



Soroor Erfanimanesh



Assistant professor at Shahid Beheshti University of Medical Sciences, School of Allied Medical Sciences

Personal Information

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- Address: Department of Medical Laboratory Sciences, School of Allied Medical Sciences, Darband St., Qods Sq., Tajrish, Tehran, Iran

Education

- PhD in Medical Bacteriology, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran (2016 – 2023)

Dissertation: Determination of the prevalent bacterial profile isolated from cystic fibrosis patients and evaluation of antibiotics effects on biofilm model of *Pseudomonas aeruginosa* and *Staphylococcus aureus* in artificial sputum model

- MSc in Medical Microbiology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran (2012 – 2015)

Thesis: Evaluation of capsaicin inhibitory effects on expression levels of *ctxA*, *ctxB* and *zot* genes in *vibrio cholerae*

- Bachelor of Science in Microbiology, Shahid Chamran University of Ahvaz, Iran (2008 – 2011)

Academic Achievements

- Ranked 2nd Nationwide in the Master's Degree Entrance Examination (2012)
- Master's Degree GPA: 19.23 / 20
- Member of the Office of Talented Students, Shahid Beheshti University of Medical Sciences
- Ranked 4th Nationwide in the PhD Entrance Examination (2015)
- PhD GPA: 18.58 / 20

Publications

1. Sharifi Malvajerdi S, Abutorabi S, Shahnazi A, Gholamhosseini S, Taheri Ghahrizjani R, Yahyaei Targhi F, Erfanimanesh S, Beigverdi R, Imani A, Sari AH, Sun H. HVHC-ESD-Induced Oxygen Vacancies: An Insight into the Phenomena of Interfacial Interactions of Nanostructure Oxygen Vacancy Sites with Oxygen Ion-Containing Organic Compounds. *ACS Applied Materials & Interfaces*. 2023 Aug 30.
2. Erfanimanesh S, Emaneini M, Modaresi MR, Feizabadi MM, Halimi S, Beigverdi R, Nikbin VS, Jabalameli F. Distribution and characteristics of bacteria isolated from cystic fibrosis patients with pulmonary exacerbation. *Canadian Journal of Infectious Diseases and Medical Microbiology*. 2022 Dec 24;2022.
3. Mirhosseini SA, Taki E, Erfanimanesh S, Karami-Zarandi M, Jasemi SS, Afrasiabi S, Feyisa S, Rahdar HA, Rezaei MJ, Amani J. Strategies to Designing Chimeric Recombinant Vaccines. *Journal of Applied Biotechnology Reports*. 2021 Sep 1;8(3):203-20.
4. Erfanimanesh S, Eslami G, Taherpour A, Hashemi A. Capsaicin inhibitory effects on *Vibrio cholerae* toxin genes expression. *Avicenna journal of phytomedicine*. 2019 May;9(3):187.
5. Bahramian A, Shariati A, Azimi T, Sharahi JY, Bostanghadiri N, Gachkar L, Ghalavand Z, Chirani AS, Erfanimanesh S, Hashemi A. First report of New Delhi metallo- β -lactamase-6 (NDM-6) among *Klebsiella pneumoniae* ST147 strains isolated from dialysis patients in Iran. *Infection, Genetics and Evolution*. 2019 Apr 1;69:142-5.
6. Roshani M, Goudarzi H, Hashemi A, Ardebili A, Erfanimanesh S, Bahramian A. Detection of IS903, IS26 and ISEcp1 elements in CTX-M-producing *Klebsiella pneumoniae* and *Escherichia coli* isolates from patients with leukemia in Iran. *Jundishapur Journal of Microbiology*. 2018 Dec 31;11(12).
7. Moosazadeh Moghaddam, M., Eftekhary, M., Erfanimanesh, S., Hashemi, A., Fallah Omrani, V., Farhadihosseiniabadi, B., Lasjerdi, Z., Mossahebi-Mohammadi, M., Pal Singh Chauhan, N., Seifalian, A.M. and Gholipourmalekabadi, M., 2018. Comparison of the antibacterial effects of a short cationic peptide and 1% silver bioactive glass against extensively drug-resistant bacteria, *Pseudomonas aeruginosa* and *Acinetobacter baumannii*, isolated from burn patients. *Amino acids*, 50, pp.1617-1628.
8. Shariati A, Azimi T, Ardebili A, Chirani AS, Bahramian A, Pormohammad A, Sadredinamin M, Erfanimanesh S, Bostanghadiri N, Shams S, Hashemi A. Insertional inactivation of oprD in carbapenem-resistant *Pseudomonas aeruginosa* strains isolated from burn patients in Tehran, Iran. *New microbes and new infections*. 2018 Jan 1;21:75-80.
9. Bostanghadiri N, Pormohammad A, Chirani AS, Pouriran R, Erfanimanesh S, Hashemi A. Comprehensive review on the antimicrobial potency of the plant polyphenol Resveratrol. *Biomedicine & Pharmacotherapy*. 2017 Nov 1;95:1588-95.
10. Roshani M, Goudarzi H, Sabzehali F, Erfanimanesh S, Dadashi M, Hashemi A. The First Report of Extended-Spectrum β -Lactamase (ESBL) Genes in an *Escherichia coli* Isolate from a One-Month-Old Infant with Acute Lymphoblastic Leukemia (ALL) in Iran. *Archives of Clinical Infectious Diseases*. 2017 Oct 31;12(4).
11. Sadredinamin M, Goudarzi H, Hashemi A, Tarashi S, Erfanimanesh S, Shariati A, Ghalavand Z, Shokouhi S, Shams S, Yousefi nn. Investigation of MexAB-OprM efflux pump expression level in *Pseudomonas aeruginosa* strains isolated from patients hospitalized in Shahid Motahari Hospital in Tehran City using real-time PCR method (Iran). *Qom Univ Med Sci J* 2017;11(10):88-97

