

Curriculum Vitae

PERSONAL DETAILS

Name: **Ali Akbar Alizadeh**
Address: Biotechnology Research Center,
Tabriz University of Medical Sciences,
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Date and Place of Birth: Feb/20/1987, Tabriz, Iran
Email: alizadehaa@tbzmed.ac.ir
Citizenship: Iran
Languages: Turkish, Farsi and English

EDUCATION

2009- 2015 PhD of Medicinal Chemistry, Tabriz University of Medical Sciences, Iran
2003-2009 Doctor of Pharmacy (Pharm.D), Kermanshah University of Medical Sciences, Iran

RESEARCH AREAS

- Molecular Docking Studies for Prediction of Mode of Interaction of Peptides and Antibodies with TNF- α
- 2D & 3D QSAR studies on TNF- α Converting Enzyme Inhibitors
- Molecular dynamics simulations of protein-protein and ligand-receptor
- Application of Antibody Phage display for Identification of Novel scFv Antibodies Against TNF- α
- Application of Peptide Phage display for Identification of Novel Peptide Ligands Against TNF- α
- Protein Expression, Purification, characterization, and Biological Evaluation

RESEARCH SKILLS

- Familiar with following Molecular modelling and molecular graphics softwares: Hyperchem, Dragon, ACDlabs, Deepview, MOE, Autodock, and Gold programs
- Familiar with following bioinformatics programs and databases: BLAST, ClustalW, Verify3D and Protein Data Bank
- Familiar with Phage display technique and molecular biology experiments such as working with different cell lines, bacterial culture, protein expression & purification, SDS-PAGE, Western Blot, agarose GE, plasmid purification, PCR, DNA digestion, Gene cloning, ELISA and MTT assay
- Familiar with different analyzing Methods such as Uv-vis spectroscopy, Fluorescence spectroscopy, Circular Dichroism polarimetry, and Voltammetric methods, as well as different Chromatographic methods like Affinity chromatography, Size Exclusion Chromatography, and Ion Exchange Chromatography
- Molecular dynamic simulation studies

PUBLICATIONS

1. Vahedpour, T., Kaur, J., Hemmati, S., Hamzeh-Mivehroud, M., **Alizadeh, A.A.**, Wuest, F., Dastmalchi, S., Synthesis and biological evaluation of 1,3,5-trisubstituted 2-pyrazolines as novel cyclooxygenase-2 inhibitors with antiproliferative activity. (2020) *Chemistry and Biodiversity*. In Press.
2. **Ali Akbar Alizadeh**, Behzad Jafari, Siavoush Dastmalchi, Application of bioinformatics and molecular dynamics simulation approaches for identification of fibroblast growth factor 10 analogues with potentially improved thermostability. (2020) *Growth Factors*. In Press.
3. Jamshidi Kandjani, O., Rahbar-Shahrouziasl, M., **Alizadeh, A. A.**, Hamzeh-Mivehroud, M., Dastmalchi, S. Identification of novel mutations in Arabidopsis thaliana DOF 4.2 coding gene. *Advanced Pharmaceutical Bulletin*. In Press.
4. **Alizadeh, A. A.**, and S. Dastmalchi. 2020. Designing novel teduglutide analogues with improved binding affinity: An in silico peptide engineering approach. *Current Computer Aided Drug Design*. In Press.

