

**Personal Information:**

**Name:** Maryam Tabarzad

**Date of birth:** 15 Sep 1982

**Degree:** Pharm.D., Ph.D. of Pharmaceutical Biotechnology

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**Education:**

2007-2014                      PhD of Pharmaceutical Biotechnology, Shahid Beheshti University of Medical Science, Faculty of Pharmacy, Tehran, Iran

**Thesis Title:** Design And Development of DNA Aptamer against Coagulation Factor viii

2000-2007                      PharmD, Shiraz University of Medical Science, Faculty of Pharmacy, Shiraz, Iran

**Thesis Title:** Synthesis, evaluation of pharmacological activities and QSAR studies of a novel group of bis (4-nitroaryl-1,4- Dihyropyridine)

2000                              High School Diploma, Shiraz

**Publication:**

1. Hemmateenejad, B., Miri, R., **Tabarzad, M.**, Jafarpour, M., Zand, F.; Molecular modeling and QSAR analysis of anticonvulsant activity of some N-phenyl -N'-(4-pyridinyl)-urea derivatives, journal of molecular structure (Theochem) 684, 2004, 43-49

2. Hemmateenejad, B., Miri, R., Jafarpour, M., **Tabarzad, M.**, Foroumadi, A.; Multiple Linear Regression and Principal Component Analysis –Based prediction of anti-tuberculosis activity of some 2-aryl-1,3,4-thiadiazole derivatives ,QSAR &Combinatorial science , 25,2006,56-66

3. Hemmateenejad, B., Miri, R., Jafarpour, M., **Tabarzad, M.**, Shamsipur, M.; Exploring QSAR for the inhibitory activity of a large set of aromatic/heterocyclic sulfonamides toward four different isoenzymes of carbonic anhydrase, *QSAR Comb. Sci.*, 26,2007, 1065-1075
4. Miri, R., Javidnia, K., Hemmateenejad, B., **Tabarzad, M.**, Jafarpour, M.; Synthesis, Evaluation of Pharmacological Activities and Quantitative Structure–Activity Relationship Studies of a Novel Group of bis(4-Nitroaryl-1,4-dihydropyridine); *Chem Biol Drug Des* 2009; 73: 225–235
5. **Tabarzad, M.**, Kazemi, B., Vahidi, H., Aboofazeli, R., Shahhosseini, S. and Nafissi-Varcheh, N; Challenges to Design and Develop of DNA Aptamers for Protein Targets. I. Optimization of Asymmetric PCR for Generation of a Single Stranded DNA Library; *Iran J Pharm Res.*, 2014 winter; 13(Suppl): 133–141.
6. **Tabarzad M.\***, Jafari M. Trends in the Design and Development of Specific Aptamers Against Peptides and Proteins. *The protein journal*. 2016 Apr 1; 35(2):81-99.
7. Mokhtarzadeh A., **Tabarzad M.**, Ranjbari J., de la Guardia M., Hejazi M., Ramezani M. Aptamers as smart ligands for nano-carriers targeting. *TrAC Trends in Analytical Chemistry*. 2016 Sep 30; 82:316-27.
8. Sharafi Z., Ranjbari J., Javidi J., Nafissi-Varcheh N., **Tabarzad M.\*** Direct Immobilization of Coagulation Factor VIII on Au/Fe<sub>3</sub>O<sub>4</sub> Shell/Core Magnetic Nanoparticles for Analytical Application. *Trends in Peptide and Protein Sciences*. 2016 Oct 4; 1(1):20-6.
9. Pazhouhandeh M., Salmannejad F., Nafissi-Varcheh N., **Tabarzad M.\*** The Effect of Arginine as an Anti-Aggregation Excipient on Recombinant Human Growth Hormone. *Trends in Peptide and Protein Sciences*. 2016 Oct 4;1(1):31-7.
10. Barati M., **Tabarzad M.**, Safarpour H., Ghaderi O. Validation of a Simple and Rapid Method for Assessment of Intracellular Bacterial Asparaginase. *Iranian Journal of Pharmaceutical Sciences*. 2016 Apr 1; 12(2):33-42.
11. Nikzad J., Shahhosseini S., **Tabarzad M.**, Nafissi-Varcheh N., Torshabi M. Simultaneous detection of bovine and porcine DNA in pharmaceutical gelatin capsules by duplex PCR assay for Halal authentication. *DARU Journal of Pharmaceutical Sciences*. 2017 Feb 14; 25(1):3.
12. **Tabarzad M.\***, Jafari M., Nafissi-varcheh N. Can Aptameric Ligands Specific to Plasma Coagulation Factor VII Bind the Recombinant Form with High Affinity: Affinity Measurement by Fluorescence Method. *Avicenna Journal of Medical Biotechnology*. 2017 Mar 1; 9(2):109-12.
13. Jafari M., Rezaei M., Kalantari H., **Tabarzad M.**, Daraei B. DNzyme-aptamer or aptamer-DNzyme paradigm: biochemical approach for aflatoxin analysis. *Biotechnology and Applied Biochemistry*. 2017 Mar 1, In press.
14. Jafari M., Rezaei M., Kalantari H., **Tabarzad M.**, Daraei B. Optimization of aflatoxin B1 aptasensing. *Jornal of Toxicology*, 2017 May 14; 2017.

