin M, **Vafaei S**, Naseri M, Fattahi F, Madjd Z, *J Cancer Res Clin Oncol*, 2021 Feb 22, DOI: 10.1007/s00432-021-03561-2, PMID: 33616717.
32. "Low expression of Talin1 Is Associated with Advanced Pathological Features in Colorectal Cancer patients."
Vafaei S, Saeednejad L, Habibi Z, Naseri M, Fattahi F, Gheytnanchi E, Alemrajabi M, Ebrahimi M, Madjd Z, *Sci Rep*, 2020 Oct 20;10(1):17786, DOI: 10.1038/s41598-020-74810-6, PMID: 33082414.
33. "Prediction of the Treatment Response in Ovarian Cancer: A ctDNA Approach."
Sharbatoghli M, **Vafaei S**, Aboulkheyr H, Asadi-Lari M, Totonchi M, Madjd Z, *J Ovarian Res*, 2020 Oct 19;13(1):124, DOI: 10.1186/s13048-020-00729-1, PMID: 33076944.
34. "Dynamic Signature of tRNA-Derived small RNAs in Cancer Pathogenesis as a Promising Valuable Approach."
Vafaei S, Fattahi F, Sahlolbei M, Madjd Z, Yazdanpanah A, Kiani J, *critical reviews in eukaryotic gene expression journal*, 2020, 30(5):391-410, DOI: 10.1615/CritRevEukaryotGeneExpr.2020035372, PMID: 33389877.

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35. "Effect of the novel coronavirus pneumonia pandemic on a medical student's psychological stress and its associated factors."
Ye W, Ye X, Liu Y, Liu Q, **Vafaei S**, Gao Y, Yu H, Zhong Y, Zhan Ch, *Front, Psychol*, 11:548506, DOI: 10.3389/fpsyg.2020.548506, PMID: 33178063.
36. "Tumor-infiltrating immune cell signature predicts the prognosis and chemosensitivity of patients with pancreatic ductal adenocarcinoma."
Gao Y, Chen Sh, **Vafaei S**, Zhong X, *Front. Oncol.* 2020; 10: 557638. DOI: 10.3389/fonc.2020.557638, PMID: 33102222.
37. "The Prevalence of VIM, IMP, and NDM-1 Metallo-beta-Lactamase Genes in Clinical Isolates of *Klebsiella pneumonia* in Qom Province, Iran."
Saremi M, Saremi L, Feizy F, **Vafaei S**, Lashkari A, Saltanatpour Z, *Journal of Medical Microbiology and Infectious Diseases* 2020, 8 (1), 34-39, DOI: 10.29252/JoMMID.8.1.34.
38. "Potential theranostics of circulating tumor cells and tumor-derived exosomes application in colorectal cancer."
Vafaei S, Roudi R, Madjd Z, Aref AR, Ebrahimi M, *Cancer Cell International* 2020, 20 (1), 1-15, DOI: 10.1186/s12935-020-01389-3, PMID: 32655320.
39. "Evaluation of targetable biomarkers for chimeric antigen receptor T-cell (CAR-T) in the treatment of pancreatic cancer: a systematic review and meta-analysis of preclinical studies"
Sahlolbei M, Dehghani M, Kheiri yeghane azar B, **Vafaei S**, Roviello G, *Int Rev Immunol.* 2020; 39(5):223-232. DOI: 10.1080/08830185.2020.1776274. Epub 2020 Jun 16, PMID: 32546036.
40. "Enrichment of Up-regulated and Down-regulated Gene Clusters using Gene Ontology, miRNAs and lncRNAs in Colorectal Cancer."
Fattahi F, Kian, J, Khosravi M, **Vafaei S**, Mohammadi A, Madjd Z, Najafi M, *Combinatorial chemistry & high throughput screening*, 2019 Oct 10, DOI: 10.2174/1386207321666191010114149, PMID: 31654507.
41. "Common molecular markers between circulating tumor cells and blood exosomes in colorectal cancer: a systematic and analytical review."
Vafaei S, Fattahi F, Ebrahimi M, Janani L, Sharifatabrizi A, Madjd Z, *Cancer Management and Research* 2019 Sep 25; 11:8669-8698, DOI: 10.2147/CMAR.S219699, PMID: 31576171.
42. "Neuropathological and genomic characterization of glioblastoma-induced rat model: How similar is it to humans for targeted therapy?"
Sharifzad F, Yasavoli-Sharahi H, Mardpour S, Fakharian E, Nikuinejad H, Heydari Y, Mardpour S, Taghikhani A, Khellat R, **Vafaei S**, Kiani S, Ghavami S, Los M, Nouredini M, Ebrahimi M, Verdi J, Hamidieh AA. *J Cell Physiol.* 2019 Dec; 234(12):22493-22504, DOI: 10.1002/jcp.28813. Epub 2019 May 23, PMID: 31120149.
43. "Designing a novel and simple competitive internal amplification control for reliable PCR diagnosis of herpes simplex virus."
Akbarian A, Shahhosseiny MH, **Vafaei S**, Moslemi E, Ghahri M, *Jundishapur journal of microbiology*, 2015 Feb 20;8(2): e16260, DOI:10.5812/jjm.16260, PMID: 25793095.
44. "Determining the Patterns of Antimicrobial Susceptibility and the Distribution of blaCTX-M Genes in Strains of *Acinetobacter Baumannii* Isolated from Clinical Samples."
Vafaei S, Mirnejad R, Amirmozafari N, *Journal of Isfahan Medical School*, 2013, 31 (252).
45. "Antibiotic resistance patterns and the prevalence of ESBLs among strains of *Acinetobacter baumannii* isolated from clinical specimens."
Mirnejad R, **Vafaei S**, *the Journal of Genes, Microbes and Immunity*, 2013, 1-8.

