

Curriculum Vitae



Name: **Zeinab Sharafi**

Date & Place of Birth: May 18, 1983, Khorramabad, Iran

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Education:

- 2011-2017 Ph.D. in **Pharmaceutical Biotechnology**, School of Pharmacy, Shahid Beheshti University of Medical Sciences
(GPA: 18.69 out of 20)
- 2006-2008 M.Sc. in **Microbiology**, Faculty of Life Sciences and Biotechnology, Shahid Beheshti University,
(GPA: 19.02 out of 20)
- 2001-2005 B.Sc. in **Biology- Zoology**, Faculty of Sciences, Lorestan University
(GPA: 18.17 out of 20)

Ph.D. Thesis:

Quantitative detection of unlabeled DNA targets using a silica coated magnetic nanoparticle-enzyme sandwich assay

M.Sc. Thesis:

Prevalence of four virulence factors in *Pseudomonas aeruginosa* isolated from wound and burn infections

Work experience:

- research associate at Razi Herbal Medicines Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran 2019-present

- teaching in Biology group at Islamic Azad University of Doroud, teaching at high school from the 9th through 12th grade, Lorestan, Iran 2009-2011
- research assistant at the Department of Microbiology, Pasteur Institute of Iran 2007-2009

Research projects

- Synthesis and characterization of efficient magnetically nanocatalysts for organic chemical reactions
- In vitro α -glucosidase inhibitory activity of some Schiff base compounds
- Evaluation and optimization of DNA purification conditions for enhancing the efficiency of ligation-independent cloning
- Optimization of covalent immobilization of coagulation factor VIII onto magnetic nanoparticles for aptamer selection
- Quantitative detection of unlabeled DNA targets using a silica coated magnetic nanoparticle-enzyme sandwich assay
- Pharmacological evaluation of new series of acridone-based oxadiazoles by pentylenetetrazole, maximal electroshock and cytotoxicity assays
- Screening and optimization of L-Asparaginase from saline habitats
- Prevalence of virulence factors in *Pseudomonas aeruginosa* isolated from different infections

Publication:

1. Alatab S, Sepanlou SG, Ikuta K, Vahedi H, Bisignano C, Safiri S, et al. The global, regional, and national burden of inflammatory bowel disease in 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet Gastroenterology & Hepatology*. 2020;5(1):17-30.
2. Safiri S, Sepanlou SG, Ikuta KS, Bisignano C, Salimzadeh H, Delavari A, et al. The global, regional, and national burden of colorectal cancer and its attributable risk factors in 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet Gastroenterology & Hepatology*. 2019;4(12):913-33.
3. Global Burden of Disease Cancer Collaboration (Accepted/In press). Global, Regional, and National Cancer Incidence, Mortality, Years of Life Lost, Years Lived with Disability, and Disability-Adjusted Life-Years for 29 Cancer Groups, 1990 to 2017: A Systematic Analysis for the Global Burden of Disease Study. *JAMA Oncology*. <https://doi.org/10.1001/jamaoncol.2019.2996>

