

## Curriculum Vitae

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### Education

- PhD, Molecular Genetics, Tarbiat Modares University, Tehran, Iran (2010-2015)
- MSc, Cellular and Molecular Biology, Khatam University, Tehran, Iran (2005-2008)
- BSc, Cellular and Molecular Biology, University of Tehran, Tehran, Iran (2003)

### Professional Experience

- **June 2023- present**

Faculty Member (Instructor)

The University of Texas, MD Anderson Cancer Center, Houston, TX

Department of Experimental Radiation Oncology

Project:

Mechanistic and translational development of a next-generation CDK7 inhibitor (REC-617), with a focus on RB-loss biology, resistance mechanisms, and rational combination strategies.

Responsibilities:

- Independently design, execute, analyze, and interpret in vitro, in vivo experiments to validate CDK7i functional mechanistic studies in breast cancer and sarcoma models.
- Develop and characterize CDK4/6 inhibitor and CDK7 inhibitor drug-resistant and CRISPR/Cas9 isogenic RB-knockout cell lines.
- Perform multi-omics studies (RNA-seq, RPPA) to identify biomarkers of response and resistance.
- Conduct in vitro and in vivo experiments, including organoid models, to define the drug mechanism of action and therapeutic vulnerabilities.
- Coordinate research staff, manage workflows, and ensure high-quality experimental execution.
- Write grants, abstracts, and manuscripts; contribute to strategic project planning and data interpretation.

Publication:

**R Esmaeili, TN Bui, TD Thanh Nguyen, J Joseph, F Aswad, KK Hunt et al. CDK7 inhibition as a synthetic lethal strategy in Rb-deficient ER+/HER2-breast cancer and sarcoma cells resistant to CDK4/6 inhibitors.** Cancer Research 2025.85 (8\_Supplement\_1), 366-366

Grant writing experience in the USA:

- Rezvan Esmaeili (PI). Uncovering Synthetic Lethal Strategies for RB1-Deficient Breast Cancer and Sarcoma. NIH R21. Submitted 2025. Not funded.
- Rezvan Esmaeili (CO-PI). Pilot Study of Breastmilk Extracellular Vesicles for Biomarker Discovery in Young Women with Breast Cancer. Shark Tank, MD Anderson Cancer Center. Submitted 2025. Not funded.
- Rezvan Esmaeili (PI). Targeting RB1-Deficient Breast Cancers Using CDK7 Inhibition to Overcome Therapeutic Resistance. Department of Defense. Submitted 2025. Not funded
- Rezvan Esmaeili (PI). Identifying Synthetic Lethal Targets in RB1-Deficient Sarcoma. Department of Defense. Submitted 2025. Not funded

- **January 2015- June 2023**

Head of the genetics department, Cancer Research Center, Motamed Cancer Institute (MCI), Academic Centre for Education, Culture and Research (ACECR), Tehran, Iran

Responsibilities:

- Served as Associate Professor (2022-2023) and Assistant Professor (2016-2022) at Motamed Cancer Institute, consistently demonstrated exceptional leadership in setting and achieving research goals in cancer biomarkers and treatment.
- My research endeavors significantly impacted the research outputs of the MCI, focusing on cancer diagnostics and prognostic biomarkers.
- Developed a biomarker assay, which is approved by the Iranian Ministry of Health for clinical diagnostics to identify breast cancer patients to avoid chemotherapy.
- Mentored three PhD students and more than 15 MSC students and worked closely with data science teams to advance our research efforts.

- **2010-2015**

PhD student, Tarbiat Modares University, Tehran, Iran

Thesis title: Effect of SD1 $\alpha$  pretreatment of mesenchymal stem cells on myocardial infarction in a rat model.

- **2007-2010**

Research Assistant and lab manager

Breast Cancer Research Center, ACECR, Tehran, Iran.

- Executed and conducted biological experiments under the supervision of the Principal Investigator (PI).
- Developed and implemented new techniques, training new lab members and students.
- Managed sample collection for the biological bank, gathered clinical data, and trained technicians in biological banking procedures.
- Analyzed experimental data and prepared detailed reports.
- Procured laboratory materials and kits, ensuring timely supply of necessary resources.
- Maintained lab equipment and ensured the proper functioning of devices.
- Managed grant finances, keeping accurate records of expenditures.
- Drafted research proposals and abstracts and contributed to manuscript writing.

