PERSONAL DETAILS:

Elham Rezaee

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PROFILE:

I am an Associate Professor at the Department of Pharmaceutical Chemistry, Shahid Beheshti University of Medical Sciences, Tehran, Iran, with over a decade of experience in teaching and research, 70+ publications, and 700+ citations. My research focuses on designing and developing enzyme inhibitors and receptor ligands using novel computer-aided drug design tools.

CURRENT OCCUPATION:

Assistant Professor (November 2014 to 2022)

Associated Professor (November 2022 to present)

Department of Pharmaceutical Chemistry, Shahid Beheshti University of Medical Sciences, School of Pharmacy, Tehran, Iran

EDUCATION:

• PhD of Medicinal Chemistry

Shahid Beheshti University of Medical Science, School of Pharmacy, Tehran, Iran (Sep. 2009 to June 2014)

• <u>PhD dissertation:</u> Design and synthesis of novel small molecules as enzyme inhibitors entitled "Design, molecular modeling, synthesis and biological evaluation of new amide compounds as soluble epoxide hydrolase inhibitors (sEHI)", under the supervision of Dr. Seyed Abbas Tabatabaei, Dr. Mehrdad Faizi and Dr. Soraya Shahhosseini.

• Doctor of Pharmacy

Shahid Beheshti University of Medical Science, School of Pharmacy, Tehran, Iran (Jan. 2003 to Sep. 2009)

• <u>Pharm.D. thesis:</u> Design and synthesis of novel small molecules as agonists entitled "Design and synthesis of 2-Substituted-5-(4-chloro-2-phenoxy) phenyl-1.3.4-oxadiazole derivatives as new benzodiazepine receptor ligands", under supervision of Dr. Seyed Abbas Tabatabaei.

RESEARCH EXPERIENCE/SKILLS:

A) Supervision and Mentoring

• PhD Students' Projects:

Entitled: "Design, Molecular Modeling, Synthesis and Evaluation of Novel Heterocyclic Amide Derivatives as Soluble Epoxide Hydrolase Inhibitors." (May 2016 to present)

Entitled: "Design, Synthesis and Biological Evaluation of Novel Heterocyclic Derivatives as Inhibitors of Dipeptidyl peptidase-4" (2017)

Entitled: "Design and Synthesis of Novel Amide, Urea and Heterocyclic Derivatives as Fatty acid amide hydrolase Inhibitors". (2018)

Entitled: "Design, Synthesis and Biological Evaluation of Novel Heterocyclic Derivatives as EGFR tyrosine kinase Inhibitors". (2019)

Entitled: "Design and synthesis of new heterocyclic derivatives as Mouse double minute 2 homolog inhibitors and investigate their cytotoxic effects". (2023)

• Pharm D. Students' Projects:

Entitled: "<u>Design and Synthesis of 4-amino-3,5-diphenyl-1,2,4-triazole Derivatives as Novel Benzodiazepine Receptor Ligands.</u>"

Entitled: "Design and Synthesis of 2-(diphenylmethyledene)malonic acid Derivatives as Anti-HIV Agents."

Entitled: "Synthesis of Novel Amide 2-phenyl-1,3,4-oxadiazole Derivatives as Soluble Epoxide Hydrolase Inhibitors."

Entitled: "Synthesis of Diphenyl-1,3,4-Oxadiazole Derivatives as Novel Benzodiazepine Receptor Ligands."

Entitled: "Design and Synthesis of spiro 2-aminopyrimidinone Derivatives as Inhibitors of Dipeptidyl peptidase-4" (May 2017 to present)

Entitled: "Design and Synthesis of 1,2,4-oxadiazole Derivatives as Acetylcholine Eterase Inhibitors."

B) Grants:

Entitled: "Design, synthesis and binding assay of 3,5-diphenyl-4H-1,2,4-triazol-4-amine derivatives as novel benzodiazepine receptor ligands."

Awarded funding from Iran National Science Foundation (INSF), 2014

Entitled: "Novel inhibitors of soluble epoxide hydrolase as potentially new antihypertensive agents: design, synthesis and biological evaluation."

Awarded funding from National Institute for Medical Research Development (NIMAD), 2018

Entitled: "Design, Synthesis and Biological Evaluation of Novel EGFR Tyrosine Kinase Inhibitors as Anticancer Agents."

Awarded funding from NIMAD, 2018

Entitled: "Novel agonists of benzodiazepine receptors: Design, synthesis, binding assay and pharmacological evaluation of 4,6-diphenylpyrimidin-2-ol derivatives."