Scientific Oral Presentations:

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1. "Phthalate Metabolite Exposure Induces Accumulation of Oxidative Stress and Extracellular Matrix in Pre-Fibroid Myometrial Stem Cell-Derived 3D Organoids: Modeling a Fibroid Phenotype", (2024-O-069-SRI). Vancouver, Canada.
Vafaei S, Omran M.M, Yang Q, Zota A.R. Ali M, Al-Hendy A.
2. "Determining the patterns of Antibiotic Resistance and the Prevalence of Extended-spectrum β -lactamase in strains of *Acinetobacter baumannii* isolated from Clinical Samples through Phenotypic Methods."
Vafaei S, Mirnejad R, Imani fooladi A, Amirmozafari N, Masjedian F. *Iranian Journal of Medical Science* 2012; 37(3):265.
3. Eureka Summer School organized by Iran University of Medical Science (IUMS) as a scientific referee & lecturer & Mentor, held on September 2nd, 2018.
4. "Common molecular markers between circulating tumor cells and blood exosomes in colorectal cancer: a systematic and analytical review"
Vafaei S, Fattahi F, Ebrahimi M, Madjd Z, in the 3rd International Congress on Biomedicine, held on November 10th -18th, 2019.

Publications (Book):

1. "Role of Antioxidants in Autoimmune Diseases."
Farrokhi M, Rigi A, Mangouri A, Fadaei M, Shabani E, Mashouf P, Shahraki T, Ghareh F, Mehran M, Dehghani S, Nazarimanesh M, Nasri P, Baharlouie N, Siami H, **Vafaei S**, Nikandish M, Alyari M, Tajik M, Sayyah A, Escroochi M, Farzan M, Farzan M, Taheri F. ISBN-13: 9798751126810, ASIN: B09K3FH1T8, Publisher: Kindle; 1st edition (October 21, 2021), Language: English, Print Length: 107 Page.
2. "Diagnosis and Treatment of Manifestations of COVID-19."
Farrokhi M, **Vafaei S**, Bidares M, Siami H, Rigi A, Hannaniyan M, Kiani Ghaleh Sardi Z, Ahadiat AA, Sadeghian R, Jalalifar F, Bayati F, Bashghareh P, Hajiesmaeilpoor Z, Taheri F, Tarassodi A, Shaker H, Abdi F, Gharedaghi H, Jedari Mohsenpour H, Jedari Mohsenpour H, Mohammadi Khah M, Safavi-Naini AA, Shariat Zadeh M, Taha R, Kiani Y, Fazlollahpour Naghibi A, Rahimi S, Esfandiari E, Hassanzadeh Jeshari F, Soudeh Sarabi M, Esmaeili S, Arabzadeh Bahri R, Nikseresht H, Shafagh GH, Heydari Z, Eslami M, Moradi AM, Forootan S, Kheradmand Z, Khorramdel A, Hemmati S, Dadashzadeh N, ISBN-13979-8780026174 :, ASIN: B09MYQ92N4, Publisher: Kindle; 1st Edition (December 6, 2021, Language: English, Print Length: 170 Page.

