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📅 Jun 20, 1985

HAMED
ZARE



EDUCATION

Ph.D. in Pharmaceutical Biotechnology | Shahid Beheshti University of medical science, Tehran, Iran

Sep. 2012 – Jan. 2018

- Thesis Title: Designing of high cell density culture process to enhance the content of selenomethionine in indigenous *Saccharomyces cerevisiae* isolates by box-Behnken.
- GPA: 17.12/20

M.Sc. in Microbial Biotechnology | Shahed University, Iran

Sep. 2009 – Jan. 2012

- Thesis Title: Production of nanobody (VHH) derived camelized antibody against PSMA antigen in prostate cancer with phage display technique
- GPA: 18.88/20

B.Sc. in Cellular and Molecular Biology | Shiraz University, Iran

Sep. 2004 – Dec. 2008

- GPA: 15.35/20



WORK EXPERIENCE

Assistant professor | Motamed Cancer Institute, ACECR, Tehran, Iran

Oct. 2022- Present

Responsibilities:

- Planning and implementation of research projects in the field of producing recombinant proteins with the application of cancer diagnosis and treatment
- Design and production of bivalent and trivalent nanobodies to target cancer cells
- Responsible for student theses on the topics of optimizing the production of recombinant proteins, repurposing chemical drugs in the treatment of breast cancer, etc.

Assistant professor | Kerman university of medical science, Iran

Dec. 2019- Sep. 2022

Responsibilities:

- Responsible for the implementation of two projects in the field of recombinant nanobody production

- Teaching courses **genetic engineering** and **bioinformatic** for Ph. D. student.
- Responsible for the implementation of two projects in the field of drug delivery with the help of nanofibers and noisome
- Responsible for the implementation of the project to investigate the effectiveness of different vaccines for Covid-19 (comparison of different vaccine platforms)
- Cooperation in the national project to investigate the side effects of different covid-19 vaccines (different platforms) in different populations living in Iran

University lecturer | Semnan University, Iran

Jan. 2017– Jan. 2019

Responsibilities:

- Teaching courses in **cellular and molecular biology, genetic engineering, biotechnology, and laboratory methods in cellular and molecular laboratory** for graduate and graduate students.



ACADEMIC & RESEARCH INTERESTS

- Biopharmaceutical Recombinant Protein
- Molecular detection methods
- Nanobody & another antibody fragment
- Drug repurposing drug for cancers



PUBLICATIONS & ARTICLES

- 2024 **Hamed Zare**, et al. "Introduction of a new recombinant vaccine based on GRP78 for breast cancer immunotherapy and evaluation in a mouse model". *BiolImpacts*. IF: 3.8
- 2024 **Hamed Zare**, et al. "Investigating the effect of cGRP78 vaccine against different cancer cells and its role in reducing melanoma metastasis". *Research in Pharmaceutical Sciences*. IF: 2.1
- 2024 **Hamed Zare**, et al. "Targeted drug delivery using nanobodies to deliver effective molecules to breast cancer cells: the most attractive application of nanobodies". *Cancer Cell International*. IF: 6.4
- 2023 **Hamed Zare**, et al. "Covid-19 prevention and treatment by targeting Fc-fusion proteins: An experience to fight emerging diseases". *Current Molecular Medicine*. IF: 2.6
- 2023 M Danaeifar, B Negahdari, HM Eslam, **H Zare**, et al. "Polymeric nanoparticles for DNA vaccine-based cancer immunotherapy: a review". *Biotechnology Letters*. IF: 2.7
- 2022 **Hamed Zare**, et al. "Nanobodies; New molecular instruments with special specifications for targeting, diagnosis and treatment of Triple-negative breast cancer". *Cancer cell international*. IF: 6.4