5. Yaqoubi S, Adibkia K, Nokhodchi A, Emami S, **Alizadeh AA**, Hamishehkar H, Barzegar-Jalali M. Co-electrospraying technology as a novel approach for dry powder inhalation formulation of montelukast and budesonide for pulmonary co-delivery. *Int J Pharm.* 591, 2020, 119970.
6. Dinparast, L., S. Hemmati, **A. A. Alizadeh**, G. Zengin, H. S. Kafil, M. B. Bahadori, and S. Dastmalchi. 2020. "An efficient, catalyst-free, one-pot synthesis of 4H-chromene derivatives and investigating their biological activities and mode of interactions using molecular docking studies. *Journal of Molecular Structure* 1203. doi: 10.1016/j.molstruc.2019.127426.
7. **Ali Akbar Alizadeh**, Behzad Jafari, Siavoush Dastmalchi, Alignment independent 3D-QSAR studies and molecular dynamics simulations for the identification of potent and selective S1P1 receptor agonists. (2020) *Journal of Molecular Graphics and Modelling*; 94: 107459.
8. L. Dinparast, S. Hemmati, G. Zengin, **A. A. Alizadeh**, M. B. Bahadori, H. S. Kafil, S. Dastmalchi, Rapid, Efficient, and Green Synthesis of Coumarin Derivatives via Knoevenagel Condensation and Investigating Their Biological Effect. (2019) *ChemistrySelect*, 4: 9211.
9. **Alizadeh AA**, Hamzeh-Mivehroud M, Haddad E, Haddad N, Sharifi M, Mohammadi S, Pourtaghi S, and Dastmalchi S. Characterization of Novel Fragment Antibodies Against Tnf-Alpha Isolated Using Phage Display Technique. (2019) *Iranian Journal of Pharmaceutical Research*; 18: 759-771
10. Sharifi, M., **Alizadeh, A.A.** Hamzeh-Mivehroud, M., Dastmalchi, S.; Computational explorations to gain insight into the structural features of TNF- α receptor I inhibitors (2018) *Journal of the Iranian Chemical Society*, 15: 2519-2531.
11. Ahmadi, F., Vahedpour, T., **Alizadeh, A.A.** The evaluation of Cr-curcumin-DNA complexation by experimental and theoretical approaches (2018) *Nucleosides, Nucleotides and Nucleic Acids*; 37: 35-52.
12. Pourtaghi-Anvarian, S., Mohammadi, S., Hamzeh-Mivehroud, M., **Alizadeh, A.A.**, Dastmalchi, S. Characterization of the novel anti-TNF- α single-chain fragment antibodies using experimental and computational approaches (2018) *Preparative Biochemistry and Biotechnology*; 49: 38-47.

13. Jafari, B., Hamzeh-Mivehroud, M., **Alizadeh, A.A.**, Sharifi, M., Dastmalchi, S. An alignment-independent 3D-QSAR study of FGFR2 tyrosine kinase inhibitors (2017) *Advanced Pharmaceutical Bulletin*; 7: 409-418.
14. **Alizadeh AA**, Hamzeh-Mivehroud M, Farajzadeh M, Dastmalchi S (2017). Identification of novel peptides against TNF- α using phage display technique and in silico modeling of their modes of binding. *European Journal of Pharmaceutical Sciences*; 98: 490-498.
15. **Alizadeh AA**, Hamzeh-Mivehroud M, Sokouti B and Dastmalchi S (2016) An alignment independent 3D-QSAR study on series of hydroxamic acid based Tumor necrosis factor- α converting enzyme inhibitors. *Journal of Chemometrics*; 9: 537-547.
16. **Alizadeh AA**, Hamzeh-Mivehroud M, and Dastmalchi S (2015) Identification of Novel Single Chain Fragment Variable Antibodies Against TNF- α Using Phage Display Technology. *Advanced Pharmaceutical Bulletin*; 5: 661-666.
17. **Alizadeh AA**, Hamzeh-Mivehroud M, and Dastmalchi S (2015) Production and purification of a novel anti-TNF- α single chain fragment variable antibody. *Advanced Pharmaceutical Bulletin*; 5: 667-672.
18. **Alizadeh AA**, Hamzeh-Mivehroud M, Farajzadeh M, Moosavi-Movahedi AA, Dastmalchi S (2015). A Simple and Rapid Method for Expression and Purification of Functional TNF- α Using GST Fusion System. *Current pharmaceutical biotechnology*; 16: 707-15.
19. Abolhasani H, Zarghi, A, Hamzeh-Mivehroud M, **Alizadeh AA**, Shahbazi Mojarrad J and Dastmalchi S (2015) *In-silico* Investigation of Tubulin Binding Modes of a Series of Novel Antiproliferative Spiroisoxazoline Compounds Using Docking Studies. *Iranian Journal of Pharmaceutical Research*; 14: 141-7.
20. Hamzeh-Mivehroud M, **Alizadeh AA**, Morris MB, Church WB and Dastmalchi S. (2013) Phage Display as a Technology Delivering on the Promise of Peptide Drug Discovery. *Drug Discovery Today*; 18: 1144-57.
21. Hamzeh-Mivehroud M, **Alizade AA**, Ahmadifar M, Dastmalchi S (2012) In silico Evaluation of Crosslinking Effects on Denaturant meq values and ΔC_p upon Protein Unfolding. *Avicenna Journal of Medical Biotechnology*; 4: 23-34.