Abstracts (E/Poster):

1. "The Relevance of Bromodomain and Extra-Terminal Domain Proteins and Their Roles as an Epigenetic Target in Human Uterine Fibroids", (2024-T-042-SRI).
Yang Q, Falahati A, Khosh A, **Vafaei S**, Bariani MV, Ali M, Boyer T.G, Al-Hendy A.
2. "Exploring the Causal Contribution of Extracellular Matrix and Myometrial Mechanical Stiffness to the Racial Disparity in Uterine Fibroids Using Stem Cell Derived 3D Organoids", (2024-F-039-SRI).
Omran MM, **Vafaei S**, Alkarit S, Yang Q, Ali M, Al-Hendy A.
3. "Phthalates exposure triggers critical pro-inflammatory cytokines expression towards fibroid phenotype in pre-fibroid myometrial stem cell-derived 3d organoid system" (#19222).
Vafaei S, Ali M., Omran M.M., Yang Q., Zota A., Al-Hendy A., *Fertility and Sterility* 120 (4), e224. Doi: 10.1016/j.fertnstert.2023.08.640.
4. "Functional Interplay of Vitamin D3 Deficiency, TGF- β Activation and DNA Hypomethylation Resulted in DNA Damage Accumulation in At-Risk Myometrium, Molecular Mechanisms Underlying Uterine Fibroid Racial Disparity", (2024-T-049-SRI).

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Ali M, Bariani MV, Włodarczyk M, **Vafaei S**, Omran MM, Maajid E, Djibrila E, Yang Q, Al-Hendy A.