- 2022 F. Ghasemi, **Hamed Zare**, et al. "In silico and in vitro analysis of a rational mutation in gIII signal peptide and its effects on periplasmic expression of rhGH in *E. coli*." *Archives of Microbiology*. IF: 2.8
- 2022 **Hamed Zare**, et al. "The recent progress in DNAzymes-based aptasensors for thrombin detection." *Critical Reviews in Analytical Chemistry*. IF: 6.5
- 2022 H. Kamali, S. Golmohammadzadeh, **Hamed Zare**, et al. "The recent advancements in the early detection of cancer biomarkers by DNAzyme-assisted aptasensors". *Journal of Nanobiotechnology*. IF: 9.43
- 2022 **Hamed Zare**, et al. "Analysis and comparison of anti-RBD neutralizing antibodies from AZD-1222, Sputnik V, Sinopharm and Covaxin vaccines and its relationship with gender among health care workers". *Immunity & Ageing*. IF: 7.9
- 2022 A. Hosseinzadeh, ..., **Hamed Zare**, et al. "COVID-19 cases, hospitalizations and deaths after vaccination: a cohort event monitoring study, Islamic Republic of Iran". *Bulletin of the World Health Organization*. IF: 11.1
- 2022 A. Zareh, E. Rabani, **Hamed Zare**, et al. "Clinical Significance of Long Non-Coding RNA HCG18, OIP5-AS1, FGD5-AS1 and LINC00657 Expression in Human Gastric Cancer". *Gene report*. IF: 1.51
- 2021 **Hamed Zare**, et al. "Prevalence of COVID-19 vaccines (Sputnik V, AZD-1222, and Covaxin) side effects among healthcare workers in Birjand city, Iran". *International Immunopharmacology*. IF: 5.6
- 2021 **Hamed Zare**, et al. "Nanobodies, the potent agents to detect and treat the Coronavirus infections: A systematic review". *Molecular and Cellular Probes*. IF: 3.3
- 2021 **Hamed Zare**, et al. "Nanobodies: a tool to open new horizons in diagnosis and treatment of prostate cancer". *Cancer cell international*. IF: 5.8
- 2021 M. Ghiasi, K. Jadidi, M. Hashemi, **Hamed Zare**, et al. "Application of Mesenchymal Stem Cells in corneal regeneration". *Tissue and Cell*. IF: 2.47
- 2022 H. Aria, F. Mahmoodi, H. S. Ghaheh, F. Mavandadnejad, **Hamed Zare**, et al. "Outlook of therapeutic and diagnostic competency of nanobodies against SARS-CoV-2: A systematic review". *Analytical Biochemistry*. IF: 2.9
- 2021 **Hamed Zare**, et al. "Evaluation of excreta/secreta of *Lucilia sericata* larvae as a new antibacterial candidate for treatment of MRSA ocular infection". *Biointerface Research in Applied Chemistry*.

- 2014 **Hamed Zare**, et al. "Production of VHH antibody against prostate-specific membrane antigen (PSMA) recognizing LnCaP cells ". *International Journal Biological Marker*. IF: 2
- 2013 H. Bakherad, S. L. Mousavi, I. Rasooli, M. Rajabibazl, M. Mohammadi, W. Ebrahimizadeh, L. Safaee, **Hamed Zare**. "In Vivo Neutralization of Botulinum Neurotoxins Serotype E with Heavy-chain Camelid Antibodies (VHH) ". *Molecular Biotechnology*. IF: 2.6
- 2013 W. Ebrahimizadeh, S. L. Mousavi, M. Rajabibazl, L. Safaee, **Hamed Zare**, H. Bakherad. "Isolation and characterization of protective anti-LPS VHH antibody against *V. cholerae* O1 recognizing Inaba and Ogawa serotypes". *Applied Microbiology and Biotechnology*. IF: 5
- 2013 L. Safaee, S. L. Mousavi, I. Rasooli, M. Rajabibazl, M. Mohammadi, W. Ebrahimizadeh, H. Bakherad, **Hamed Zare**. "A novel VHH antibody against urease activity of *Helicobacter pylori* ". *Journal of Infectious Diseases*. IF: 8.4
- 2021 H. Aghamollaei, R. Sarvestani, H. Bakherad, **Hamed Zare**, et al. "Emerging Technologies for the Treatment of COVID-19". *Clinical, Biological and Molecular Aspects of COVID-19. Part of the book series: Advances in Experimental Medicine and Biology (AEMB, volume 1321)*
- 2021 Marek Kieliszek, Iqra Bano, **Hamed Zare**. "A Comprehensive Review on Selenium and Its Effects on Human Health and Distribution in Middle Eastern Countries". *Biological Trace Element Research*. IF: 3.9
- 2020 M. Hosseindokht, **Hamed Zare**, et al. "Association between polymorphisms in microRNA seed region and warfarin stable dose". *Postgraduate Medical Journal*. 2020. IF: 5.1
- 2020 H. Aghamollaei, H. Safabakhsh, M. M. Moghaddam, **Hamed Zare**, et al. "Evaluation of a Cationic Antimicrobial Peptide as the New Antibiotic Candidate to Treat *Staphylococcus aureus* Keratitis". *International Journal of Peptide Research and Therapeutics*. IF: 2.5
- 2020 **Hamed Zare** and M. Hosseindokht. "Isolation of Indigenous Selenium Tolerant Yeast and Investigation of the Relationship Between Growth and Selenium Biotransformation". *Advanced Pharmaceutical Bulletin*. IF: 3.6
- 2019 M. Ramezani, M. Yousefi, S. Dehghani, R. Nosrati, **Hamed Zare**, et al. "Aptasensors as a new sensing technology developed for the detection of MUC1 mucin: A review". *Biosensors and Bioelectronics*. IF: 12.6