- **2003-2007**

Research assistant, Pasteur Institute of Iran

**Projects**

- Phylogenetic analysis of HIV and HDV in the Iranian population
- Investigating the effects of Silibinin on cell growth and invasive properties of a human hepatocellular carcinoma

Responsibilities:

- Gained extensive experience in molecular techniques, including DNA banking for HIV and HDV patients, DNA cloning, phylogenetic analysis, RNA expression analysis, and Microarray experiments.
- Procured laboratory materials and kits, ensuring timely supply of necessary resources.
- Maintained lab equipment and ensured the proper functioning of devices.

**Grants**

- 1- 2021 **Liquid biopsy biomarkers, including ctDNA and circulating tumor cells, in relapse and metastasis in breast cancer.** ACECR, Tehran, Iran.
- 2- 2021 **Extracellular vesicle biomarker evaluation in young breast cancer.** ACECR, Tehran, Iran.
- 3- 2020 **Evaluation of Circular RNA in breast cancer metastasis,** ACECR, Tehran, Iran.
- 4- 2019 **Investigation of mutations of PIK3CA gene for treatment resistance in patients treated by Trastuzumab,** ACECR, Tehran, Iran.
- 5- 2017 **investigation of the CYP2D6 gene in response to tamoxifen in breast cancer,** ACECR, Tehran, Iran. This is a joint project with the Tehran University of Medical Sciences.
- 6- 2017 **Investigating the RNA profile of exosomes in breast cancer using next-generation sequencing,** Iran National Science Foundation.
- 7- 2017 **Designing and Synthesis of organic fluorophores to use in fluorescent labels and probes for molecular imaging as bio-optical sensors,** National Institute for Medical Research Development (NIMAD)
- 8- 2017 **Supporting the breast cancer research center for sharing data (biologic bank),** The Office of the Wise Presidency for Science and Technology, Tehran, Iran.
- 9- 2016 **Investigation of CD44 polymorphism in Iranian women with breast cancer,** ACECR, Tehran, Iran. This was a joint project with the Tehran University of Medical Sciences.
- 10- 2015, **Expression analysis of AKAp3 in breast cancer,** ACECR, Tehran, Iran.

**Honors and Awards**

- 2022 Outstanding department leader among 32 biomedical departments in ACECR.
- 2016 Outstanding researcher in Motamed Cancer Institute, Tehran, Iran
- 2014 Health Education Award, UNESCO chair in health education (Tehran University of Medical Science)

- 2013 Outstanding researcher in the Academic Center for Education, Research, and Culture (ACECR), Tehran, Iran
- 2010 Received fellowship grant, European Breast Cancer Congress, EBCC7, Barcelona, Spain
- 2010 First place in PhD entrance exam. Tarbiat Modares University, Tehran, Iran
- 2009 Appreciation for promoting the research activities of ACECR
- 2006 Best poster presentation in the 4<sup>th</sup> biotechnology congress. Kerman, Iran

### **Peer-Reviewed Publications**

[Esmaeili R\\*](#): Last and corresponding Author

[Esmaeili R\\*](#): co-correspond with other centers.