5. "Human myometrial and uterine fibroid stem cell-derived organoids as a robust model system for understanding the role of extracellular matrix in uterine fibroid pathogenesis" (#18536). Omran M.M., Ali M., **Vafaei S.**, Bariani M.V., Yang Q., Al-Hendy A., Fertility and Sterility 120 (4), e281-e282. Doi: 10.1016/j.fertnstert.2023.08.824.
6. "Combined inhibition of EZH2 and histone deacetylases as a potential epigenetic therapy for human uterine sarcoma cells". Omran MM, **Vafaei S**, Al-Hendy A, Yang Q. Journal of Clinical Oncology 41 (16_suppl), e17620-e17620.
7. "Extracellular Matrix Contributes to mechanical properties of human 3D organoids derived from Uterine Fibroids stem cells". Omran M.M., **Vafaei S.**, Alkhrait S, Yang Q., Al-Hendy A, Ali M. Upper Midwest Summit for Reproductive Science, October 2023.
8. "Phthalates Exposures Increase the Risk of Uterine Fibroid Pathogenesis in Pre-Fibroid Myometrial Stem Cell-Derived 3D Organoid System" (#1116). **Vafaei S**, Omran MM., Bariani MV, Ali M, Bai T, Yang Q, Thompson WE, Zota AR., and Al-Hendy A. Society for Reproductive Investigation's 70h Annual Scientific Meeting (SRI).
9. "Dual Targeting Enhancer of Zeste Homolog 2 and Histone Deacetylases in Human Uterine Sarcoma Cells" (#688). Omran MM, **Vafaei S**, Al-Hendy A, and Yang Q. Society for Reproductive Investigation's 70h Annual Scientific Meeting (SRI).
10. "Determining the patterns of Antibiotic Resistance and the Prevalence of Extended-spectrum β -lactamase in strains of *Acinetobacter baumannii* isolated from Clinical Samples through Phenotypic Methods." **Vafaei S**, Mirnejad R, Imani fooladi A, Amirmozafari N, Masjedian F. Iranian Journal of Medical Science 2012; 37(3): 265.
11. Determine the prevalence of *bla* IMP gene in *Acinetobacter baumannii* in Tehran- Iran, by PCR method" **Vafaei S**, Mirnejad R, Masjedian F, amirmozafari N, Imani Fooladi A, Ghanbari Y, Safiri Z. The fifth International Congress of Laboratory & Clinic "Blood Disorders" Iranian Scientific Association of Clinical Laboratory, P35.
12. "Prevalence of *bla* CTX-M-II encoding gene in *Acinetobacter baumannii* isolated from clinical specimens in patients." **Vafaei S**, Mirnejad R, Masjedian F, Ghanbari Y. The 21st Iranian Congress on Infectious Disease and Tropical Medicine, P324 (Text in Persian).
13. "Distribution of Carbapenem-Resistant *Acinetobacter baumannii* producing *bla* OXA in Tehran-Iran." **Vafaei S**, Mirnejad R, Masjedian F, amirmozafari N, Imani Fooladi A, Ghanbari Y, Safiri Z. The fifth International Congress of Laboratory & Clinic "Blood Disorders" Iranian Scientific Association of Clinical Laboratory, P36.
14. "Antibiotic resistance patterns and the prevalence of Carbapenemases enzymes among Multidrug-Resistant *Acinetobacter baumannii* isolated from clinical specimens in hospitals of Tehran-Iran." **Vafaei S**. 14th International Iranian congress of Microbiology, P 1019.
15. "Designing Novel and Simple Competitive Internal Amplification Control for Reliable PCR Diagnosis of HSV Keratitis and Encephalitis." Akbarian A, Shahhoseini M, **Vafaei S**. 14th International Iranian congress of Microbiology, P79.
16. "Detection of pathogenic *Leptospira* spp Through Polymerase Chain Reaction targeting *lipL41* gene." Soltani M, Khaki P, Dorafshan Sh, Mazidabadi Farahani N, Bakhshandeh N, Cheraghi N, **Vafaei S**. The 2nd Iranian Congress of Medical Bacteriology, P390.
17. "Prevalence of Vancomycin-resistant enterococci in clinical specimens in Tehran" Ghanbari Y, Mirnejad R, Imani Fooladi A, Shahhoseini M, **Vafaei S**, Safiri Z, Mazidabadi Farahani N, Soltani M. The fifth International Congress of Laboratory & Clinic "Blood Disorders" Iranian Scientific Association of Clinical Laboratory, P35.

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18. "Role of PFGE technique in molecular epidemiology of *Acinetobacter baumannii* isolated strains." Mazidabadi Farahani N, Mirnejad R, Ghanbari Y, Ahmadi Z, **Vafaei S**. The fifth International Congress of Laboratory & Clinic "Blood Disorders" Iranian Scientific Association of Clinical Laboratory, P165.
19. "Survey on Association of the -59353T/C Polymorphism of *CCR5* Gene with the Response to Interferon Treatment in Patients with Hepatitis C Infections" Hosseini A, Sharifi Z, Baghbani-arani F, **Vafaei S**. 14th International Iranian congress of Microbiology, P148.
20. "Assessment of a Loop-Mediated Isothermal Amplification (LAMP) Techniques for the Detection of Adenovirus Keratitis." Mohamadi M, Shahhosseiny M, Takrusta M, **Vafaei S**. 14th International Iranian congress of Microbiology, P186.
21. "Antibiotic resistance of *Acinetobacterbaummanii* isolates with the genotyping method in Tehran hospitals " Mazidabadifarahani N, Mirnejad R, Ghanbari Y, **Vafaei S**, Soltani M. 14th International Iranian congress of Microbiology, P 877.
22. "Determining the correlation between Presence of integron Class 1 and antibiotic resistance in *Enterococcus* isolates" Ghanbari Y, Mirnejad R, Imani Fooladi A, **Vafaei S**, Mazidabadi farahani N, habibian S. 14th International Iranian congress of Microbiology, P582.
23. "Optimization of PHB Production from native *Pseudomonas* and *Alcaligenes* spp isolated from Soils in Jungel Park Tehran." Shahreza H, Akhavansepahi A, Mohammadi R, **Vafaei S**. 14th International Iranian congress of Microbiology, P702.

