

# CURRICULUM VITAE

## Fatemeh Ghahremani

### Personal information

Full name: Fatemeh Ghahremani

Nationality: Iranian

Place of birth: Hamedan, Iran

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### Present Position

Assistant Professor of Medical Physics. Department of Medical Physics and Radiation Therapy.

Arak University of Medical Sciences

Arak , Iran

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**Educational Background**

**PhD of medical physics, Isfahan University of Medical Sciences, Isfahan, Iran**

AS1411 aptamer conjugated gold nanoclusters as a targeted radiosensitizer for megavoltage radiation therapy of 4T1 breast cancer cells.

Supervisor: Dr. Daryoush Shahbazi-Gahrouei - Dr. Masoud A. Mehrgardi

**MSc of medical physics, Ahvaz University of Medical Sciences, Ahvaz, Iran**

Determination of Correction Coefficient of the Sterling's Formula (Vadash factor) in Megavoltage Photon therapy

Supervisor: Dr. Mohamad javad Tahmasebi Biragani - Dr . mohammad Ali Behrooz

**BSc of physics, University of Hamedan, Hamedan, Iran**

Application of NMR in medical physics

Supervisor: Dr. Fereydon Samavat

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**Language**

Persian Native Language

English Writing : Advanced  
Reading : Intermediate  
Speaking: Intermediate  
Listening: Intermediate

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## Honore and Awards

Ranked First in the M.Sc. course of Medical Physics - 2011

Top Iranian Biotechnology Articles with title: Ultra-small but ultra effective: Folic acid-targeted gold nanoclusters for enhancement of intracranial glioma Tumors' radiation therapy efficacy- 2018

Member of the Iran's National Elites Foundation -Iran's National Elites Foundation - 2019

Top Researcher of Arak university of medical sciences - 2019

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Investigating the therapeutic efficiency of targeted Megavoltage x-rays radiation therapy in presence of gold nanoclusters conjugated with aptamer in breast cancer 4T1 cell line: in vitro . Isfahan University of Medical Sciences - 95.6.10 to 97.2.12

The effects of combination Aptamer-Gold nanocluster in targeted radiaton therapy of breast cancer cells in BALB/c mice- Isfahan University of Medical Sciences- 95.8.10 to 97.6.29

3. Evaluation of MV Radiation Therapy Efficacy of Folic Acid Decorated with Ultrasmall Gold Nanoparticles as Effective Radiosensitizer for Intracranial Glioma Tumors in rat- Arak University of Medical Sciences- 97.9.21 to 98.11.24

4. Employing Veillonella parvula as an anaerobic lactate-fermenting bacterium for breast tumor colonization and growth inhibition in vivo - Arak University of Medical Sciences- 97.11.18 to 98.3.27

5. Evaluation of AS1411 aptamer effect on metastasis inhibition at the mouse model of breast cancer in BALB/c mice - Arak University of Medical Sciences- currently

6. The effect of vaccine derived from germ cells and gametes isolated from Balb/C mice in induced tumors of 4T1 breast cancer - Arak University of Medical Sciences - currently

7. Fabrication and characterization of bilayer skin tissue engineering scaffold consist of loaded-polyurethane film with propolis and gelatin/polycaprolactone nanofibers for in vivo evaluation Arak University of Medical Sciences - currently

8. Introduction of best radiosensitizer metal nanoparticles for radiation therapy enhancement: the key parameters- Arak University of Medical Sciences - currently

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9. Evaluation of SCF sermic level correlation with glioblastoma multiformclinical clinical progression in the Milad hospital in 1398 - Arak University of Medical Sciences – currently
  10. Comparative investigation of the gold nanostructures efficacy, designed in two forms of nanoclusters and nanoparticles for enhancement of breast cancer radiation therapy efficacy in vitro and in vivo – Iran National Science Foundation (**INSF**)
  - 11- Evaluation of subcutaneous implants consisted of folic acid targeted and mebendazole loaded chitosan nanoparticles in 4T1 breast cancer model in Balb/c mice 1399- Isfahan University of Medical Sciences – currently
  - 12- 3D-printed biodegradable Polycaprolactone/Chitosan/ Hydroxyapatite implants containing doxorubicin-loaded /folic acid-decorated hydroxyapatite nanoparticles for treatment of triple negative breast tumor-bearing mice – Iran National Science Foundation (**INSF**) - currently
  - 13- Evaluation of the low dose radiation therapy effect on the treatment and cytokine profile of COVID-19 patients - currently
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- **Reviewing articles in these journals:**