1. Group of authors, including Esmaeili R. **Minimal information for studies of extracellular vesicles (MISEV2023): From basic to advanced approaches.** *Journal of extracellular vesicles*(2024).13(2): e12404
2. Khoshbakht, S., Fatemeh Zomorodi Anbaji, Mohammad Darzi, [Esmaeili R\\*](#). (2024). "The endogenous association among MMP2/miR-1248/Circ\_0087558/miR-643/ MAP2K6 axis can contribute to brain metastasis in the basal-like subtype of breast cancer." *Heliyon* 10(13): e33195.
3. Narges Jafarbeik-Iravani, Sara Kolahdozan, [Esmaeili R\\*](#). **The role of ASXL1 mutations and ASXL1 CircRNAs in cancer.** *Biomarkers* 2024. 29(1): 1-6.
4. Shadi Damough, Elham Bayat, Tayebeh Oghabi Bakhshaiesh, Farzaneh Barkhordari, Rezvan Esmaeili R, Leila Nematollahi, Yeganeh Talebkhan. **Recombinant anti-human epidermal growth factor receptor type 2 single-chain variable fragment-alpha-luffin fusion protein as a putative immunotoxin against human epidermal growth factor receptor type 2-positive breast cancer cells: an experimental research.** *Ann Med Surg (Lond)* 2023. 85(9): 4348-4354.
5. Arman Moradi, Saeid Rahmani, Narges Jafarbeik Iravani, Esmaeili R, Seyed Javad Mowla, Keivan Majidzadeh. **Dysregulation of miR-577, miR-505-3p, miR-3682-3p, and miR-4661 in breast cancer patients, differentially expression in ER-positive compared to ER-negative.** *GMJ. VOL. 12 (2023): 2023*
6. Zaman Hasanvand, Tayebeh Oghabi Bakhshaiesh, Fariba Peytam, Loghman Firoozpour, Elaheh Hosseinzadeh, Rasoul Motahari, Setareh Moghimi, Elaheh Nazeri, Mahsa Toolabi, Farhad Momeni, Hamidreza Bijanzadeh, Ali Khalaj, Blandine Baratte, Béatrice Josselin, Thomas Robert, Stéphane Bach, [Esmaeili R\\*](#), Alireza Foroumadi. **Imidazo [1, 2-a] quinazolines as novel, potent EGFR-TK inhibitors: design, synthesis, bioactivity evaluation, and in silico studies.** *Bioorganic Chemistry* Volume 133, April 2023, 106383
7. M Jafari, F Abbasvandi, E Nazeri, A Olfatbakhsh, A Kaviani, [Esmaeili R\\*](#). **Ultrasound features of pregnancy-associated breast cancer: A retrospective observational analysis.***Cancer Medicine* 2022/6/23
8. T Oghabi Bakhshaiesh, [Esmaeili R\\*](#). **Effects of noncoding RNAs in radiotherapy response in breast cancer: a systematic review.** *Cell Cycle* 21 (9), 883-893
9. F Jame-Chenarboo, A Aliahmadi, S Khavari, F Habibi, [Esmaeili R](#), et al. **Functional analysis of recombinant menthone menthol reductase by chiral GC and GC-MS.** *Industrial Crops and Products.* 2022,184, 115075
10. TO Bakhshaiesh, E Nazeri, N Jafarbeik-Iravani, Z Shirvani-Farsani, [Esmaeili R\\*](#). **Vitamin D and breast cancer risk: A systematic review and meta-analysis in Iranian patients.***Annals of Medicine and Surgery.* 2022. 104162