15. Vahidi H, Nafissi-Varcheh N, Kazemi B, Aboofazeli R, Shahhosseini S, **Tabarzad M.\*** Challenges to Design and Develop of DNA Aptamers for Protein Targets. II. Development of the Aptameric Affinity Ligands Specific to Human Plasma Coagulation Factor VIII Using SEC-SELEX. Iranian journal of pharmaceutical research: IJPR. 2017;16(2):737.
16. Ranjbari J., Mokhtarzadeh A., Alibakhshi A., **Tabarzad M.\***, Hejazi M., Ramezani M. Anti-cancer drug delivery using carbohydrate-based polymers. Current Pharmaceutical Design, 2017 May, 23: In Press.
17. Panahi Chegini, P., Nikokar, I., Hosseinabadi, T., **Tabarzad, M.\*** Concerns in the Design and Development of Novel Antimicrobial Peptides, 2017; 1(4): 135-143
18. Ramezanzpour, M., Daei, P., Khanaki, K., Hosseinabadi, T., **Tabarzad, M.\*** The Relationship Between Janus Kinase Pathways and MicroRNAs, 2017; 1(4): 144-152
- 19-Mokhtarzadeh A, Hassanpour S, Vahid ZF, Hejazi M, Hashemi M, Ranjbari J, **Tabarzad M.\***, Noorolyai S, de la Guardia M. Nano-delivery system targeting to cancer stem cell cluster of differentiation biomarkers. Journal of Controlled Release. 2017 Sep 21.
- 20-Delshadian Z., Mortazavian A.M., **Tabarzad M.**, Hosseini S.M., Mohammadi R., Rouhi M., Salami M., Khosravi-Darani K. Optimisation of experimental conditions for binding of divalent iron to bioactive casein phosphopeptides. International Journal of Food Science & Technology. 2017, In Press.
- 21- **Tabarzad M.\***, Sharafi Z., Javidi J. Covalent Immobilization of Coagulation Factor VIII on Magnetic Nanoparticles for Aptamer Development. Journal of Applied Biomaterials & Functional Materials. Accepted.

### **Book:**

Tabarzad, M, Nafissi-varche, N; Oligonucleotides Aptamers: Development and Applications (*in Farsi*). Supported financially by Shahid Beheshti University of Medicinal Sciences; 2013

### **Abstracts Presented in Congresses:**

- 1- 8th seminar of pharmaceutical science, Shiraz, Aug 26-28, 2002, assay of Medicinal Plants that affect the immunity system in book of “Ghanon Dar Teb” بررسی گیاهان دارویی مؤثر بر سیستم ایمنی در کتاب طب بوعلی سینا
- 2- The 15th European Symposium on Quantitative Structure-Activity Relationships & Molecular Modelling, 05-10 September 2004, Istanbul, Turkey, Molecular modeling and QSAR analysis of anticonvulsant activity of some N-phenyl -N’-(4-pyridinyl)-urea derivatives

- 3- 9th seminar of pharmaceutical science, Tabriz, Aug 23-26, 2004, Molecular modeling and QSAR analysis of anticonvulsant activity of some N-phenyl -N'-(4-pyridinyl)-urea derivatives
- 4- First seminar of medicinal & natural product chemistry, Shiraz, May 10-11, 2005, Multiple Linear Regression and Principal Component Analysis -Based prediction of anti-tuberculosis activity of some 2-aryl-1,3,4-thiadiazole derivatives
- 5- 10th Iranian pharmaceutical science conference, Tehran (shahid beheshti), Aug 2006, QSAR study of some aromatic/heterocyclic sulphonamides on four different isoenzymes of carbonic anhydrase (CAI, CAII, CAIV, CAIX)
- 6- 11th Iranian pharmaceutical science conference, Kerman, Aug 18-21, 2008, Quantitative analysis of structural factors that affect the toxicity of ionic liquid
- 7- The 10th Seminar of Iranian Pharmacy Student, Mashhad, 2004, Molecular modeling and QSAR analysis of anticonvulsant activity of some N-phenyl -N'-(4-pyridinyl)-urea derivatives
- 8- The 11th Seminar of Iranian Pharmacy Student, Shiraz, 2005, Multiple Linear Regression and Principal Component Analysis -Based prediction of anti-tuberculosis activity of some 2-aryl-1,3,4-thiadiazole derivatives (The best poster)
- 9- The 7th Annual Research Congress of Iranian Students of Medical Science, Shahid Beheshti University of Medical Science, 2006, Multiple Linear Regression and Principal Component Analysis -Based - prediction of anti-tuberculosis activity of some 2-aryl-1,3,4-thiadiazole derivatives
- 10- Abstracts of the 14th European Congress on Biotechnology Barcelona, Spain 13-16 September, 2009, New Biotechnology, Volume 25, Supplement 1, September 2009, Pages S9-S10; Nucleolin and its position in cancer therapy; M. Tabarzad and F. Hosseini Shirazi; doi:10.1016/j.nbt.2009.06.026
- 11- 12th Iranian Pharmaceutical Science Congress, Zanjan, Aug 2010, Synthesis, Evaluation of Pharmacological Activities and Quantitative Structure-Activity Relationship Studies of a Novel Group of bis(4-Nitroaryl-1,4-dihydropyridine)
- 12- 12th Iranian Pharmaceutical Science Congress, Zanjan, Aug 2010, Challenges in quality control of glycoprotein biopharmaceuticals
- 13- MipTec congress, Basel, Switzerland, Sep 2010, In Silico design of humanized monoclonal antibody against ICAM-1
- 14- 13th Iranian Pharmaceutical Science Congress, Isfahan, Sep 2012, Design of a ssDNA oligodeoxynucleotide library with diverse random sequences and its amplification optimization

