

Curriculum Vitae

Shima Aliebrahimi



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Birth: 21 Sep. 1985, Tehran, Iran.

Education:

Ph.D., (2012-2017), **Cell and Molecular Biology**, University of Tehran, Tehran, Iran.

M.Sc., (2020-present), **Medical Education**, Smart University of Medical Sciences, Tehran, Iran.

M.Sc., (2008-2011), **Microbiology**, Shahid Beheshti University, Tehran, Iran.

B.Sc., (2004-2007), **Cell and Molecular Biology-Microbiology**, Alzahra University, Tehran, Iran.

Scientific Position:

Assistant Professor (2018-present), Smart University of Medical Sciences (SMUMS).

Executive Position:

Coordinator of the accreditation process of e-learning centers, High Council of Virtual Learning since 2018.

Professional Membership:

- Member of the ethics committee of Smart University of Medical Sciences since 2018
- Member of scientific board of the First International Congress of Artificial Intelligence in Medical Sciences, 2023.

- Member of the examining board for the scientific evaluation of abroad students, 2022.

Course Teaching:

- Computational Drug Design: Molecular Docking (Short-term course), SMUMS.
- Cell culture, Teacher assistance, Tehran University of Medical Sciences (TUMS) & SMUMS.

Approved Projects:

- Designing and implementation of visual training for the purpose of non-invasive isolation and primary culture of cells isolated from rat prostate tissue (**co-investigator**), SMUMS, In progress.
- Design, implementation, and evaluation of short-term course of computational drug design: molecular docking (**Principal investigator**), SMUMS, In progress.
- Prediction and repositioning of drug compounds as MNK-1 inhibitor and its effect on the WNT/ β -catenin pathway in ovarian cancer (**Advisor, Ph.D. thesis**), TUMS, In progress.
- Study the cytotoxic effect of papaverine nanoliposome on glioblastoma cells (**Supervisor, PharmD. thesis**), Islamic Azad University, In progress.
- Evaluation of cisplatin and clarithromycin co-treatment on TIMP-1 expression in cisplatin-resistant ovarian cancer cells (**co-investigator**), TUMS, In progress.
- Evaluation of Paclitaxel and Capmatinib co-treatment on expression of genes involved in EMT pathway in 4T1 breast cancer cells (**co-investigator**), TUMS, In progress.
- Evaluation of the anti-apoptotic effects of PEG-functionalized graphene oxide loaded with paclitaxel in the *in vitro* & *in vivo* model of breast cancer (**co-investigator**), TUMS, In progress.
- Evaluation of the effects of hydroalcoholic extract of *Salvia aristata* Aucher ex Benth, the isolated dominant compound and its derivative on induction of apoptosis and inhibition of STAT3 pathway in MDA MB-231 cells (**co-investigator**), TUMS, In progress.
- Study of cytotoxicity mechanisms of withaferin A on MKN-45 gastric cancer cells (**Supervisor, PharmD. thesis**), Islamic Azad University, In progress.
- Evaluation of the effect of simultaneous administration of capmatinib and paclitaxel on the expression of genes involved in the EMT pathway in MDA-MB231 breast cancer cells (**Advisor, PharmD. thesis**), TUMS, In progress.