Honors and Awarded Granted for Research Projects:

1. Reviewer of 31 abstracts for the 71st Annual Scientific Meeting of the Society for Reproductive Investigation, March 12-16, 2024. Vancouver, BC, Canada.
2. Selected for a Biological Science Division (BSD) Career Advancement for Postdocs (CAP) Travel Award in the University of Chicago.
3. Selected person whose article was introduced as the top downloaded article in 2018-2019 (Wiley certificate)
4. Common molecular markers between circulating tumor cells and blood exosomes in colorectal cancer: a systematic and analytical review" Selected as a Book Chapter.
5. Investigation and comparison of gene expression profiles of circulating tumor cells (CTCs) and circulating exosomes in treated patients with metastatic colorectal cancer. "(Supervisor of Ph.D., IUMS, a joint project with Royan Institute), (ID: 8488, Ethic code: IR.IUMS.REC.1395.9221513203).
6. "Evaluation of *CD105* marker in colorectal cancer tissues and its correlation with pathologic features of patients "The executor of the plan, IUMS) (ID: 14113, Ethic code: IR.IUMS.REC.1397.1124).
7. "The systemic effects of regulatory factors (*lncRNA*, *miRNA*) on genes expression and proteins in cancer stem cells (CSCs) compared to parental cells of colorectal carcinomas. "(Colleague of the plan, IUMS), (ID: 1151).
8. "Evaluation of the *Tln1* gene in fresh tissues of colorectal cancer patients and its correlation with clinicopathologic characterization by Real-Time PCR. "(Executor of the plan, IUMS), (ID: 13954, Ethic code: IR.IUMS.REC.1397.1123).
9. "Evaluation of the *Tln1* gene in fresh tissues of colorectal cancer patients and its correlation with clinicopathologic characterization by Tissue Micro Array (TMA) "(Executor of the plan, IUMS), (ID: 13951).

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10. "The association between C-reactive protein with lymphopenia and leukopenia as a diagnostic indicator in COVID-19: A systematic review." (Executor of the plan, IUMS), (ID: 17953, Ethic code: IR.IUMS.REC.1399.378).
11. "Molecular pathways of Coronavirus, from cell entry to intracellular affected messaging pathways: A systematic review." (Executor of the plan, IUMS), (ID: 17807, Ethic code: IR.IUMS.REC.1399.411).
12. "Evaluation of the effectiveness of potentially widely used drugs in the treatment of COVID-19; A systematic review." (Executor of the plan, IUMS), (ID: 17806).
13. "Clinical and prognostic significances of cancer stem cell markers in gastric cancer patients: a systematic review and meta-analysis." (Colleague of a plan, IUMS), (ID: 19475)
14. "Evaluation of the *Tln1* gene in fresh tissues of renal cancer patients and its correlation with clinicopathologic characterization by Tissue Micro Array (TMA)." (Colleague of the plan, IUMS), (ID: 16289, Ethic code: IR.IUMS.REC.1397.1293).
15. "Evaluation of *DDIT4* marker in colorectal cancer tissues and its correlation with pathologic features of patients by Tissue Micro Array (TMA)." (Colleague of the plan, IUMS), (ID: 15643, Ethic code: IR.IUMS.REC.1398.1043).
16. "Evaluation of *miRNA1280* and *Src* gene expression levels in colorectal cancer patients tumor samples." (Colleague of the plan, IUMS), (ID: 14112).
17. "Assessment of circulating tsRNAs as biomarkers of colorectal cancer: A systematic review" (Colleague of plan, IUMS), (ID: 14110).
18. "Common markers between circulating tumor cell (CTCs) and circulatory exosomes as a potential tool for diagnosis and prognosis in colorectal cancer patients, a systematic review." (Executor of the plan, IUMS), (ID: 13921, Ethic code: IR.IUMS.REC.1397.1198).
19. "Gene expression profiles of circulating tumor cells (CTCs) and circulating exosomes in colorectal cancer patients" (Cancer Research Center of Cancer Institute of Iran (Sohrabi cancer charity, Grant No: 37353-202-01-97, Tehran University of medical science (TUMS)).
20. "Investigation of circulating tumor cells (CTCs) and circulating exosomes in colorectal cancer patients" (Royan Stem Cell Technology Company (RSCT96030202)).