11. Mehrpour S, Arabpour M, Shakoory A, Naghizadeh MM, Mansoori Y, Tavakkoly Bazzaz, [Esmaeili R\\*](#). **Expression profiles and functional prediction of long non-coding RNAs LINC01133, ZEB1-AS1, and ABHD11-AS1 in the luminal subtype of breast cancer.** *Journal of Translational Medicine* volume 19, Article number: 364 (2021)
12. Mohammad Darzi, Saeid Gorgin, Keivan Majidzadeh-A, [Esmaeili R\\*](#). **Identification of Prognostic Genes in HER2-enriched Breast Cancer by Gene Co-Expression Network Analysis.** *Iranian Journal of Breast Disease* 2021 Volume 14, Issue 1.
13. SM Kazemi, A Esmaeili-Bandboni, ZV Malekshahi, MS Sardood, Mehrdad Hashemi, Keivan Majidzadeh, Maryam Kadkhodazadeh, [Esmaeili R](#), Babak Negahdari. **Vitamin D receptor gene polymorphisms and risk of breast cancer in Iranian women.** *Annals of Medicine and Surgery.* 2022. 73, 10315
14. R Motahari, MA Boshagh, S Moghimi, F Peytam, Z Hasanvand, [Esmaeili R\\*](#), **Design, synthesis and evaluation of novel tetrahydro pyrido thienopyrimidin-ureas as cytotoxic and anti-angiogenic agents.** *Scientific Reports* 2022, 12 (1), 1-17
15. K Majidzadeh-A, S Zarinfam, N Abdoli, F Yadegari, Esmaeili R, et al. **A comprehensive reference for BRCA1/2 genes pathogenic variants in Iran: published, unpublished and novel Familial Cancer** 21 (2), 137-142
16. Aram Faraji, Rasoul Motahari, Zaman Hasanvand, Tayebeh Oghabi Bakhshaiesh, Mahsa Toolabi, Setareh Moghimi, Loghman Firoozpour, Mohammad Amin Boshagh, Roya Rahmani, Shima HME Ketabforoosh, Hamid Reza Bijanzadeh, [Esmaeili R\\*](#), Alireza Foroumadi. **Quinazolin-4 (3H)-one-based agents bearing thiadiazole-urea: Synthesis and evaluation of anti-proliferative and antiangiogenic activity.** *Bioorganic Chemistry* Volume 108, March 2021, 104553
17. Esmaeili R ; Mohammadi, Samaneh; Jafarbeik-Iravani, Narges; Yadegari, Fatemeh; Olfatbakhsh, Asiieh; Mazaheri, Mahta; Kaviani, Ahmad; Rezaee, Mahdi; Majidzadeh-A., Keivan. **Expression of SCUBE2 and BCL2 Predicts Favorable Response in ER $\alpha$ -Positive Breast Cancer.** *Archives of Iranian Medicine* Mar 2021, Vol. 24 Issue 3, p209-217. 9p.
18. Darzi M, Gorgin S\*, Majidzadeh-A K, [Esmaeili R\\*](#): **Gene Co-Expression Network Analysis Reveals Immune Cell Infiltration as a Favorable Prognostic Marker in Non-Uterine Leiomyosarcoma.** *Scientific Reports* 2021,11,1. 1-11.
19. Keivan Majidzadeh-A, Shiva Zarinfam, Nasrin Abdoli, Fatemeh Yadegari, [Esmaeili R](#), Leila Farahmand, Azin Teimourzadeh, Mahdieh Taghizadeh, Mansoor Salehi, Mohamad Zamani. **A comprehensive reference for BRCA1/2 genes pathogenic variants in Iran: published, unpublished, and novel.** *Familial Cancer.* 2021.3.23
20. Esmaeili R, Amir Darbandi-Azar, Anita Sadeghpour, Keivan Majidzadeh-A, Leila Eini, Narges Jafarbeik-Iravani, Parisa Hoseinpour, Alireza Vajhi, Tayebeh Oghabi Bakhaiesh, Farzad Masoudkabar, Majid Sadeghzadeh. **Mesenchymal stem cells. Pretreatment with stromal-derived factor-1 alpha augments cardiac function and angiogenesis in infarcted myocardium.** *The American Journal of the Medical Sciences.* 2021.2.12
21. Aram Faraji, Tayebeh Oghabi Bakhshaiesh, Zaman Hasanvand, Rasoul Motahari, Elahe Nazeri, Mohammad Amin Boshagh, Loghman Firoozpour, Hossein Mehrabi, Ali Khalaj, [Esmaeili R\\*](#), Alireza Foroumadi. **Design, synthesis, and evaluation of novel thienopyrimidine-based agents bearing diaryl urea functionality as potential inhibitors of angiogenesis.** *European Journal of Medicinal Chemistry*,209.112149
22. Layeghi SM, Arabpour M, Esmaeili R, Naghizadeh MM, Bazzaz JT, Shakoory A: **Evaluation of the potential role of long non-coding RNA LINC00961 in luminal breast cancer: a case-control and systems biology study.** *Cancer Cell International* 2020, 20(1):1-13.