12. Sadredinamin M, Hashemi A, Goudarzi H, Tarashi S, Yousefi Nojookambari N, Erfanimanesh S. Detection of ISPa1328 and ISPpu21, two novel Insertion sequences in the OprD porin and blaIMP-1 gene among metallo-beta-lactamase-producing *Pseudomonas aeruginosa* isolated from burn patients. *Archives of Trauma Research*. 2017 Jan 1;6(1):1-7.
13. Tarashi S, Goudarzi H, Erfanimanesh S, Pormohammad A, Hashemi A. Phenotypic and molecular detection of metallo-beta-lactamase genes among imipenem resistant *Pseudomonas aeruginosa* and *Acinetobacter baumannii* strains isolated from patients with burn injuries. *Archives of Clinical Infectious Diseases*. 2016 Oct 1;11(4).
14. Taherpour A, Hashemi A, Erfanimanesh S, Taki E. Efficacy of methanolic extract of green and black teas against extended-spectrum beta-Lactamase-producing *Pseudomonas aeruginosa*. *Pak J Pharm Sci*. 2016 Jul 1;29(4):1257-61.
15. Erfanimanesh S, Hashemi A. Global Dissemination of the mcr-1 gene. *Archives of Pediatric Infectious Diseases*. 2016 Jul 1;4(3).
16. Dadashi M, Hashemi A, Eslami G, Fallah F, Goudarzi H, Erfanimanesh S, Taherpour A. Evaluation of antibacterial effects of *Zataria multiflora* Boiss extracts against ESBL-producing *Klebsiella pneumoniae* strains. *Avicenna journal of phytomedicine*. 2016 May;6(3):336.
17. Goudarzi H, Taherpour A, Fallah F, Pourkaveh B, Erfanimanesh S, Hashemi A. Laboratory detection of carbapenemases in gram-negative bacteria. *Archives of Clinical Infectious Diseases*. 2016 Apr 30;11(2).
18. Hashemi A, Tarashi S, Erfanimanesh S. Epidemiology of antibiotic resistance and MBL genes among *Pseudomonas aeruginosa* and *Acinetobacter baumannii* clinical strains isolated from burnt patients in Iran: a systematic review. *Acta Vulnologica*. 2016 Mar 1;14(1):40-3.
19. Goudarzi H, Hashemi A, Fatemeh F, Noori M, Erfanimanesh S, Yosefi N, Heidary M, Khoshnood S, Houri HR. Detection of blaDIM, blaAIM, blaGIM, blaNDM and blaVIM Genes among *Acinetobacter baumannii* strains isolated from hospitalized patients in Tehran hospitals, Iran. *Iranian Journal of Medical Microbiology*. 2016 Feb 10;9(4):32-9.
20. Hashemi A, Fallah F, Erfanimanesh S, Chirani A, Dadashi M. Detection of antibiotic resistance genes among *Pseudomonas aeruginosa* strains isolated from burn patients in Iran. *British Microbiology Research Journal*. 2016 Jan 10;12(4):1-6.
21. Roshani M, Goudarzi H, Hashemi A, Erfanimanesh S, Mehrvar A. A case report of infection caused by contaminated port in a child with leukemia. *Research in Medicine* 2016, 40(2): 90-93
22. Ashrafian F, Fallah F, Hashemi A, Erfanimanesh S, Amraei S, Tarashi S. First detection of 16S rRNA methylase and blaCTX-M-15 genes among *Klebsiella pneumoniae* strains isolated from hospitalized patients in Iran. *Research in Molecular Medicine*. 2015 Nov 10;3(4):28-34.
23. Fallah F, Eslami G, Erfanimanesh S, Hashemi A. Use of β -Lactam Antibiotic and β -Lactamase Inhibitor combination against bacteria. *Research in Medicine*. 2015 Nov 10;39(3):110-.
24. Hashemi A, Fallah F, Taherpour A, Goudarzi H, Tarashi S, Erfanimanesh S, Roshani M, Amin MS. Detection of metallo-beta-lactamases, extended-spectrum beta-lactamases (ESBLs), outer membrane porins among *Klebsiella pneumoniae* strains isolated from hospitalized patients in Tehran. *Journal of Zanjan University of Medical Sciences and Health Services*. 2015;23(98):89-102.

