CURRICULUM VITAE

CONTACT INFORMATION:

Name: Shahin Alizadeh-Fanalou
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PERSONAL INFORMATION:

Citizenship: Iranian
Education: DVM/PhD (clinical biochemistry)
Sex: Male

EMPLOYMENT HISTORY:

- Assistant Professor, Urmia University of Medical Sciences, Urmia, Iran (2022-2025)
- University Lecturer, Iran University of Medical Sciences, Tehran (2017)
- Secretary of the Student Scientific Association of Biochemistry, Iran University of Medical Sciences (2022)
- Senior Medical Laboratory Specialist (2015-2018)

EDUCATION:

- Study of clinical biochemistry (Ph.D) in Iran University of Medical Sciences, Tehran-Iran. (2016-2021). Thesis title: Protective effects AGE-RAGE axis inhibition using FPS-ZM1 against diabetic nephropathy in STZ-induced diabetic rats.
- Study of Veterinary Medicine, (DVM) in School of Veterinary Medicine, Urmia University, Urmia-Iran (2005-2011).

RESAERCHS:

1. Design and development of a rapid diagnostic kit for heart-type fatty acid–binding protein (H-FABP) in human whole blood based on an immunochromatographic method using gold nanoparticles
2. Investigation of the combined effects of FK866 and pyrazinoic acid on the inhibition of nicotinamide phosphoribosyltransferase and nicotinate phosphoribosyltransferase, and their impacts on apoptosis, metastasis, and survival of prostate cancer cells in the LNCaP and PC3 cell lines.
3. Assessment of the association between the severity of coronary artery stenosis and bisphenol A, and the introduction of novel biomarkers for the early diagnosis of cardiovascular diseases
4. Investigation of miR-613 levels in breast cancer tumor samples and the effect of this microRNA on the gene and protein expression of nicotinamide phosphoribosyltransferase (NAMPT), as well as on the survival and invasion of breast cancer cells

5. Investigation of the effect of the hydroalcoholic seed extract of *Securidaca securigera* on serum levels of the angiogenic factors vascular endothelial growth factor (VEGF) and fibroblast growth factor (FGF) in diabetic rats.
6. Investigation of the antioxidant and anti-inflammatory effects of the hydroalcoholic seed extract of *Securidaca securigera* in diabetic rats.
7. Investigation of the effect of the hydroalcoholic seed extract of *Securidaca securigera* on hepatic expression levels of the NFR2 and FGF21 genes and their relationship with insulin secretion in hyperglycemic rats.
8. Investigation of the effect of the hydroalcoholic seed extract of *Securidaca securigera* on the local pancreatic renin–angiotensin system in diabetic rats
9. Study of the effect of the hydroalcoholic seed extract of *Securidaca securigera* on the local hepatic renin–angiotensin system in diabetic rats
10. Investigation of serum homocysteine levels and paraoxonase enzyme phenotypes in rats treated with the hydroalcoholic seed extract of *Securidaca securigera*
11. Investigation of the effect of the hydroalcoholic seed extract of *Securidaca securigera* on glycogen storage, testicular lactate dehydrogenase gene expression, and sperm physiological parameters in streptozotocin-induced diabetic rats
12. Investigation of the effects of catharanthine and ubiquinone on the expression levels of the transcription factor NRF2 and their relationship with metastasis, drug resistance, and apoptosis in the HepG2 cell line, with evaluation of BCL2, MRP1, and MMP9 markers, respectively
13. Investigation of the effect of simultaneous inhibition of nicotinamide phosphoribosyltransferase (NAMPT) and nicotinate phosphoribosyltransferase (NAPRT) on apoptosis, metastasis, cell survival, and the expression of p53, p21, and BAX genes in breast cancer cell lines

PUBLICATIONS:

- **PAPERS**

1. Khomari F, Kiani B, Alizadeh-Fanalou S, Babaei M, Kalantari-Hesari A, Alipourfard I, et al. Effectiveness of Hydroalcoholic Seed Extract of Securigera securidaca on Pancreatic Local Renin-Angiotensin System and Its Alternative Pathway in Streptozotocin-Induced Diabetic Animal Model. Oxidative Medicine and Cellular Longevity. 2023;2023(1):7285036.
2. Masoumi M, Alesaeidi S, Khorramdelazad H, Behzadi M, Baharlou R, Alizadeh-Fanalou S, et al. Role of T cells in the pathogenesis of rheumatoid arthritis: focus on immunometabolism dysfunctions. Inflammation. 2023;46(1):88-102.
3. Ghaffari T, Moradi N, Chamani E, Ebadi Z, Fadaei R, Alizadeh-Fanalou S, et al. Captopril and spironolactone can attenuate diabetic nephropathy in wistar rats by targeting ABCA1 and microRNA-33. Current pharmaceutical design. 2022;28(16):1367-72.
4. Alizadeh-Fanalou S, Khosravi M, Alian F, Rokhsartalb-Azar S, Nazarizadeh A, Karimi-Dehkordi M, et al. Dual role of microRNA-1297 in the suppression and progression of human malignancies. Biomedicine & Pharmacotherapy. 2021;141:111863.
5. Babaei M, Alizadeh-Fanalou S, Nourian A, Yarahmadi S, Farahmandian N, Nabi-Afjadi M, et al. Evaluation of testicular glycogen storage, FGF21 and LDH expression and physiological parameters of sperm in hyperglycemic rats treated with hydroalcoholic extract of Securigera Securidaca seeds, and Glibenclamide. Reproductive Biology and Endocrinology. 2021;19(1):104.