23. Jahani S, Nazeri E, Majidzadeh-A K, Jahani M, [Esmaeili R\\*](#) : **Circular RNA; a new biomarker for breast cancer: A systematic review.** *Journal of Cellular Physiology* 2020, **235**(7-8):5501-5510.
24. Eslami-S Z, Majidzadeh-A K, Halvaei S, Babapirali F, [Esmaeili R\\*](#): **Microbiome and Breast Cancer: New Role for an Ancient Population.** *Frontiers in Oncology* 2020, **10**:120
25. HamideHosseinjani-Pirdehia, Nosrat O. Allah Mahmoodi, AmirTaheri, Kaveh Amir, Ashjaee Asalemia, [Esmaeili R\\*](#): **Selective immediate detection of Cu<sup>2+</sup> by a pH-sensitive rhodamine-based fluorescence probe in breast cancer cell-line.** *Spectrochimica Acta Part A* 2020.
26. Faraji A, Bakhshaiesh TO, Hasanvand Z, Motahari R, Nazeri E, Boshagh MA, Firoozpour L, Mehrabi H, Khalaj A, [Esmaeili R\\*](#), Foroumadi A\* : **Design, synthesis and evaluation of novel thienopyrimidine-based agents bearing diaryl urea functionality as potential inhibitors of angiogenesis.** *European Journal of Medicinal Chemistry* 2020:112942.
27. Aghcheli A, Toolabi M, Ayati A, Moghimi S, Firoozpour L, Bakhshaiesh TO, Nazeri E, Norouzbahari M, [Esmaeili R\\*](#), Foroumadi\* A: **Design, synthesis, and biological evaluation of 1-(5-(benzylthio)-1, 3, 4-thiadiazol-2-yl)-3-phenylurea derivatives as anticancer agents.** *Medicinal Chemistry Research* 2020, **29**(11):2000-2010.
28. Toolabi M, Moghimi S, Bakhshaiesh TO, Salarinejad S, Aghcheli A, Hasanvand Z, Nazeri E, Khalaj A, [Esmaeili R\\*](#), Foroumadi A: **6-Cinnamoyl-4-arylaminothienopyrimidines as highly potent cytotoxic agents: Design, synthesis and structure-activity relationship studies.** *European journal of medicinal chemistry* 2020, **185**:111786.
29. Yadegari F, Farahmand L, Esmaeili R, Zarinfam S, Majidzadeh-A K: **Functional Investigation of the Novel BRCA1variant (Glu1661Gly) by Computational Tools and Yeast Transcription Activation Assay.** *Multidisciplinary Cancer Investigation* 2019, **3**(2):20-26.
30. Yadegari F, Farahmand L, Esmaeili R, Samadi T, Majidzadeh K: **Functional investigation of the BRCA1 Val1714Gly and Asp1733Gly variants by computational tools and yeast transcription activation assay.** *Molecular Biology Research Communications* 2019, **8**(3):113.
31. Kalantari E, Naghib SM\*, Irvani NJ, [Esmaeili R\\*](#), Naimi-Jamal MR, Mozafari M\*: **Biocomposites based on hydroxyapatite matrix reinforced with nanostructured monticellite (CaMgSiO<sub>4</sub>) for biomedical application: synthesis, characterization, and biological studies.** *Materials Science and Engineering: C* 2019, **105**:109912.
32. Nazeri E, Savadkoobi MG, Majidzadeh-A K, [Esmaeili R\\*](#): **Chondrosarcoma: an overview of clinical behaviour, molecular mechanisms mediated drug resistance and potential therapeutic targets.** *Critical Reviews in Oncology/Hematology* 2018, **131**:102-109.
33. Mansouri S, Esmaeili R(co-first author), Kaviani A, Rezaei M, Abdoli N, Mokhtari-Hesari P, Farahmand L, Majidzadeh-A K: **The Interaction Between the Expression of Proliferative Biomarkers and Clinical Characteristics in Breast Cancer.** *Multidisciplinary Cancer Investigation* 2018, **2**(2):20-28.
34. Halvaei S, Daryani S, Eslami-S Z, Samadi T, Jafarbeik-Irvani N, Bakhshayesh TO, Majidzadeh-A K, [Esmaeili R\\*](#): **Exosomes in cancer liquid biopsy: a focus on breast cancer.** *Molecular Therapy-Nucleic Acids* 2018, **10**:131-141.
35. Farahmand L, Esmaeili R, Eini L, Majidzadeh-A K: **The effect of mesenchymal stem cell-conditioned medium on proliferation and apoptosis of breast cancer cell line.** *Journal of Cancer Research and Therapeutics* 2018, **14**(2):341.
36. Esmaeili R, Abdoli N, Yadegari F, Neishaboury M, Farahmand L, Kaviani A, Majidzadeh-A K: **Unique CD44 intronic SNP is associated with tumor grade in breast cancer: a case control study and in silico analysis.** *Cancer Cell International* 2018, **18**(1):1-6.
37. Ayati A, [Esmaeili R](#), Moghimi S, Bakhshaiesh TO, Eslami-S Z, Majidzadeh-A K, Safavi M, Emami S, Foroumadi A: **Synthesis and biological evaluation of 4-amino-5-**