15-The national conference on protein and peptide science: from basic to medical and industrial application, Shiraz, Dec 2014, Design of oligonucleotide ligands with affinity for coagulation factor VIII

16- The national conference on protein and peptide science: from basic to medical and industrial application, Shiraz, Dec 2014, Fusion proteins in pharmaceutical sciences: today and tomorrow

17- The national conference on protein and peptide science: from basic to medical and industrial application, Shiraz, Dec 2014, Analysis of host cell proteins, the uninvited guests

18- The national conference on protein and peptide science: from basic to medical and industrial application, Shiraz, Dec 2014, Innovative position of aptamer in the protein world

19- The 3<sup>rd</sup> national seminar on the role of medical basic science on health promotion, Tehran, Feb 2015, Clinical potentials of aptamer ligands.

20- 14th Iranian Pharmaceutical Sciences Congress and 1st Symposium of Biopharmaceutics and Pharmacokinetics, Tehran, Dec 2015, Attachment of coagulation factor viii to the gold magnetic nanoparticles for analytical application.

21- 14th Iranian Pharmaceutical Sciences Congress and 1st Symposium of Biopharmaceutics and Pharmacokinetics, Tehran, Dec 2015, The Importance of Bioactive Peptides Derived From Macro or Microalgae.

22- 12<sup>th</sup> Iranian peptide conference & Humboldt-Kolleg, Tehran, Jan 2017, Design of a novel antimicrobial peptide based on magainin II sequence.

23-2<sup>nd</sup> International and 10<sup>th</sup> National biotechnology congress of Islamic Republic of Iran, Tehran, Aug 2017, Screening of Several Endemic Cyanobacteria as Bioreactors for the Synthesis of Gold Nanoparticles

24-15<sup>th</sup> Iranian Pharmaceutical Sciences Congress, Hamedan, Oct 2017, Aptasensors: Promising Affinity Biosensors for *in vitro* & *in vivo* Applications

25-15<sup>th</sup> Iranian Pharmaceutical Sciences Congress, Hamedan, Oct 2017, Application of Molecular Biology Methods in Herbal Medicine Authentication

### **Thesis supervisor/Advisor:**

Detection of the gelatin origin in pharmaceutical capsules by PCR, **Pharm.D. degree**, 2014, **Advisor**

Design and development of an aflatoxin-B1 biosensor based on aptamer-DNAzyme, **Ph.D. degree**, 2014, **Advisor**

Study of the induced structural changes in pexiganan (as an antimicrobial peptide) through metal nanoparticle attachment, **Ph.D. degree**, 2016, **Supervisor**

Design and development of a chimeric nanomolecule containing aptamer and miRNA let-7d and evaluation of its effect on gastric cancer cell line; **MSc degree**, 2016, **Supervisor**

Evaluation the effect of nucleolin specific aptamer- miRNA let-7d conjugate on Janus Kinase expression in gastric cancer cell line; **MSc degree**, 2016, **Supervisor**

Design and antibacterial evaluation of a new anti-microbial peptide based on Magainin II; **MSc degree**, 2016, **Supervisor**

Analysis and optimization of the binding of divalent iron to bioactive casein phosphopeptides, **Ph.D. degree**, 2016, **Advisor**

Design and development of aptameric ligand for oral pathogens, **Ph.D. degree**, 2017, **Supervisor**

Extraction of mycosporine like amino acids from cyanobacteria, **Pharm.D. degree**, 2017, **Supervisor**

### **Experimental skills:**

SELEX, PCR, Asymmetric PCR, Gel electrophoresis, SDS-PAGE, Column chromatography, Transformation, Cloning