

Curriculum Vitae

Name: Roghayyeh Vakili-Ghartavol

Gender: Female

Marital status: Single

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Work Experience

At present

- Assistant professor at Shiraz University of Medical Sciences
- Vice president of education of the department of medical nanotechnology

2020-2021

R&D senior specialist at Biosun Pharmed Pharmaceutical Company

Education

2019-2020

Postdoctoral fellowship at Iran Nanotechnology Innovation Council

Supervisors: Prof Mahmoud Reza Jaafari, Prof Seyed Mahdi Rezayat

2014-2019

Ph.D. of Medical Nanotechnology, Tehran University of Medical Sciences, Tehran, Iran

Average: 19.64

Thesis title: Preparation of metformin- and docetaxel- loaded nanoliposomes for evaluation of anticancer and antimetastatic effects in metastatic breast cancer models.

Supervisors: Prof Seyed Mahdi Rezayat, Prof Mahmoud Reza Jaafari, Dr Reza Faridi Majidi

2008– 2011

M.Sc. of Cellular and Molecular Biology, Shiraz University, Shiraz, Iran

Thesis title: Association between Exudative Age-related Macular Degeneration and the G6721T Polymorphism of XRCC7

Supervisors: Dr. Iraj Saadat

Study emphases:

Cancer biology: The study of the pathways involved in cancer, diabetes, etc,

Biochemistry: The study of kinetical processes of different enzymes. **Biophysics:** The study of signaling, cell motility, and transport mechanisms in biological membranes.

2002 – 2006

B.Sc. of Animal Biology, Tabriz University, Tabriz, Iran

Study emphases:

Molecular Cell Biology: The study of cellular physiology and mechanism of cell functions,

Biochemistry: The study of chemical processes within and relating to living organisms,

Genetics: The study of mechanism of heredity, replication and transcription DNA molecules and translation of RNA sequence to protein sequence.

Research interests

- Applications of nanoliposomes in cancer therapy
- Diagnostic and therapeutic applications of nanoparticles in cancer therapy
- Applications of nanotechnology in medical and biological sciences
- Targeted drug and gene delivery and diagnostics using nanotechnology
- Applications of nanoparticles in tumor microenvironment evaluation
- ...

Technical experiences

- Synthesis & characterization of nanoparticles specially nanoliposomes and nanomicelles
- HPLC
- PCR
- Elemental Analyzer (laboratory expert)

- Spectroscopic analysis (Fluorimeter, UV spectrophotometer)
- Flow cytometry
- Cell culture
- Animal studies
- And etc

Research experiences & employments

- Holding workshop of liposome preparation along with Prof. Mahmoud Reza Jaafari in summer school organized by Iranian Society of Nanomedicine
- Oral English presentation on the 2th international congress on Nanomedicine and Nanosafety of Tehran University of medical sciences.
- Oral English presentation on the 8th international congress on Nanoscience and nanotechnology of Mashhad University of Medical Sciences (ICNN 2021).
- Member of executive team and being participated in holding of the 1th Nanomed Festival of Tehran University of Medical Sciences.
- Member of executive team and being participated in holding of the 8th international congress on Nanoscience and nanotechnology of Mashhad University of Medical Sciences (ICNN 2021).
- Member of executive team and being participated in holding of the 2th international congress on Nanomedicine and nanosafety of Tehran University of Medical Sciences (ICNN 2020).
- Member of executive team and being participated in holding of the 1th international congress on Nanomedicine and nanosafety of Tehran University of Medical Sciences (ICNN 2019).
- Collaboration with patent office in considering patent researches as a member of referee team at idea sazasan aftab institute
- Responsible of Tehran University of Medical Sciences pavilion in Iranian Nanotechnologies 2014 exhibition

Skills

- Spss
- Prism
- End Note
- Microsoft Office (Word, Power point, Excel)
- CalcuSyn
- Origin
- DigitalMicrographDemo
- Languages: English (fluent)
- FlowJo

Awards

- 1- **One of the top 4 selected students** for Ph.D program of medical nanotechnology, Iran, 2014
- 2- **2th** rank among all students in class from 2014 to 2019 with GPA 19.64 out of 20.
- 3- **3st Prize and bronze medal** of 1st TUMS Nanomedicine Festival for the Best research in Nanomedicine, Tehran, Iran, 2019.

Articles

- 1- Nanoparticles-based therapeutics for the management of bacterial infections: A special emphasis on FDA approved products and clinical trials, Fatemeh Aflakian, Farshad Mirzavi, Hamed Tanimowo Aiyelabegan, Anvar Soleimani, Jamshid Gholizadeh Navashenaq, Iman Karimi-Sani, Abolfazl Rafati Zomorodi, **Roghayyeh Vakili-Ghartavol**, European Federation for Pharmaceutical Sciences (EUFEPS)., 2023.

- 2- Docetaxel in combination with metformin enhances antitumour efficacy in metastatic breast carcinoma models: a promising cancer targeting based on PEGylated liposomes, Roghayyeh Vakili-Ghartavol, Amin Mehrabian, Farshad Mirzavi, Seyed Mahdi Rezayat,

Mohammad Mashreghi, Leila Farhoudi, Sharmin Kharrazi, Kayvan Sadri, Mahmoud Reza Jaafari, Journal of Pharmacy and Pharmacology., 2022.