- cinnamoylthiazoles as chalcone-like anticancer agents.** *European journal of medicinal chemistry* 2018, **145**:404-412.
38. Ayati A, Bakhshaiesh TO, Moghimi S, **Esmaeili R**, Majidzadeh-A K, Safavi M, Firoozpour L, Emami S, Foroumadi A: **Synthesis and biological evaluation of new coumarins bearing 2, 4-diaminothiazole-5-carbonyl moiety.** *European journal of medicinal chemistry* 2018, **155**:483-491.
  39. Estiar MA, Zare A-A, Esmaeili R, Farahmand L, Fazilaty H, Jafari D, Samadi T, Majidzadeh-A K: **Clinical significance of NDRG3 in patients with breast cancer.** *Future Oncology* 2017, **13**(11):961-969.
  40. Estiar MA, Esmaeili R, Zare A-A, Farahmand L, Fazilaty H, Zekri A, Jafarbeik-Iravani N, Majidzadeh-A K: **High expression of CEACAM19, a new member of carcinoembryonic antigen gene family, in patients with breast cancer.** *Clinical and Experimental Medicine* 2017, **17**(4):547-553.
  41. Esmaeili R, Samadi T, Abdoli N, Majidzadeh-Ardebili K, Farahmand L, Salehi M: **The A-kinase anchoring proteins correlation with disease-free survival in breast cancer.** *Tehran University Medical Journal TUMS Publications* 2017, **74**(10):688-696.
  42. Esmaeili R, Sadeghpour A, Darbandi-Azar A, Majidzadeh-A K, Vajhi A, Sadeghizadeh M: **Echocardiographic assessment of myocardial infarction: comparison of a rat model in two strains.** *Iranian Journal of Veterinary Research*, 2017, **18**(1): 30.
  43. Eftekhari R, Esmaeili R, Mirzaei R, Bidad K, de Lima S, Ajami M, Shirzad H, Hadjati J, Majidzadeh-A K: **Study of the tumor microenvironment during breast cancer progression.** *Cancer Cell International* 2017, **17**(1):123.
  44. Bakhshaiesh TO, Majidzadeh-A K, **Esmaeili R\*** : **Wip1: A candidate phosphatase for cancer diagnosis and treatment.** *DNA repair* 2017, **54**:63-66.
  45. Zare A-A, Majidzadeh-A K, Esmaeili R, Gheibi N, Sarookhani MR: **Expression Analysis of ARMC3, a Testis-Specific Gene, in Breast Cancer Patients.** *Biotechnology and Health Sciences* 2016, **3**(2).
  46. Majidzadeh-A K, Farahmand L, Zare A-A, Esmaeili R, Salehi M, Habibi M: **Iranian women's attitude toward prophylactic mastectomy for breast cancer.** *Journal of Cancer Research and Therapeutics* 2016, **12**(2):915.
  47. Majidzadeh-A K, Esmaeili R, Sarookhani MR: **Expression Analysis of ARMC3, a Testis-Specific Gene, in Breast Cancer Patients.** *Journal of Biotechnology and Health Sciences* 2016.
  48. Esmaeili R, Majidzadeh-A K, Farahmand L, Ghasemi M, Salehi M, Khoshdel AR: **AKAP3 correlates with triple negative status and disease-free survival in breast cancer.** *BMC cancer* 2015, **15**(1):681.
  49. Esmaeili R, Majidzadeh-A K, Eini L, Hoseinpour P, Teymourzadeh A, Sadeghizadeh M: **Transduction of Mesenchymal Stem Cells that Express VEGF-A and Pre-conditioning with SDF1 $\alpha$  In order to Increase Survival for use in Myocardial Infarction Treatment in a Rat Model.** *Pathobiology Research* 2015, **18**(3):45-58.
  50. Amoli SY, Kokabee L, Majidzadeh-A K, Kordafshari AR, Rahimi H, Esmaeili R, Izadi P, Noruzinia M, Maryami F, Karimipour M: **Cancer Testis Antigen Expression in Breast cancer Tissues and Cell Lines.** *Advances in Bioresearch* 2015, **6**(1).
  51. Farahmand L, Esmaeili R: **Ligation Independent Cloning of Polycistronic, Genetically Modified, HuMAb4D5-8 F (ab) 2, in Bacterial Plasmid.** *Iranian Quarterly Journal of Breast Disease* 2014, **7**(2):7-15.
  52. Esmaeili R, Majidzadeh-A K, Ghasemi M, Farahmand L, Abdoli N: **PIWIL2 and PL2L60 (Cancer/Testis genes) Expression in Breast Cancer.** *Archives of Breast Cancer* 2014:91-94.