- 2019 M. Hosseindokht, M. Boroumand, R. Salehi, S. Sadeghia, L. Pourgholi, **Hamed Zare**, S. Ziaee. "Association between four microRNA binding site-related polymorphisms and the risk of warfarin-induced bleeding complications". *EXCLI journal*. IF: 4.6
- 2019 M. M. Moghaddam, **Hamed Zare**, H. Aghamollaei. "Degenerate primer-based PCR for rapid and accurate detection of infectious pathogens, *Acinetobacter baumannii*, *Escherichia coli* and *Staphylococcus aureus*, with the targeting of *FtsZ* gene". *Molecular Genetics Microbiology and Virology*. IF: 0.5
- 2019 R. Moradi, Rahim Nosrati, **Hamed Zare**, et al. "Screening and characterization of in-vitro probiotic criteria of *Saccharomyces* and *Kluyveromyces* strains." *Iranian Journal of Microbiology*. IF: 1.4
- 2018 **Hamed Zare**, et al. "Simultaneous optimization of the production of organic selenium and cell biomass in *Saccharomyces cerevisiae* by Plackett-Burman and Box-Behnken Design". *Iranian Journal of Pharmaceutical Research*. IF: 1.6
- 2017 **Hamed Zare**, et al. "Yeast Enriched with Selenium: A Promising Source of Selenomethionine and Seleno-Proteins." *Trends in Peptide and Protein Sciences*.
- 2016 T. Tahmasebi, R. Nosrati, **Hamed Zare**, et al. "Isolation of indigenous Glutathione producing *Saccharomyces cerevisiae* strains." *Iranian Journal of Pathology*. IF: 1.01
- 2016 M. Faghihi, M. Paknejad, S. Sarokhani, **Zare H**, et al. "Preparation and characterization of monoclonal antibody against truncated recombinant nuclear matrix protein (NMP22)". *Biotech Health Sci*. 2016.



ACADEMIC PROJECTS

- 2023-2024 Design two industrial vectors for recombinant human growth hormone (rhGH) and a monoclonal antibody | Motamed Cancer Research and CinnaGen Co., Iran
- 2022-2023 Preparation of recombinant cGRP78 vaccine to immunize BALb/c mice against 4T1 and B16F10 cancer cells | Motamed Cancer Research and Isfahan University of Medical Sciences, Iran
- 2021-2022 In silico and in vitro analysis of a rational mutation in gIII signal peptide and its effects on periplasmic expression of rhGH in *E. coli* | Kerman University of Medical Sciences, Iran
- 2020-2022 Designing a Blotting Strip for Detection of 10 Common HPV Genotypes in Iran Based on PCR-based Reverse Linear Hybridization Technique | Birjand University of Medical Sciences, Iran

- 2020-2021 National project to investigate the side effects of different covid-19 vaccines (different platforms) in different populations living in Iran | Birjand University of Medical Sciences, Iran
- 2019-2020 Investigation of the effectiveness of different vaccines for Covid-19 (comparison of different vaccine platforms) | Birjand University of Medical Sciences, Iran
- 2017-2019 Optimization of production conditions to increase the content of selenomethionine and glutathione in *Saccharomyces cerevisiae* yeast with the aim of producing a preventive agent for cancer | Shahid Beheshti University of Medical Sciences, Iran
- 2017-2018 Multiplex PCR design for simultaneous detection of *E. coli*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* and *Acinetobacter baumannii* bacteria | Shahid Beheshti University of Medical Sciences, Iran
- 2013-2015 Production of recombinant NMP22 antigen & a monoclonal antibody against NMP22 antigen using hybridoma technique for using in the bladder cancer diagnostic kit | Shahid Beheshti University of Medical Sciences and Rojan Azma Co., Iran
- 2009-2012 Production of heavy-chain camel antibody (nanobody) against two cancerous antigens (PSMA & VEGF), and two bacterial antigens | Shahed University, Iran



HONORS AND ACHIEVEMENTS

- 2012 6th ranked PhD Entrance Exam



LANGUAGE SKILLS

- Persian: Mother Tongue
- English: B2
- German: A2
- Turkish: A1



SKILLS

SOFTWARE

- | | | |
|---------------------------|--------------------------|-------------------|
| • Microsoft Office™ tools | • CLC Genomics Workbench | • Gene Runner |
| • Design-Expert & Minitab | • GraphPad | • Snap Gene |
| • ImageJ | • Prism | • Plasmid mapping |
| • Oligo 7 | • Endnote | • R programming |
| • Cytoscape | • Mendeley | • WGCNA |

LAB SKILLS

- Gene Cloning
- PCR & Real-Time PCR
- SDS-PAGE & Western blotting
- ELISA
- Phage display & Hybridoma
- Extraction of DNA and RNA
- Agarose gel electrophoresis
- Protein purification
- Primer and Probe design
- Working with animal models
- Animal cell culture
- bacterial cell culture



HOBBIES

- Reading books
- Listening music
- Running and Cycling



REFERENCES

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Professor | Shahed University, Iran
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