4. Kazemnejadi M, **Sharafi Z**, Mahmoudi B, Zeinali A, Nasser MA. Magnetic Fe–Cr–Ni oxide alloy nano-belts prepared from the chemical decomposition of a stainless steel screw (a top-down approach): an efficient and cheap catalyst for multicomponent reactions. *Journal of the Iranian Chemical Society*. 2019;1-11.
5. Milad Kazemnejadi, Boshra Mahmoudi, **Zeinab Sharafi**, Mohammad Ali Nasser, Ali Allahresani, Mohsen Esmaeilpour. Copper coordinated-poly(α -amino acid) decorated on magnetite graphene oxide as an efficient heterogeneous magnetically recoverable catalyst for the selective synthesis of 5- and 1-substituted tetrazoles from various sources: A comparative study. *Applied Organometallic Chemistry*. 2019;e5273.
6. Kazemnejadi M, Mahmoudi B, **Sharafi Z**, Nasser MA, Allahresani A, Esmaeilpour M. Synthesis and characterization of a new poly α -amino acid Co (II)-complex supported on magnetite graphene oxide as an efficient heterogeneous magnetically recyclable catalyst for efficient free-coreductant gram-scale epoxidation of olefins with molecular oxygen. *Journal of Organometallic Chemistry*. 2019 (896) 59-69.
7. Nasli-Esfahani E, Mohammadi-Khanaposhtani M, Rezaei S, Sarrafi Y, **Sharafi Z**, Samadi N, et al. A new series of Schiff base derivatives bearing 1, 2, 3-triazole: Design, synthesis, molecular docking, and α -glucosidase inhibition. *Arch Pharm Chem Life Sci*. 2019;e1900034.
8. **Sharafi Z**, Adrangi S. Replacing UV with Blue light during DNA purification increases the efficiency of ligation-independent cloning. *Trends in Peptide and Protein Sciences*. 2019;3:1-8.
9. Tabarzad M, **Sharafi Z**, Ranjbar J. Covalent immobilization of coagulation factor VIII on magnetic nanoparticles for aptamer development. *Journal of applied biomaterials & functional materials*. 2018;16(3):161-70.
10. **Sharafi Z**, Bakhshi B, Javidi J, Adrangi S. Synthesis of silica-coated iron oxide nanoparticles: preventing aggregation without using additives or seed pretreatment. *Iranian Journal of pharmaceutical Research*. 2018;17(1):386-395.
11. **Sharafi Z**, Barati M, Khoshayand MR, Adrangi S. Screening for type II L-asparaginases: lessons from the genus Halomonas. *Iranian Journal of pharmaceutical Research*. 2017;16(4):1565-1573.
12. **Sharafi Z**, Ranjbar J, Nafissi-Varcheh, N, Tabarzad M. Direct immobilization of coagulation factor VIII on Au/Fe₃O₄ shell/core magnetic nanoparticles for analytical application. *Trends in Peptide and Protein Sciences*. 2016;1(1):20-26.

13. Mohammadi M, Shabani M, Faizi M, Aghaei I, Jahani R, **Sharafi Z**, Shamsaei N. et al. Design, synthesis, pharmacological evaluation, and docking study of new acridone-based 1,2,4-oxadiazoles as potential anticonvulsant agents. *European Journal of Medicinal Chemistry*. 2016 (112) 91-98.
14. Nikbin VS, Aslani MM, **Sharafi Z**, Hashemipour M, Shahcheraghi F, Ebrahimipour GH. Molecular identification and detection of virulence genes among *Pseudomonas aeruginosa* isolated from different infectious origins. *Iranian Journal of Microbiology*. 2012;4(3):118-23.

Congress Presentation:

- member of the executive committee in the 3rd *Iranian Congress of Natural Toxins*, 18-20 February 2014, Tehran, Iran
- Sharafi Z, Aslani MM, Nikbin VS and Shahcheraghi F. Molecular identification and detection of virulence genes among *Pseudomonas aeruginosa* isolated from wound and burn infections .6th *Iranian Congress of Clinical Microbiology*, 2-4 October 2012 Mashhad, Iran, (Oral presentation).
- Poster presentation in the *Second Congress of Clinical Microbiology* 7-9 October 2008 Shiraz, Iran.
- Poster presentation in the 9th *Iranian Congress of Microbiology*, 4-6 March 2008 Kerman, Iran.

Honors and awards:

- Ranked 1st in the 11th Shahid Beheshti University of Medical Sciences educational festival, 2016
- Educational excellent student, Faculty of Life Sciences and Biotechnology, Shahid Beheshti University, 2008
- Educational excellent student, Faculty of Sciences, Lorestan University, 2005

Laboratory Experience:

- Animal/Bacterial cell culture
- PCR, Real Time PCR
- Southern blot
- Protein purification, Western blot, ELISA
- Cytotoxicity assay of synthetic and natural compounds
- Cloning and gene expression in bacteria

- Application of bioinformatics in biology, SPSS statistics, response surface methodology (RSM)
- Preparation and characterization of magnetic/Ag/ Au nanoparticles
- Conjugation of oligonucleotides and proteins to nanoparticles