- Evaluation of EJ138 cells stemness properties in co-culture with metastatic and non metastatic derived cancer associated fibroblasts from bladder cancer (**Advisor, PharmD. thesis**), TUMS, (2020-2022).
- Co-treatment effect of paclitaxol & capmatinib on cytotoxic effect in 4T1 breast tumor in mice (**co-investigator**), TUMS, In progress.
- Evaluation the synergic effects of metformin and cisplatin on inhibition of hedgehog pathway, and autophagy in cisplatin resistance ovarian cancer cells (**Advisor, Ph.D. thesis**), TUMS, In progress.
- Assessment of cytotoxicity & genotoxicity of selected pesticides available in Iranian Markets (**co-investigator**), TUMS, (Jan 2021- June 2021)
- Evaluation of single and combined effects of heat stress and titanium dioxide nanoparticles (TiO₂) on DNA in mouse brain in order to predictive model of brain injuries in co-exposure (**co-investigator**), TUMS, (2020-2022).
- Evaluation of invasive potential in gastric cancer cell line MKN-45 resistant to Capecitabine (**co-investigator**), TUMS, In progress.
- Study of Green Tea Polyphenols (GTPs) on MDA-MB-231 & MCF-7 breast cancer stem-like cells (CSC-LCs) in comparison to parent cancer cells (**Advisor, PharmD. thesis**), National Institute for Medical Research Development (NIMAD), (2019-2021).
- Study the inhibitory effect of Statins on c-Met signaling *in silico* & *in vitro* (**co-investigator**), TUMS, (2020-2021).
- Evaluation of c-Met signaling and stemness effects on chemo-resistance of gastric cancer cells (**Advisor, Ph.D. thesis**), TUMS, (2019-2022).
- Evaluation of simvastatin on expression of pluripotency transcription factors of breast cancer cells under hypoxia and normoxia (**co-investigator**), TUMS, (2019-2021).
- Evaluation of iron oxide nanoparticles combined with magnetic hyperthermia and anticancer drug delivery on breast cancer model (**co-investigator**), NIMAD, (2018-2020).
- Study of cytotoxic effect of simvastatin on the CSC MDA-MB-231 cells in normal and hypoxic condition (**co-investigator**), TUMS, (2017-2020).
- Pre-clinical evaluation of thermotherapy with magnetic nanoparticles and alternating magnetic field (AMF) in suppressing proliferation in breast cancer tumor xenograft model in nude mice (**co-investigator**), TUMS, (2016-2020).
- Evaluation of *in vitro* cytotoxicity of plant active agents on pancreatic cancer stem cells based on virtual screening (**co-investigator**), Iran National Science Foundation (INSF), (2015-2017).

Publications:

– Articles

1. **Aliebrahimi Sh**, Habibian Sezavar A, Sabet B, Ostad SN, Montazeri V. Primary Culture by Enzymatic Disaggregation. *Journal of Visualized Medicine*, 2023; 5;e0100.
2. Sajjadi Mohri SM, Montazeri V, **Aliebrahimi S**, Abedi A, Zare Dehnavi M, Jamshidzade A, Ostad SN. Anticancer properties of a new platinum (IV) agent on HT1080 cancer stem-like cells: an in vitro study. *Acta Medica Iranica*, 2022;60(12):756-64.
3. Habibi P, Ostad SN, Heydari A, **Aliebrahimi S**, Montazeri V, Rahimi Foroushani A, MonazzamMR, Ghazi-Khansari M, Golbabaei F. Effect of Heat Stress on DNA Damage: A Systematic Literature Review. *International Journal of Biometeorology*, 2022. ;66(11):2147-58.
4. Mohseni HS, Sahebnasagh R, Tavajohi S, Ghahremani MH, Kebriaeezadeh A, **Aliebrahimi S**, Ostad SN. Evaluation of genotoxic and cytotoxic effects of some insecticides used in Iran on murine fibroblast cells (L-929). *Toxicology and Environmental Health Sciences*. 2022;12:1-6.
5. Habibi P, Ostad SN, Monazzam MR, Rahimi Foroushani A, Ghazi-Khansari M, **Aliebrahimi S**, Montazeri V, Golbabaei F. Thermal Stress and TiO₂ Nanoparticle Induced Oxidative DNA Damage and Apoptosis in Mouse Hippocampus. *Environmental Science and Pollution Research*. 2022:1-12.
6. Jafarzadeh E, Montazeri V, **Aliebrahimi S**, Habibian Sezavar A, Ghahremani MH, Ostad SN. Combined regimens of cisplatin and metformin in cancer therapy: a systematic literature review and meta-analysis. *Life Science*, 2022;304:120680.
7. Farnudiyan-Habibi A, Mirjani M, Montazeri V, **Aliebrahimi S**, Katouzian I, Abdolhosseini S, Rahmani A, Keyvani H, Rad-Malekshahi M, Ostad SN. Review on approved and In Progress COVID-19 vaccines. *Iranian Journal of Pharmaceutical Research*, 2022; 21(1): e124228.
8. Rasouli A, **Aliebrahimi S**, Montazeri V, Ghahremani MH, Ostad SN. Combination effect of doxorubicin and HIF inhibitor on MCF-7 CD44⁺/CD24⁻ subpopulation cells in hypoxic condition. *Brazilian Journal of Pharmaceutical Sciences*, 2022;58:e18754.
9. Gholizadeh F, Ghahremani MH, **Aliebrahimi S**, Shadboorestan A, Ostad SN. Assessment of cannabinoids agonist and antagonist in invasion potential of K562 cancer cells. *Iranian Biomedical Journal*, 2019; 23(2):153-158.
10. **Aliebrahimi S**, Montasser Kouhsari S, Arab SS, Shadboorestan A, Ostad SN. Phytochemicals, withaferin A and carnosol, overcome pancreatic cancer stem cells as c-Met inhibitors. *Biomedicine & Pharmacotherapy*, 2018;106:1527-1536.
11. **Aliebrahimi S**, Montasser Kouhsari S, Ostad SN, Arab SS, Karami L. Identification of phytochemicals targeting c-Met kinase domain using consensus docking and molecular dynamics simulation studies. *Cell Biochemistry and Biophysics*, 2018;76(1-2):135-145.