Main Scientific Interests:

- ❖ Cancer
- ❖ Uterine fibroid (UF)
- ❖ Myometrial stem cell (MyoF) pathogenesis
- ❖ Endocrine disruptive chemicals (EDCs)
- ❖ Mitochondrial functional assays
- ❖ Molecular biology of cancer metastasis
- ❖ Targeted therapy designation for cancer
- ❖ Bioinformatics analysis (different databases and Tools)
- ❖ Circulating Tumor Cells (CTCs), Extracellular vesicles (EVs) (Exosome and Microvesicles), Cancer Stem Cells (CSCs), and Cell-Free DNA (ctDNA) biology, isolation, targeting, characterization, and drug delivery
- ❖ Using microfluidic systems to precisely extract CTCs, EVs, CSCs, and ctDNA to design studies on them.
- ❖ Designing rapid kit tests for early diagnosis of cancer
- ❖ Microbiology knowledge

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Technical Skills:

- ❖ 3D culture
- ❖ Organoid system
- ❖ Mitochondrial functional
- ❖ Statistical analysis of experimental data
- ❖ Spectroscopic method
- ❖ electrophoretic technique
- ❖ Isolation and characterization of biological materials, including DNA, RNA, and protein.
- ❖ PCR and Real-time PCR
- ❖ Tissue Micro Array (TMA)
- ❖ Next-generation sequencing (Whole exosome seq, RNA- seq, gene panel analysis)
- ❖ ELISA
- ❖ Immunohistochemistry (IHC)
- ❖ Immunofluorescence (IF)
- ❖ Cell culture
- ❖ Biobank generation for CTCs, EVs, CSCs, ctDNA, and TMA slides for cancer patients
- ❖ Fresh patients' samples handling, storage, and preparation for biological molecules extraction

Membership:

- ❖ American Society for Reproductive Medicine (ASRM) since June 2022 (Member ID: 00139148).
- ❖ Society for Reproductive Investigation (SRI) since June 2022, (Member ID: 20276).
- ❖ American Medical Writers Association (AMWA) since December 2022.

Certificate (Training Workshop only selected):

1. Completed the "CORE Reference: A Medical Writer's Guide to Preparing CSRs in an Evolving Context" course at the American Medical Writer Association (AMWA).
2. Completed the "From Bench Science to Medical Writer: Career Alternatives for Life Scientists" course at the American Medical Writer Association (AMWA).
3. Completed the "Protecting Youth" course at the University of Chicago.
4. Completed the course entitled "Harassment Prevention" at the University of Chicago.
5. Completed the course entitled "Preventing Harassment and Discrimination: Non-Supervisors" at the University of Chicago.
6. Completed the course "General Orientation to Animal Care and Use" at the University of Chicago.
7. Completed the "Human Research (CITI Program)" course at the University of Chicago.
8. Completed the "Chemical Hygiene Plan - Laboratory Safety" course at the University of Chicago.
9. Completed the course entitled "Health Insurance and Portability and Accountability ("HIPAA) Privacy and Security Training and Attestation for New Employees CBT" at the University of Chicago.
10. Completed the "Phishing Awareness Campaign: Introduction to Phishing CBT" course at the University of Chicago.
11. Completed the "Biological Toxins" course at the University of Chicago.
12. Completed the "Blood Borne Pathogens" course at the University of Chicago.