22. Ahmadi F, **Alizadeh AA**, Shahabadi N, Rahimi-Nasrabadi M. (2011) Study binding of Al-curcumin complex to ds-DNA, monitoring by multispectroscopic and voltammetric techniques. *Spectrochimica Acta A*; 79: 1466-1477.
23. Ahmadi F, **Alizadeh AA**, Bakhshandeh-Saraskanrood F, Jafari B, Khodadadian M (2010) Experimental and computational approach to the rational monitoring of hydrogen-bonding interaction of 2-Imidazolidinethione with DNA and guanine. *Food and Chemical Toxicology*; 48: 29-36.

PRESENTATIONS

ABSTRACTS:

1. Hamzeh-Mivehroud M, **Alizadeh AA**, Sokouti B and Dastmalchi S. An alignment independent 3D QSAR study on a series of TNF-alpha converting enzyme inhibitors (2014) *20th EuroQSAR* 31 August-04 September, St. Petersburg, Russia.
2. Maryam Hamzeh-Mivehroud, **Ali Akbar Alizadeh**, Malak Farajzadeh and Siavoush Dastmalchi. 3D QSAR study for a series of TNF-alpha converting enzyme inhibitors. *The First International Life Science & 12th Iran Biophysical Chemistry Conference* May, Tabriz, Iran.
3. Milad Abbasi, Maryam Hamzeh-Mivehroud, **Ali Akbar Alizadeh** and Siavoush Dastmalchi. Cloning, expression, and purification of DOF 2.1 zinc finger domain. (2013) *The First International Life Science & 12th Iran Biophysical Chemistry Conference* May, Tabriz, Iran.
4. Omid Jamshidi, Maryam Hamzeh-Mivehroud, **Ali Akbar Alizadeh** and Siavoush Dastmalchi. Cloning, expression, and purification of DOF 4.2 zinc finger domain. (2013) *The First International Life Science & 12th Iran Biophysical Chemistry Conference* May, Tabriz, Iran.
5. **A. Alizadeh**, M. Hamzeh-Mivehroud, M. Farajzadeh, S. Dastmalchi. Cloning, expression, and purification of human TNF- α (2012) *13th Iranian Pharmaceutical Sciences Congress* 3-6 September, Isfahan Iran.
6. **Alizadeh AA**, Hamzeh-Mivehroud M and Dastmalchi, S. Effects of structural constraints on thermodynamic parameters of protein unfolding. (2012) *The First*

International & 11th Iran *Biophysical Chemistry Conference* 13-15 June, Ardebil, Iran.

7. TEACHING EXPERINCES

Practical Analytical Chemistry

*Department of Medicinal Chemistry
School of Pharmacy
Tabriz University of Medical Sciences
Tabriz, Iran*

Practical Instrumental Analysis

*Department of Medicinal Chemistry
School of Pharmacy
Tabriz University of Medical Sciences
Tabriz, Iran*

Theoretical General Chemistry

*Faculty of Health and Nutrition
Tabriz University of Medical Sciences
Tabriz, Iran*

Practical General Chemistry

*Faculty of Health and Nutrition
Tabriz University of Medical Sciences
Tabriz, Iran*

Protein expression & purification, ELISA, PCR and primer design, Western Blot, and Cell Culture (workshop)

*Biotechnology Research Center
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Participations

1. Referee in the field of Medicinal Chemistry. 17th Iranian Pharmacy Students Seminar, November, 2012, Kermanshah, Iran.

2. Referee in the field of Medicinal Chemistry. 18th Iranian Pharmacy Students Seminar, November, 2014, Tabriz, Iran.