12. Malekmarzban F, Seyedabadi M, Ghahremani MH, **Aliebrahimi S**, Habibollahi P, Tavajohi S, Ostad SN. Role of nitric oxide and metallothionein in cytotoxic activity of cadmium in Caco-2 cells. *Acta Medica Iranica*, 2018. 56(5):287-294.
13. Yahyavi Z, Fazeli MR, Mirfeizi M, **Aliebrahimi A**, Ostad SN. Cytotoxic Activity of Familact: A Probiotic Supplement. *Iranian Journal of Toxicology*, 2018. 12(4):41-45.
14. Salehi M, Amini M, **Aliebrahimi S**, Ghadbeigi S, Kiani M, Yahyavi Z, Ostad SN. Novel synthetic derivatives of dichloroimidazole targeting NorA efflux pump against methicillin-resistant *Staphylococcus aureus*. *International Pharmacy Acta*, 2018; 1(2):167-175.
15. Majdzadeh M, **Aliebrahimi S**, Vatankhah M, Ostad SN. Celecoxib and L-NAME effects on apoptosis and cell cycle of MCF-7 CD44⁺/CD24^{-low} subpopulation. *Turkish Journal of Biology*, 2017;41:826-834.
16. Mohammadpour F, Ostad SN, **Aliebrahimi S**, Daman Z. Anti-invasion effects of cannabinoids agonist and antagonist on human breast cancer stem cells. *Iranian Journal of Pharmaceutical Research*, 2017;16(4):1479-1486.
17. **Aliebrahimi S**, Raheb J, Ebrahimipour G, Bardania H, Nurollah M, Aghajani Z. Designing a new recombinant indigenous *Klebsiella oxytoca* ISA4 by cloning of *dsz* genes. *Journal Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 2015;37:2056-2063.

– **Congress presentation**

1. 17th National Congress of Biochemistry & 8th International Congress of Biochemistry & Molecular Biology, Tehran University of Medical Sciences, 23-26 Aug 2022; **Mini-oral presentation**. Cytotoxic evaluation of chitosan-coated Fe₃O₄ nanocarriers in conjugation with opium alkaloids. **Shima Aliebrahimi**, Fateme Heidari, Amir Amani, Vahideh Montazeri, Shiva Sabzandam, Seyed Nasser Ostad
2. 17th National Congress of Biochemistry & 8th International Congress of Biochemistry & Molecular Biology. Tehran University of Medical Sciences, 23-26 Aug 2022; **Mini-oral presentation**. An evaluation of the effectiveness of combined regimens of cisplatin and metformin in the treatment of cancer: a systematic review and meta-analysis. Emad Jafarzadeh, Vahideh Montazeri, Shima Aliebrahimi, Ahmad Habibian Sezavar, Mohammad H. Ghahremani, Seyed Nasser Ostad.
3. 12th National and 4th International Biotechnology Congress of Islamic Republic of Iran, 22-24 Aug 2021. Discovery of Statins Targeting c-Met Kinase Domain using Molecular Dynamics Simulation Studies. Elham Ahmad Alizadeh, **Shima Aliebrahimi**, Leila Karami, Seyed Nasser Ostad.
4. The 4th International Congress on BioMedicine (ICB2020), 9-12 Nov 2020. Preparation and characterization of noscapine loaded superparamagnetic iron oxide nanoparticles for drug delivery in breast cancer cells. Fateme Heidari, **Shima Aliebahimi**, Amir Amani, Vahide Montazeri, Shiva Sabzandam, Seyed Nasser Ostad.
5. 16th National Congress of Biochemistry & 7th International Congress of Biochemistry & Molecular Biology, 9-12 Nov 2020. Evaluation of cytotoxic effect of platinum (IV) and