Awarded funding from NIMAD, 2018

C) Journals Reviewe

Iranian Journal of Pharmaceutical Research Journal (2014 to present) Iranian Journal of Pharmaceutical Sciences Journal (2014 to present) Iranian Pharmacy Students' Seminar Journal (December 2017) National Elites Foundation (Jun 2023)

SELECTED PUBLICATIONS:

- 1. <u>Design, Synthesis and Biological Evaluation of Some Oxadiazole Derivatives as Novel Amide-Based Inhibitors of Soluble Epoxide Hydrolase</u>. Letters in Drug Design & Discovery, 2014, 11, 721-730.
- 2. <u>A Rapid HPLC Method for Determination of Zolpidem and its Degradation Product in Tablet Using Monolithic Column.</u> Journal of chromatographic sciences, 2015, 1-4.
- 3. Novel soluble epoxide hydrolase inhibitors with a dihydropyrimidinone scaffold: design, synthesis and biological evaluation. Medicinal Chemistry Communications 2016, 7, 2128-2135
- 4. <u>Novel 4-thiazolidinone derivatives as agonist of benzodiazepine receptors: design, synthesis and pharmacological evaluation.</u> EXCLI Journal, 2017, 16, 52-62
- 5. <u>Investigation of the binding mode of 1, 3, 4-oxadiazole derivatives as amide-based inhibitors</u> for soluble epoxide hydrolase (sEH by molecular docking and MM-GBSA). Eur Biophys J, 1188
- A Cu-Catalyzed Synthesis of Functionalized Quinazolines from Isocyanides and Aniline-triand dichloroacetonitrile Adduct via Intramolecular C-H Activation Reactions. SYNLETT, 2017, 28, 12
- Synthesis of functionalized benzothiadiazine 1,1-dioxide derivativesvia intramolecular CAH
 <u>activation reactions of trichloroacetamidine and benzenesulfonyl chloride.</u> Tetrahedron
 <u>Letters</u>, 2018, 59, 2054-205
- 8. <u>2D & 3D-QSAR study on novel piperidine and piperazine derivatives as acetylcholinesterase</u> enzyme inhibitors. Current Computer-Aided Drug Design, 14, 391-397
- 9. <u>Novel group of imidazole derivatives as atypical selective cyclooxygenase-2 inhibitors:</u> <u>design, synthesis and biological evaluation.</u> Iranian Journal of Pharmaceutical Research, 17,78-86

- 10. <u>Cu-catalyzed synthesis of functionalized benzo [1, 3] selenazin from intramolecular C-H activation reactions isocyanides, aniline-acyl isoselenocyanate adduct.</u> Journal of the Iranian Chemical Society, 16(3):603-8.
- 11. <u>Quantitative Structure Activity Relationships Study of Soluble Epoxide Hydrolase Inhibitors Using MLR, ANN, CoMFA and CoMSIA Methods.</u> ChemistrySelect, 4, 6348 –6353
- 12. <u>Novel amide derivatives of 3 phenylglutaric acid as potent soluble epoxide hydrolase inhibitors.</u> Molecular Diversity. 2019 Dec 23:1-9.
- 13. <u>Quinazoline-4 (3H)-one Derivatives as Novel and Potent Inhibitors of Soluble Epoxide</u>
 <u>Hydrolase: Design, Synthesis and Biological Evaluation.</u> Bioorganic Chemistry, 99, 103736
- 14. Design, synthesis and anti-diabetic activity of novel 1, 2, 3-triazole-5-carboximidamide derivatives as dipeptidyl peptidase-4 inhibitors. Journal of Molecular Structure, 1221, 128745-70
- 15. <u>25. Targeting EGFR tyrosine kinase: Design, Synthesis and Biological Evaluation of Novel Quinazolinone Derivatives.</u> Iranian Journal of Pharmaceutical Research (2022), 21, 1-13.
- 16. 26. <u>Development of Dual Inhibitors of Soluble Epoxide Hydrolase/Fatty Acid Amide Hydrolase with Tetrazole Core.</u> Medicinal Chemistry (2023), 19(10):1037-1048
- 17. 27. <u>A Comprehensive Review of Soluble Epoxide Hyadrolase Inhibitors Evaluating their Structure-Activity Relationship. Mini-Reviews in Medicinal Chemistry (2023), 23(1):99-117</u>
- 18. <u>28. A Molecular Generative Model of COVID-19 Main Protease Inhibitors Using Long Short-Term Memory-Based Recurrent Neural Network.</u> Journal of Computational Biology (2024), 31(1):83-98
- 19. 29. <u>Design, Synthesis, and In-Vitro Evaluation of Novel Butanoic Acid Derivatives as Potential Soluble Epoxide Hydrolase Inhibitors</u>. ChemistrySelect (2024), 9(8)

CONFERENCE PRESENTATIONS:

- 3rd International BAU DRUG design Congress
- 13th Iranian Pharmaceutical Sciences Congress
- 16th Iranian Pharmacy Students Seminar

OTHER PROFESSIONAL ACTIVITIES:

- Director of research and development, Sanjesh Daru Razi Inc. Tehran, Iran Conducting research in Pharmaceutical Secondary Standards. Jan 2019 Present
 - Education and postgraduate administrator Jan 2019-Jun 2023
 - Editor in Chief of Iranian Journal of Pharmaceutical Research Journal March 2024-Present