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13. Completed the course "Biological Safety- Recombinant DNA at BSL1 (rDNA/BSL1)" at the University of Chicago.
14. Completed the course "Biological Safety- Recombinant DNA at BSL2 (rDNA/BSL2)" at the University of Chicago.
15. Completed the "Viral Vectors" course at the University of Chicago.
16. Completed the "Biological network analysis" course at bioinformatics college with a grade of A on the 12th of August 2021.
17. Completed the course entitled "LINUX Essentials" at bioinformatics college with a grade of A on the 12th of August 2021.
18. Completed the "Next Generation Sequencing" course at bioinformatics college with a grade of A on the 22nd of September 2021.
19. Completed the "Fundamentals of R" course at bioinformatics college with a grade of A on the 19th of July 2021.
20. "Manuscript writing for researchers," organized by the institute of biotechnology and genetic engineering (KIBGE), University of Karachi, held on June 9th -11th, 2020.
21. "Cancer: from Bench to Bedside," organized by Royan institute for reproductive biomedicine, stem cell biology, and technology biotechnology (ACECR), held on February 5th -6th, 2020.
22. "Developing a protocol for a Cochrane systematic review," organized by Iran Cochrane, held on October 2nd -3rd, 2019.
23. "Systematic review and Meta-analysis," organized by Iran University of Medical Sciences (IUMS) on January 29th -30th, 2019.
24. "Entrepreneurship and value creation workshop," organized by Iran University of Medical Sciences (IUMS), held on October 2nd -3rd, 2018.
25. "Cancer stem cell" (as Executive Committee) organized by Iran University of Medical Sciences (IUMS), held on October 2nd -3rd, 2018.
26. "Technical editing in scientific writing workshop," organized by the International Union of Immunological Societies (IUIS), held on April 26th, International Congress of Immunology & Allergy (ICIA) 2018.
27. "Immunocytochemistry," organized by the International Union of Immunological Societies (IUIS), held on April 26th, International Congress of Immunology & Allergy (ICIA) 2018.
28. "New findings on cancer diagnosis and treatment using modern medical technologies", organized by Iran University of Medical Sciences (IUMS), held on January 10th, 2018.
29. "Immuno-oncology and translational cancer research," The 8th Royan international summer school: organized by Royan institute for reproductive biomedicine stem cell biology and technology biotechnology (ACECR), held on July 22nd -27th, 2017.
30. "Data mining and Machine learning in bioinformatics," organized by the National Institute of Genetic biotechnology (NIGEB), held on May 24th - 25th, 2017.
31. "Next generation sequencing data analysis: Comparative Genome Analysis: variant discovery and de novo assembly," organized by the National Institute of Genetic biotechnology (NIGEB), held on May 24th - 25th, 2017.
32. "Microfluidics application in Biology," organized by the National Institute of Genetic biotechnology (NIGEB), held February 26th, 2017.

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33. "Computational systems biology: Network analysis, Gene ontology and promoter analysis," organized by the National Institute of Genetic biotechnology (NIGEB), held on February 22nd – 23rd, 2017.

34. "Next generation sequencing data analysis: RNA seq and small RNA seq," organized by the National Institute of Genetic biotechnology (NIGEB), held on February 8th – 9th, 2017.

35. "Flow cytometry," organized by Oncopathology Research Center, Iran University of Medical Sciences (IUMS), held on December 21st, 2016- March 18th, 2017.

36. "Gene therapy by CRISPR," organized by Tehran University of Medical Sciences (TUMS), held on September 5th, 2016.

37. "Molecular methods," organized by Royan institute for reproductive biomedicine, stem cell biology and technology biotechnology (ACECR), held on December 19th – 20th, 2013.

38. "Nanotechnology," organized by Chamran Nano research center (SNN), held on March 5th, 2008.

Cultural And Artistic Activity:

- Selected in some Quran (Hifz & Tartil) and Nahj al-Balagheh competitions
- A member of the Chicago Muslim Inclusion Resource Group (MIRG) & Muslim Pro during the postdoctoral scholarship & doing religious and cultural activities.

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