- cisplatin on proliferation of EJ138 and main population of HT1080 cells and their Cancer Stem Like Cells. Seyedeh Masoume Sajjadi Mohri, Vahideh Montazeri, **Shima Aliebrahimi**, Anita Abedi, Simin Aghmasheh, Seyed Naser Ostad.
6. 16th National Congress of Biochemistry & 7th International Congress of Biochemistry & Molecular Biology, 9-12 Nov 2020. Evaluation of papaverine-iron oxide nanoparticles for anticancer drug delivery. **Shima Aliebrahimi**, Fateme Heidari, Amir Amani, Shiva Sabzandam, Vahideh Montazeri, Seyed Nasser Ostad
 7. The 6th Conference on Bioinformatics, University of Tehran, Iran, 13-15 Dec 2016. Discovery of phytochemicals targeting c-Met kinase domain using consensus docking and molecular dynamics simulation studies. **Sh. Aliebrahimi**, Sh. Montasser Kouhsari, S. N. Ostad, Sh. Arab, L. Karami.
 8. 13th Iranian and The 2nd International Congress On Microbiology, Ardebil University of Medical Sciences, Iran, 14-16 July 2012. Desulfurization activity evaluation of recombinant *Klebsiella oxytoca* ISA4. **Shima Aliebrahimi**, Gholam Hossein Ebrahimipour, Jamshid Raheb.
 9. The 7th National Biotechnology Congress of I.R. Iran, 12-14 Sep 2011. Cloning and expression of desulfurization operon dszABC in native bacterium, *Klebsiella oxytoca*. **Aliebrahimi S.**, Raheb J., Ebrahimipour G., Aghajani Z., Nagmi Z.
 10. Second National Conference of Applied Microbiology, University of Tehran, Iran, 16-17 Feb 2011. Isolation and identification of the gene encoding a desulfurase from DBT-desulfurizing bacterium, *Klebsiella oxytoca*. **Aliebrahimi S.**, Ebrahimipour G., Bambai B., Nurollah M.
 11. Second National Conference of Applied Microbiology, University of Tehran, Iran, 16-17 Feb 2011. Improvement of biodesulfurization activity by *Klebsiella oxytoca*. Nurollah M., Ebrahimipour G., Mehrdad M., Negmi Z., **Aliebrahimi S.**
 12. 11th National and The 1st International Congress On Microbiology, Guilan University of Medical Sciences, Iran, 10-13 May 2010. Biochemical and molecular identification of a new DBT-desulfurizing bacterium. **Shima Aliebrahimi**, Gholam Hossein Ebrahimipour.

Workshops (Education):

- Bioinformatics, ACECR, Iran University of Medical Sciences, Tehran, Iran.
- Preparation of antifungal drugs from medicinal plants: isolation, characterization and purification of bioactive compounds using HPLC and TLC, Pasteur Institute of Iran.
- Peer review & critical appraisal, TUMS, Tehran, Iran.
- Principles of designing an effective e-content, SMUMS, Tehran, Iran.
- Instructional design principles for MOOCs, SMUMS, Tehran, Iran.
- Prepare an e-content with Storyline, SMUMS, Tehran, Iran.
- Prepare an e-content with Camtasia Studio, SMUMS, Tehran, Iran
- Ethical issues in qualitative research, SMUMS, Tehran, Iran..

- The basic principles & applications of flowcytometry, Sababiomedicals, Science-based company, Tehran, Iran.

Research Interests:

- Computational biology
- Cell signaling
- Cancer stem cells