

CURRICULUM VITAE

Name: Fahimehshamsi
Nationality: Iranian
Contact address: Iran, semnan, Semnan University of Medical Science
Email address: fahimeh.shamsi@ymail.com
Contact number: 09921277252

EDUCATIONAL BACKGROUND

University of Sydney, Australia

Doctor of Philosophy (PhD) in Biochemical Engineering

Thesis Title: A study of peptide functionalized silicon surfaces

University of Shahid Beheshti, Tehran, Iran. University of New South Wales, Sydney, Iran

Pharmacy

Thesis Topic: Formulation and Physico-chemical Control of an Antibacterial Liquid Soap from *LavandulaOfficinalis*.

AREAS OF EXPERTISE (QUALIFICATION)

- Drug target delivery
- Gene therapy
- Microfluidics
- Biomolecular Engineering
- Investigation of cell-surface interactions
- Nanoscale engineering of biomimetic surfaces
- Selectively detect an analyte – biosensors

PUBLICATIONS AND CONFERENCE PRESENTATIONS

Rahmani, B, Raz A, **Shamsi F***, Davami F. Targeting DNA repair pathways with B02 and Nocodazole small molecules to improve CRIS-PITCh mediated cassette integration in CHO-K1 cells. **DOI:10.1038/s41598-023-29863-8**

Iraji M, Salehi, M, Eshaghi Malekshah R, Khaleghian A, **Shamsi. F***. Liposomal formulation of new arsenic schiff base complex as drug delivery agent in the treatment of acute promyelocytic leukemia and quantum chemical and docking calculations.

DOI:10.1016/j.jddst.2022.103600

Shamsi F .Covalent attachment of three derivatives of pegylated RGD peptides on the NH₂-terminated silicon surfaces: **DOI: 10.1016/j.bbame.2021.183770**

Dadashi K, **Shamsi F**, et al, Optimization of post-insertion method to conjugate Doxil with anti-CD133 monoclonal antibodies: Investigating the specific binding and cytotoxicity to colorectal cancer cells in vitro. Saudi Pharmaceutical Journal, 28, (2020), 1391-1401.

Shamsi F. The Potential Role of the Peptide Amphiphiles in Targeted Drug Delivery to Tumors. International Journal of Pharmacy and Chemistry 6, (2020), 37-40.

Shamsi F. Nanotechnology application in cancer treatment. Komesh. 21,2019, 579-589.

Shamsi F. Investigation of Human Cell Response to Covalently Attached RADA16-I Peptide on Silicon Surfaces. Colloids and Surfaces B, 145, 2016, 470-478.

Shamsi F. Investigation of Cellular Response to Covalent Immobilization of Peptide and Hydrophobic Attachment of Peptide Amphiphiles on Substrates. Biochemical Engineering Journal. Biochemical Engineering Journal. 2017. 82-88.

Shamsi F, Coster H. Mimicking Cell Membrane-like Structures on Alkylated Silicon Surfaces by Peptide Amphiphiles. *Journal of Material Chemistry and Physics*, 130, (2011), 1162-1168.

Shamsi F, Coster H, Jolliffe, K. Characterization of Peptide Immobilization on an Acetylene Terminated Surface via Click Chemistry. *Journal of Surface Science*, 605, (2011), 1763-1770.

Shamsi F, Coster H, Chilcott T, Jolliffe, K. Characterization of the Substructure and Properties of Immobilized Peptides on Silicon Surface, *Journal of Material chemistry and Physics*, 126, (2011), 955-961.

Shamsi F, Coster H, Chilcott T. Characterization of the Dielectric Properties of Covalently Attached Organic Films on Silicon Surfaces. *Journal of Thin Solid Films*, 915 (2011), 6472-6479.

International conference presentation:

Shamsi F, Coster H, Jolliffe K. Investigation of Peptide Immobilization on Silicon Substrates. *International Conference on Biomedical Engineering and Technology*, December Bangkok, Thailand. (presenter)

Shamsi F, Coster H. Using Peptide Amphiphiles as a New Biomimetic Extracellular Matrix. *International Conference on Bioinformatics and Biomedical Engineering*, December, Singapore (presenter).

Shamsi F, Coster H. Immobilization of Biologic Peptide to Silicon Surfaces by Click Chemistry, *International Conference on Peptide*, Europe, Berlin, Germany.

Shamsi F, Coster H, Immobilization of Peptide RADA16 on Silicon Surface, *Poster Presentation at University of Sydney*, School of Chemical Engineering, October. 3

PROJECTS:

Shamsi, F Selectively target chemotherapy-resistant cancer stem cells with novel treatment configurations (**Project Manager**).

Shamsi, F . davami, F. Rahmani B. Investigating the effect of small molecules on CRIS-PITCH efficiency for targeted integration and development of cell platform(**Project Manager**).

Shamsi, F. The comparison of antibacterial effect of two kinds of socks covering with Ag-Cu alloy nanoparticles and Ag-Curcumin complex nanoparticles (**Project Manager**)

Ali khalegian, Shamsi F, Liposomal formulation of new arsenic Schiff base complex as drug delivery agent in treatment of acute promyelocytic leukemia; quantum chemical calculations and docking simulations of compounds.

Ali khalegian, Shamsi F, Anti CD133-grafted single-walled carbon nanotubes as a carrier for doxorubicin; Quantum simulations of DXR on various surfaces of SWCNTs.

Shamsi F. Nanofibers peptide amphiphiles for targeted and improved delivery of an anti-cancer drug to cancer cells (**Project Manager**)

Shamsi F. Investigation of Human Cell Response to Covalently Attached RADA16-I Peptide on Silicon Surfaces. Completed. (**Project Manager**)

Teaching:

- Nanobiotechnology
- Electrochemistry
- Microfluidics
- Stem cells
- Tissue engineering
- Standardization of biological products
- Gene therapy

Associations:

Editorial Board:

Austin Biomolecular Research

Biomedical Technology and Medical Device

Chemical & Pharmaceutical Research

International Journal of Pharmacy and Chemistry

Reviewer:

Biomedical Technology and Medical Device

Komesh

Biotechnology Journal