53. Majidzadeh-A K, Kaviani A, Esmaeili R, Farahmand L, Shojamoradi MH, Zare AA, Eini L, Abbasvandi F, Olfatbakhsh A, Moazen H: **Iranian Breast Cancer Bio-Bank: the activity and challenging issues.** *Cell and tissue banking* 2013, **14**(1):11-20.
54. Kaviani A, Esmaeili R, Foroughizadeh Moghaddam M, Abdoli N, Zare A-A, Lashgari MH, Majidzadeh K: **Comparison of Real-Time PCR and Immunohistochemistry for HER-2/neu gene amplification assay in breast cancer tissue.** *Annals of Military and Health Sciences Research* 2013, **11**(3).
55. Amoli SY, Kokabi L, Kord Afshari A, Esmaeili R, Izadi P, Norouzniai M, Majidzadeh Ardabili K, Karimipour M: **Expression of multiple cancer/testis genes in 32 breast cancer tumor samples.** *Medical Science Journal of Islamic Azad University-Tehran Medical Branch* 2013, **23**(3):179-184.
56. Motamedi S, Majidzadeh K, Mazaheri M, Anbiaie R, Mortazavizadeh SMR, Esmaeili R: **Tamoxifen resistance and CYP2D6 copy numbers in breast cancer patients.** *Asian Pacific Journal of Cancer Prevention* 2012, **13**(12):6101-6104.
57. Majidzadeh-A K, Esmaeili R, Mazaheri M, Mortazavi-Zadeh MR, Motamedi S: **287 Cytochrome P450 2D6 Gene Copy Number as an Indicator for Tamoxifen Resistance in Breast Cancer.** *European Journal of Cancer* 2012 (48): S126.
58. Farahmand L, Majidzadeh-A K, Sepehrizadeh Z, Mofid MR, Esmaeili R, Yazdi MT: **Ligation independent cloning of polycistronic, genetically modified, HuMAb4D5-8 F (ab')<sub>2</sub> in bacterial plasmid.** *Avicenna Journal of Medical Biotechnology* 2012, **4**(1):15.
59. Majidzadeh-A K, Esmaeili R, Abdoli N: **TFRC and ACTB as the best reference genes to quantify Urokinase Plasminogen Activator in breast cancer.** *BMC research notes* 2011, **4**(1):215.
60. Momeny M, Khorramizadeh MR, Ghaffari SH, Yousefi M, Yekaninejad MS, Esmaeili R, Jahanshahi Z, Nooridalooi MR: **Effects of silibinin on cell growth and invasive properties of a human hepatocellular carcinoma cell line, HepG-2, through inhibition of extracellular signal-regulated kinase 1/2 phosphorylation.** *European journal of pharmacology* 2008, **591**(1-3):13-20.
61. Sarrami-Forooshani R, Das SR, Sabahi F, Adeli A, Esmaeili R, Wahren B, Mohraz M, Haji-Abdolbaghi M, Rasoolinejad M, Jameel S: **Molecular analysis and phylogenetic characterization of HIV in Iran.** *Journal of Medical Virology* 2006, **78**(7):853-863.

### **Participating in Research Projects as Co-Investigator**

- 2020 Synthesis and Anticancer Evaluation of 2-arylamino-5- (3-acetylcumarin) -4 aminothiazole Derivatives.
- 2020 Investigation of genetic factors modifying BRCA1 and BRCA2 genes: Membership of the Trusted Cancer Research Institute in the CIMBA International Consortium
- 2019 Design and make a polymer microfilter to identify and isolate cancer cells from the peripheral blood of breast cancer patients
- 2019 Synthesis and anticancer evaluation of aminothiazole derivatives on three breast cancer cell lines
- 2018 Evaluation of methylation changes in HSPB8, P21 and Cops5 genes in sensitive and resistant tamoxifen-treated breast cancer women
- 2017 Evaluation of the Functional assay effectiveness in measuring the function of unknown carboxylic terminus mutations in the BRCA1 gene in breast cancer patients
- 2017 Development of breast cancer biological specimens' bank.