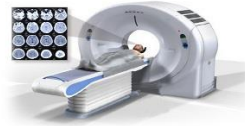
1. The member of Editorial Board : **OSP Journal of Radiology (JOR)**
2. Reviewer in :
  - NMR in Biomedicine - WILEY Publication .
  - Nanobiomedicine .
  - Journal of Research in Medical Sciences.
  - Advanced Biomedical Research.
  - International Journal of Molecular and Cellular Medicine (IJMCM)
  - International Journal of Nanomedicine

- **Seminars and Presentations:**

1. MALTA (Frontiers of Science: Research and Education in the Middle East Malta-December 10-15 2017- poster. Golden Bacteria: using Salmonella Typhimurium as a gold nanoparticle delivery agent to Hypoxic and anoxic tumor regions.
  2. 12th Iranian Medical Physics Congress. 97-4-28. poster. AS1411 Aptamer Conjugated Gold Nanoclusters as a Targeted Radiosensitizer for Megavoltage Radiation Therapy of 4T1 Breast Cancer Cells.
  3. 1<sup>st</sup> MEFOMP International Conference of Medical Physics. Shiraz. Determination of Correction Coefficient of the Sterling Formula.
  4. Iranian Medical Physics Congress- Iran University of Medical Sciences. presentation of :
    1. Evaluation of dose measurement (ESD) from current radiographic tests and comparisons with international standards.
    2. Evaluation of MRI magnetic field effect on growth of plants.
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## Basics and Quality Control of Computed Tomography (CT)

مبانی فیزیکی و کنترل کیفی  
برش نگاری کامپیوتری (CT)



مؤلفین:  
**دکتر داریوش شهبازی گهرونی**  
استاد هیئت تدریس دانشکده پزشکی  
دانشگاه علوم پزشکی مشهد  
**فاطمه نورمانی و حمید فخرایی کتیر**  
دانشجویان دکتری تخصصی فیزیک پزشکی دانشکده پزشکی  
دانشگاه علوم پزشکی مشهد

*Basics and Quality Control of  
Computed Tomography  
(CT)*



**Daryoosh Shabbazi-Gahreui**  
Professor of Medical Physics, School of Medicine  
Mashhad University of Medical Sciences  
**Fatemeh Chahromani & Hamid Fakhimi Kahir**  
Ph.D. Students of Medical Physics, School of Medicine  
Mashhad University of Medical Sciences