3- Preparation, characterization, and biodistribution of glutathione PEGylated nanoliposomal doxorubicin for brain drug delivery with a post-insertion approach, Amin Mehrabian, Roghayyeh Vakili-Ghartavol, Mohammad Mashreghi, Sara Shokooh Saremi, Ali Badiiee, Leila Arabi, Seyedeh Hoda Alavizadeh, Seyedeh Alia Moosavian, Mahmoud Reza Jaafari, Iranian Journal of Basic Medical Sciences., 2022

4- Pegylated liposomal encapsulation improves the antitumor efficacy of combretastatin A4 in murine 4T1 triple-negative breast cancer model, Farshad Mirzavi, Mehdi Barati, Roghayyeh Vakili-Ghartavol, Mostafa Karimi Roshan, Mohammad Mashreghi, Mohammad Soukhtanloo, Mahmoud Reza Jaafari, International Journal of Pharmaceutics.,2022

5- A review on liposome-based therapeutic approaches against malignant melanoma, Farshad Mirzavi, Mehdi Barati, Anvar Soleimani, **Roghayyeh Vakili-Ghartavol**, Mahmoud Reza Jaafari, Mohammad Soukhtanloo, Journal of International Journal of Pharmaceutics., 2021.

6- Optimization of Docetaxel Loading Conditions in Liposomes: proposing potential products for metastatic breast carcinoma chemotherapy, **Roghayyeh Vakili Ghartavol**, Seyed Mahdi Rezayat Sorkhabadi, Reza Faridi-Majidi, Keivan Sadri, Mahmoud Reza Jaafari, Journal of Scientific Reports., 2020.

7- Toxicity Assessment of Superparamagnetic Iron Oxide Nanoparticles in Different Tissues, **Roghayyeh Vakili-Ghartavol**, Amir Abbas Momtazi-Borojeni, Zeynab Vakili-Ghartavol, Hammed Tanimowo Aiyelabegan, Mahmoud Reza Jaafari, Seyed Mahdi Rezayat; Sepideh Arbabi, Journal of Artificial Cells, Nanomedicine, and Biotechnology., 2020.

8- In vitro and In silico investigation of a likely pathway for anti-cancerous effect of Thrombocidin-1 as a novel anticancer peptide, Abbas Tanhaian, Elyas Mohammadi,

Roghayyeh Vakili-Ghartavol, Mohammad Reza Saberi, Mehdi Mirzayi, Mahmoud Reza Jaafari, Journal of Protein and peptide letters., 2020.

9- Docetaxel delivery using folate-targeted liposomes: in vitro and in vivo studies, **Roghayyeh Vakili-Ghartavol**, Mahmoud Reza Jaafari, Amin Reza Nikpoor, Seyed Mahdi Rezayat, nanomedicine journal., 2019.

10- Tumor associated macrophages and epithelial–mesenchymal transition in cancer: Nanotechnology comes into view, **Roghayyeh VakiliGhartavol**, Reza Mombeiny, Arash Salmaninejad, Seyed Mahdi Rezayat Sorkhabadi, Reza Faridi Majidi, Mahmoud Reza Jaafari, Hamed Mirzaei, Journal of cellular physiology., 2018.

11- Secretory Expression of a Chimeric Peptide in Lactococcus lactis: Assessment of its Cytotoxic Activity and a Deep View on Its Interaction with Cell-Surface Glycosaminoglycans by Molecular Modeling, Abbas Tanhaeian, Mahmoud Reza Jaafari, Farajollah Shahriari Ahmadi, **Roghayyeh Vakili-Ghartavol**, Mohammad Hadi Sekhavati, , Journal of Probiotics and Antimicrobial Proteins., 2018.

12- Association between Exudative Age-related Macular Degeneration and the G6721T Polymorphism of XRCC7 in Outdoor Subjects, Iraj Saadat, **Roghayyeh Vakili-Ghartavol**, Majid Farvardin-Jahromi, Mostafa Saadat, Korean J Ophthalmol., 2012.

13- Parental consanguinity and susceptibility to drug abuse among offspring, a case–control study, Mostafa Saadat and **Roghayyeh Vakili-Ghartavol**, Psychiatry Research., 2010.

-----submitted or under revision articles

○ Nanotechnology improves the detection of Bacteria: Clinical Trials and FDA Approvals promise the beginning of a new era, Colloids and Surfaces B: Biointerfaces, Sara Takallu Hamed Aiyelabegan Abolfazl Rafati Zomorodi Fatemeh Aflakian Farhad

Moradi Zahra Asvar Mahrokh Rajae Behbahani Esmail Mirzaei Firoozeh Sarhadi,
Roghayyeh Vakili-Ghartavol, Colloids and Surfaces B: Biointerfaces B

Books

In English

○ Chapter of " Bone Regeneration: Current Status and Future Prospects", Bone Tissue Engineering Book, Intech Publication, Hossein Ghanbari and Roghayyeh Vakili-Ghartavol, 2016.

In Persian

○ Translation of "Advances in Polymer Science" Book, Tehran university of medical sciences Publication, Tehran, Iran, **Roghayyeh Vakili-Ghartavol**, Gholamreza Ahmadi, Mostafa Rahvar, and Mogde Safari, 2019.

○ Translation of "Biochemical Methods", Azad University of Boroujerd Publication, Boroujerd, IRAN, 2014, **Roghayyeh Vakili-Ghartavol**, Nasrin Amiri, and Mehdi Koushki, 2013.

Elite Grants

- grant no. 996600
- grant no. 977113
- grant no. 963392

References

Prof. Seyed Mahdi Rezayat

Tehran University of Medical Sciences, Tehran, Iran

Prof. Mahmoud Reza Jaafari

Mashhad University of Medical sciences, Mashhad, Iran

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