25. Hashemi A, Fallah F, Taherpour A, Goudarzi H, Erfanimanesh S, Taki E. Evaluation of genetic pattern and determination of oqxA gene expression levels among clinical isolates of *Klebsiella pneumoniae* strains. *Journal of Mazandaran University of Medical Sciences*. 2014 Dec 10;24(119):48-61.

26. Erfanimanesh S, Eslami G, Goudarzi H, Taherpour A, Hashemi A, Taki E. In vitro evaluation of capsaicin inhibitory effects on zonula occludens toxin in *vibrio cholerae* ATCC14035 strain. *Research in Molecular Medicine*. 2014 Nov 10;2(4):33-5.

27. Hashemi A, Fallah F, Erfanimanesh S, Hamedani P, Alimehr S, Goudarzi H. Detection of β -lactamases and outer membrane porins among *Klebsiella pneumoniae* strains isolated in Iran. *Scientifica*. 2014 Jan 1;2014.

28. Fallah F, Noori M, Hashemi A, Goudarzi H, Karimi A, Erfanimanesh S, Alimehr S. Prevalence of bla NDM, bla PER, bla VEB, bla IMP, and bla VIM Genes among *Acinetobacter baumannii* isolated from two hospitals of Tehran, Iran. *Scientifica*. 2014 Jan 1;2014.

Research Projects

- Evaluation of the Effect of Capsaicin on the Expression Levels of *ctxA*, *ctxB*, and *zot* Genes in *Vibrio cholerae*, 2012
Approved by the School of Medicine, Shahid Beheshti University of Medical Sciences
Co-Investigator (Second Executor)
- Assessment of *mexCD-oprJ* Efflux Pump Gene Expression in *Pseudomonas aeruginosa* Isolates from Hospitalized Patients Using Real-Time PCR, 2013
Approved by the School of Medicine, Shahid Beheshti University of Medical Sciences
Research Collaborator
- Evaluation of *oprD* Gene and *MexAB-oprM* Efflux Pump Expression in Carbapenem-Resistant *Pseudomonas aeruginosa* Using Real-Time PCR at Shahid Motahari Hospital, Tehran, 2013
Approved by the School of Medicine, Shahid Beheshti University of Medical Sciences
Research Collaborator
- Detection of Inducible Clindamycin Resistance in *Staphylococcus aureus* Isolates from Hospitalized Patients in Tehran Using the D-zone Test, 2014
Approved by the Infectious and Tropical Diseases Research Center, Shahid Beheshti University of Medical Sciences
Research Collaborator
- Identification of Metallo- β -lactamase Genes (*blaIMP-1*, *blaVIM-1*, *L1*, *L2*) in *Stenotrophomonas maltophilia* Isolates Collected from Hospitalized Patients in Tehran, 2014
Approved by the Infectious and Tropical Diseases Research Center, Shahid Beheshti University of Medical Sciences
Research Collaborator
- Investigation of Bacterial Profiles Isolated from Pulmonary Infections in Cystic Fibrosis Patients and Evaluation of the Effects of Selected Antibiotics on *Pseudomonas aeruginosa* and *Staphylococcus aureus* Biofilms Using an Artificial Sputum Model, 2017
Approved by the School of Medicine, Tehran University of Medical Sciences
Co-Investigator (Second Executor)