- 2017 Production of Her2/neu and chromosome 17 centromere FISH kit for breast cancer."
- 2017 Separation and characterization of cancer stem cells in breast cancer
- 2015 Expression analysis of proliferative biomarkers in breast cancer patients
- 2014 Investigating the effect of mesenchymal stem cell co-culture with cancer cells,
- 2013 Gene expression analysis of testis-specific antigens in breast cancer
- 2010 Expression analysis of estrogen-regulated genes in ductal carcinoma of the breast.
- 2009 Expression analysis of genes of the plasminogen activator system in breast cancer patients
- 2008 Phylogenetic analysis of HDV in Iranian patients.
- 2007 Investigating the effect of Sinibilin in the inhibition of metastasis in the HepG2 cell line, Tehran University of Medical Science and Pasteur Institute of Iran
- 2004-2007 Phylogenetic analysis of patients affected with HIV, Pasteur Institute of Iran

### **Supervisor or Academic Advisor of MSc Thesis and PhD Dissertations**

- 2022 Investigation of the biomarker potential of circ\_0001756 and circ\_0001851 to determine metastasis and overall survival in breast carcinoma patients. Mahsa Maleki
- 2022 Evaluation of circHIPK3 and circNRIP1 expression and their biomarker ability to diagnose breast carcinoma
- 2021 Evaluating expression of selected circular RNAs (circ-100338 and circ-0006168) involved in regulation of PI3K/AKT/mTOR signaling pathway in breast carcinoma. Saeid Mirjalili
- 2021 Evaluation of the NFKB1 gene and derived circRNA in the exosomes of patients with metastatic breast cancer. Maryam Nakhaee
- 2020 Study of Gene Expression Changes in Breast Cancer Progress based on the topological analysis of biological data. Alireza Ahani
- 2020 Evaluation of ASXL1 and its derived circRNA expression in breast cancer patients' exosomes. Sara Kolahdouzan
- 2019 PIK3CA mutation and Trastuzumab resistance in breast cancer patients
- 2019 Evaluation of p21 gene methylation and expression status in tamoxifen-sensitive and resistant breast cancer patients. Sepideh Ghafari
- 2019 Study of the effective factors On Breast cancer patient survival using multistate models. Fatemeh Mamashli
- 2019 Sponge mir7 by Non-coding RNA Linc-pint and its effect on PI3K/ Akt signaling. Romina Norouzi
- 2019 Synthesis, evaluation, Biological and Docking Studies Derivatives 4 Ariel - Amino Thiopyrimidine as inhibitor of EGFR. Mahsa Toolabi
- 2018 Investigation of the expression pattern of selected long non-coding RNAs in breast cancer tissue samples. Sepideh Mehrpoor Layeghi
- 2017 Comparison of sarcoma vs carcinoma cancer for extracting similar genome patterns based on a systems biology approach. Mohammad Darzi
- 2016 Investigating the mutations of the PIK3ca gene in response to trastuzumab, Behzad Karami

2016 The role of CYP2D6 polymorphism in tamoxifen resistance in breast cancer patients,  
Sahar Motamedi

### **Teaching Experience**

2017 Cancer genetics course for PhD students of bioinformatics, Tehran University, Iran.  
2016 Real-Time PCR Workshop, Motamed Cancer Institute  
2017 molecular techniques workshop, Motamed Cancer Institute  
2015 Real-Time PCR Workshop, Pasteur Institute of Iran  
2010 Real-Time PCR Workshop, Pasteur Institute of Iran  
2002-2007 Basic techniques in molecular biology, Pasteur Institute of Iran  
An introduction to Basic Methods in biotechnology, Pasteur Institute of Iran  
2002-2007 Workshop on PCR, Real-time PCR, cloning, plasmid extraction, gel extraction,  
electrophoresis, Pasteur Institute of Iran

### **Professional Services and Outreach**

2017-2023 Step team leader, cellular and molecular committee, Second International Tehran  
Breast Cancer Congress (TBCC9)  
2016-2021 Executive manager, editor, Journal of Multidisciplinary Cancer Investigation,  
www.mcijournal.com  
2015-2023 Member of the scientific staff promotion sub-committee, Motamed Cancer Institute  
2015-2023 Member of the scientific committee, Genetics department, and Recombinant  
Protein Group  
2013 Member of the scientific committee, 6th Breast Cancer Congress, Tehran, Iran  
2012 Member of the scientific committee, 4th Breast Cancer Congress, Tehran, Iran  
2009 Member of the executive committee, symposium of molecular aspects in breast cancer  
2007 Member of the executive committee, 4th Virology Congress, Tehran, Iran

### **Other scientific involvement**

2007 Established the molecular laboratory, Breast Cancer Research Center  
2007-2023 Managed Breast Cancer Biologic bank in MCI

### **Gene Bank Submission**

- 1- HIV genome DQ115641-DQ115707
- 2- HDV genome EU476899-EU476910 and EU496556-EU496569
- 3- Cyp2d6 gene, MT199338-MT199340