6. Alizadeh-Fanalou S, Hosseinkhani S, Nazarizadeh A, Ezzati-Mobaser S, Hesari Z, Aziminezhadan P, et al. MiR-613 promotes cell death in breast cancer cells by downregulation of nicotinamide phosphoribosyltransferase and reduction of NAD. DNA and Cell Biology. 2021;40(7):1026-36.
7. Kiani B, Alizadeh-Fanalou S, Khomari F, Babaei M, Alipourfard I, Hesari AK, et al. The effect of Hydroalcoholic seed extract of Securigera Securidaca on the hepatic renin-angiotensin system in the Streptozotocin-induced diabetic animal model. Clinical Diabetology. 2022;11(2):97-106.
8. Alizadeh-Fanalou S, Alian F, Mohammadhosayni M, Rahban D, Kheyli PAG, Ahmadi M. Dysregulation of microRNAs regulating survivin in CD4+ T cells in multiple sclerosis. Multiple Sclerosis and Related Disorders. 2020;44:102303.
9. Nazarizadeh A, Mohammadi F, Alian F, Faraji P, Nourbakhsh M, Alizadeh-Fanalou S. MicroRNA-154: a novel candidate for diagnosis and therapy of human cancers. Onco Targets Ther. 2020; 13: 6603–15.
10. Alizadeh-Fanalou S, Nazarizadeh A, Babaei M, Khosravi M, Farahmandian N, Bahreini E. Effects of Securigera securidaca (L.) Degen & Dorfl seed extract combined with glibenclamide on paraoxonase1 activity, lipid profile and peroxidation, and cardiovascular risk indices in diabetic rats. BioImpacts: BI. 2019;10(3):159.
11. Alizadeh-Fanalou S, Babaei M, Hosseini A, Azadi N, Nazarizadeh A, Shojaii A, et al. Effects of Securigera Securidaca seed extract in combination with glibenclamide on antioxidant capacity, fibroblast growth factor 21 and insulin resistance in hyperglycemic rats. Journal of ethnopharmacology. 2020;248:112331.
12. Ghorbanihaghjo A, Fanalou S, Farahmandian N, Bahreini E. The Study of Serum Asymmetric Dimethylarginine Concentrations in the Different Paraoxonase Phenotypes of Exudative Age-related Macular Degeneration Disease. International Journal of Medical Laboratory. 2020.
13. Alizadeh-Fanalou S, Nazarizadeh A, Alian F, Faraji P, Sorori B, Khosravi M. Small dense low-density lipoprotein-lowering agents. Biological chemistry. 2020;401(10):1101-21.
14. Amniattalab A, Malekinejad H, Rezabakhsh A, Rokhsartalab-Azar S, Alizade-Fanalou S. Silymarin: a novel natural agent to restore defective pancreatic β cells in streptozotocin (STZ)-induced diabetic rats. Iranian journal of pharmaceutical research: IJPR. 2016;15(3):493.
15. Malekinejad H, Alizadeh-Fanalou S, Hobbenaghi R, Rokhsartalb-Azar S. Atorvastatin up-regulates the expression and activity of renal cytochrome P450 3A2 in diabetic rats. journal of applied biomedicine. 2016;14(1):25-34.
16. Malekinejad H, Rokhsartalab-Azar S, Hassani-Dizaj S, Alizadeh-Fanalou S, Rezabakhsh A, Amniattalab A. Effects of silymarin on the pharmacokinetics of atorvastatin in diabetic rats. European journal of drug metabolism and pharmacokinetics. 2014;39(4):311-20.
17. Masoumi M, Alesaeidi S, Khorramdelazad H, Behzadi M, Baharlou R, Alizadeh-Fanalou S, et al. Role of T cells in the pathogenesis of rheumatoid arthritis: focus on immunometabolism dysfunctions. Inflammation. 2023;46(1):88-102.
18. Tajik F, Alian F, Yousefi M, Azadfallah A, Hoseini A, Mohammadi F, et al. MicroRNA-372 acts as a double-edged sword in human cancers. Heliyon. 2023;9(5).
19. Jahanbakhsh J, Mojtahedi MF, Moradi N, Fadaei R, Tehranian A, Rostami R, et al. Circulating and Endometrial Profiles of miR-145, miR-155-5p, miR-224, MPP-5, and PECAM-1 Expression in Patients with Repeated Implantation Failure: A Case Control Study. Cell Journal (Yakhteh). 2023;25(6):427.