1. **Ghahremani F**, Kefayat A, Shahbazi-Gahrouei D, Motaghi H, Mehrgardi MA, Haghjooy-Javanmard S. AS1411 aptamer-targeted gold nanoclusters effect on the enhancement of radiation therapy efficacy in breast tumor-bearing mice. *Nanomedicine*. 2018;13(20):2563-78.
2. **Ghahremani F**, Shahbazi-Gahrouei D, Kefayat A, Motaghi H, Mehrgardi MA, Javanmard SH. AS1411 aptamer conjugated gold nanoclusters as a targeted radiosensitizer for megavoltage radiation therapy of 4T1 breast cancer cells. *RSC Advances*. 2018;8(8):4249-58.
3. Kefayat A, **Ghahremani F\***, Motaghi H, Amouheidari A. Ultra-small but ultra-effective: Folic acid-targeted gold nanoclusters for enhancement of intracranial glioma Tumors' radiation therapy efficacy. *Nanomedicine: Nanotechnology, Biology and Medicine*. 2018.
4. Kefayat A, **Ghahremani F**, Motaghi H, Rostami S, Mehrgardi MA. Alive attenuated Salmonella as a cargo shuttle for smart carrying of gold nanoparticles to tumour hypoxic regions. *Journal of drug targeting*. 2018:1-10.
5. Kefayat A, **Ghahremani F**, Motaghi H, Mehrgardi MA. Investigation of different targeting decorations effect on the albumin-stabilized gold nanoparticles radiosensitizing efficacy for breast cancer radiation therapy. *European Journal of Pharmaceutical Sciences*. 2019.
6. Sanei B, Kefayat A, Samadi M, Goli P, Sanei MH, **Ghahremani F**, et al. Undifferentiated Pleomorphic Sarcoma of Pancreas: A Case Report and Review of the Literature for the Last Updates. *Case Reports in Medicine*. 2018;2018.
7. Allahverdi M, Jaberi R, Aghili M, **Ghahremani F**, Geraily G. In vivo dosimetry with semiconductors in medium dose rate (MDR) brachytherapy for cervical cancer. *Japanese journal of radiology*. 2013;31(3):160-5.
8. Behroz MA, Hosseini M, **Ghahramani F**, Seyf F. : Determination of Correction Coefficient of the Sterlling's Formula. *Jundishapur Scientific Medical Journal*.
9. Safavi A, Kefayat A, Abiri A, Mahdevar E, Behnia AH, **Ghahremani F**. In silico analysis of transmembrane protein 31 (TMEM31) antigen to design novel multiepitope peptide and DNA cancer vaccines against melanoma. *Molecular Immunology*. 2019;112:93-102.



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10. Kefayat A, **Ghahremani F**, Taheri N, Amouheidari A, Okhravi SM. Utilizing 808 nm laser for sensitizing of melanoma tumors to megavoltage radiation therapy. *Lasers in medical science*. 2019;1-7.
  11. Safavi A, Kefayat A, **Ghahremani F\***, Mahdevar E, Moshtaghian J. Immunization using male germ cells and gametes as rich sources of cancer/testis antigens for inhibition of 4T1 breast tumors' growth and metastasis in BALB/c mice. *International Immunopharmacology*. 2019;74:105719.
  12. Yaghoobi F, Torabi M, Kefayat A, **Ghahremani F**, Farzadnia A. Therapeutic effect of deferoxamine conjugated to PEGylated gold nanoparticles and complexed with Mn (II) beside the CT scan and MRI diagnostic studies. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 2019;583:123917.
  13. Foroushani MS, Shervedani RK, Kefayat A, Torabi M, **Ghahremani F**, Yaghoobi F. Folate-graphene chelate manganese nanoparticles as a theranostic system for colon cancer MR imaging and drug delivery: In-vivo examinations. *Journal of Drug Delivery Science and Technology*. 2019;54:101223.
  14. Eskandarinia A, Kefayat A, Agheb M, Rafienia M, Baghbadorani MA, Navid S, **Ghahremani F\***. A Novel Bilayer Wound Dressing Composed of a Dense Polyurethane/Propolis Membrane and a Biodegradable Polycaprolactone/Gelatin Nanofibrous Scaffold. *Scientific Reports*. 2020;10(1):1-15.
  15. Kefayat A, **Ghahremani F\***, Safavi A, Hajiaghababa A, Moshtaghian J. Spirulina extract enriched for Braun-type lipoprotein (Immulina®) for inhibition of 4T1 breast tumors' growth and metastasis. *Phytotherapy Research*. 2020;34(2):368-78.
  16. **Ghahremani F\***, Safavi A, Hajiaghababa A, Moshtaghian J. C-phycoyanin: a natural product with radiosensitizing property for enhancement of colon cancer radiation therapy efficacy through inhibition of COX-2 expression. *Scientific Reports*. 2019;9(1):1-13.
  17. Kefayat A, **Ghahremani F\***. Low dose radiation therapy for COVID-19 pneumonia: a double-edged sword. *Radiotherapy and Oncology*. 2020
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18. Safavi A, Kefayat A, Mahdevar E, **Gahremani F**, Nezafat N, Modarressi MH. Efficacy of co-immunization with the DNA and peptide vaccines containing SYCP1 and ACRBP epitopes in a murine triple-negative breast cancer model. *Human Vaccines & Immunotherapeutics*. 2020:1-13.

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