Oral/Poster presentation

- Contribution of Efflux Pumps, Porins and β -Lactamases to Multi-drug Resistance in Clinical Isolates of *Klebsiella pneumoniae*. Fatemeh Fallah, Ali Hashemi, Arezou Taherpour, Hossein Goudarzi, Gita Eslami, Masoud Dadashi, Shokouh Amraei, Elahe Taki, Soroor Erfanianesh. The 3rd Iranian congress of Medical Bacteriology., (poster presentation)
- In Vitro Evaluation of Antimicrobial Effects of Capsaicin. Soroor Erfanianesh, Gita Eslami, Hossein Goudarzi, Ali Hashemi, Elahe Taki. The 15th International Congress of Microbiology. Tehran, Iran, 26-28 Aug 2014., (poster presentation)
- Detection of blaCTX-M-15 and 16S rRNA methylase genes among *Klebsiella pneumoniae* strains isolated from Mofid, Imam Hossein and Taleghani hospitals in Tehran. Ashrafiyan F, Fallah F, Hashemi A, Erfanianesh S, Amraei Sh, Tarashi S. The 9th International Congress of Clinical Microbiology October 13-15, 2015 Shiraz, Iran., (poster presentation)
- Detection of beta-lactamases among *Klebsiella pneumoniae* strains isolated from hospitalized patients in Tehran hospitals. Hashemi A, Fallah F, Taherpour A, Goudarzi H, Erfanianesh S. The 9th International Congress of Clinical Microbiology October 13-15, 2015 Shiraz, Iran., (poster presentation)
- In vitro Evaluation of Capsaicin Inhibitory Effects on *Vibrio cholerae* Toxin Production in the 5th Iranian congress of medical bacteriology, August 2018, Maraghe., (Oral presentation)

Teaching Experience

- Instructor of Medical Microbiology (Laboratory Course) for medical students, Tehran University of Medical Sciences, Fall Semester 2017
- Lecturer in Medical Microbiology (Theoretical and Practical Components) for Clinical Laboratory Sciences Fellowship students (Partial Course), June 2022

Book Translation

- Contributor Translator, Topley & Wilson's Microbiology and Microbial Infections, Heydari Publications, 2015, ISBN: 978-600-7815-00-7

Congress Reviewing Activities

- The 12th International Congress of Laboratory and Clinic, Oral Presentation Reviewer, December 2019
- The 14th International Congress of Laboratory and Clinic, Poster Reviewer, February 2023
- The 16th International Congress of Laboratory and Clinic, Oral Presentation Reviewer, January 2025

Conferences and Academic Service

- The 5th International Congress of Laboratory and Clinic, Executive Committee Member, Tehran University of Medical Sciences, January 2013
- The 2nd National Congress of Iranian Medical Bacteriology, Executive Committee Member, Shahid Beheshti University of Medical Sciences, October 2013
- Congress on Antimicrobial-Resistant Infectious Diseases, Participant, Mazandaran University of Medical Sciences, May 2014
- The 15th Iranian Congress of Medical Microbiology, Executive Committee Member, Tehran University of Medical Sciences, September 2014
- The 17th Iranian Congress of Microbiology, Executive Committee Member, Tehran University of Medical Sciences, September 2017
- The 11th Iranian Congress of Clinical Microbiology, Participant, Shiraz University of Medical Sciences, November 2017
- PhD Entrance Interview Program, Ministry of Health, Executive Committee Member, Tehran University of Medical Sciences, September 2018

Clinical Experience

- Clinical Internship, Imam Khomeini Hospital and Razi Hospital, Summer 2017

Laboratory and Professional Skills

- Proficiency in routine laboratory diagnostic tests for bacterial identification in diverse clinical specimens
- Sampling, identification, and microbiological analysis of respiratory specimens
- Primer design using bioinformatics software
- Proficiency in molecular diagnostic techniques, including PCR and Real-Time PCR
- Experience with molecular typing methods, including REP-PCR typing, spa typing, SCCmec typing, and MLST
- Working knowledge of statistical software, including SPSS and GraphPad Prism