20. Heidari-Kalvani N, Alizadeh-Fanalou S, Yarahmadi S, Fallah S, Alipourfard I, Farahmandian N, et al. Investigation of the effects of catharanthine and Q10 on Nrf2 and its association with MMP-9, MRP1, and Bcl-2 and apoptosis in a model of hepatocellular carcinoma. Naunyn-Schmiedeberg's Archives of Pharmacology. 2024;397(4):2507-22.
21. Bahreini E, Babaei M, Mohammadi F, Alizadeh-Fanalou S. Evaluation of serum pro/anti-angiogenic biomarkers in hyperglycemic rats treated with Securigera securidaca seeds, alone and in combination with Glibenclamide. Journal of Cardiovascular and Thoracic Research. 2024;16(1):8.
22. Alizadeh-Fanalou S, Mehdipour S, Rokhsartalb-Azar S, Mohammadi F, Ghorban K, Asri S, et al. Evaluation of novel biomarkers for early diagnosis of bisphenol A-induced coronary artery disease. Heliyon. 2024;10(1).
23. Hasani M, Abbasi-Oshaghi E, Khomari F, Kiani B, Mirzaei F, Alipourfard I, et al. Enhanced Insulin Secretion Through Upregulation of Transcription Factors by Hydroalcoholic Extract of Securigera securidaca Seeds in Diabetic Animal Model. Endocrinology, Diabetes & Metabolism. 2024;7(5):e515.
24. Khosravi M, Sheikhnia F, Pashaei MR, Karimi-Dehkordi M, Alizadeh-Fanalou S. Association between small dense low-density lipoprotein and carotid intima-media thickness. Journal of Cardiovascular and Thoracic Research. 2024;16(4):202.
25. Mohammadi F, Nejatollahi M, Sheikhnia F, Ebrahimi Y, Mohammadi M, Rashidi V, et al. MiRNAs: main players of cancer drug resistance target ABC transporters. Naunyn-Schmiedeberg's Archives of Pharmacology. 2025:1-53.

- **BOOK**

Comprehensive Biochemistry Textbook

CONGRESS

- 2ND International Health and Medical Sciences Conference (2021) Nicotinamide Phosphoribosyltransferase (NAMPT) is a Target of miR-613 in Breast Cancer Cells
- 21st International Congress of Physiology and Pharmacology (2013). Atorvastatin up-regulates the expression of renal cytochrome P450 3A2 in diabetic rats.
- 1st international and 22nd Iranian congress of Physiology and Pharmacology (2015). Ameliorative effects of atorvastatin on diabetes-induced nephropathy in rats
- 21st International Congress of Physiology and Pharmacology. Silymarin regulates diabetes-induced up-regulation of hepatic biotransformation of cytochrome PP450 3A2 substrate
- 2nd National Congress on Medicinal Plants (2013) Silymarin restored the pancreatic beta cells in streptozotocin induced diabetic rats
- Tabriz University (2012) The role of Aspergillus fumigatus toxins in increasing caspase-3/7 enzyme activity in human lymphocyte cells
- Urmia University (2014) Atorvastatin reduces renal disorders in diabetic rat models.
- Urmia University (2014). Silymarin promotes the regeneration of insulin-producing beta cells in diabetic rat models.
- Shiraz University (2014) Atorvastatin reduces lipid peroxidation and increases superoxide dismutase activity in the livers of diabetic rats.

HONORS

- **Top graduate in Clinical Biochemistry**, Iran University of Medical Sciences
- **Member of the National Elite Foundation**
- **Ranked 10th** in the Ph.D. entrance exam (D.Ph) among 385 candidates
- **Reviewer for international journals** (ISI)
- **Outstanding senior laboratory specialist** at Lalehgar Hospital Diagnostic Laboratory
- **Reviewer for national and international congresses** of medical students in Iran (20th and 21st Annual Congress of Medical Students)
- **Member of the Executive Committee** of the 13th International Congress of Toxicology in Iran
- **Associate member of the Biochemistry Society of Iran**
- **Active and associate member of the Student Basij** at Urmia University and Iran University of Medical Sciences
- **Deputy of Research**, Department of Clinical Biochemistry, Iran University of Medical Sciences

LABORATORY SKILLS

Cloning,

SDS-Page

Electrophoresis,

ELISA,

HPLC,

Cell culture,

NMR, IR, Mass, and Raman Spectroscopy Analysis