



Elahe Taki

Assistant Professor of Medical Bacteriology

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Current position: Faculty Member at Kermanshah University of Medical Sciences, since 2023

Education:

• **PhD. in Medical Bacteriology**

- Department of Microbiology, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran, September 2022
- **PhD. Thesis:** Evaluation of bacterial Pattern from different grades of diabetic foot ulcers (DFU) and comparison of clonal complexes of *Staphylococcus aureus* stains isolated from these ulcers and nasal cavity of the patients

• **MSc in Medical Microbiology**

- Department of Microbiology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran, February 2015

- **MSc Thesis:** Frequency of *bla*VEB, *bla*GES and *bla*DHA genes in *Pseudomonas aeruginosa* strain isolated from hospitalized burnt patients during 2014-2015
- **BSc in Cellular and Molecular Biology (Microbiology)**
 - Department of Microbiology, School of Sciences, Shahid Chamran University, Ahwaz, Iran, September 2011

Publications:

1. Taherpour A, Hashemi A, Erfanimanesh S, **Taki E**. Efficacy of methanolic extract of green and black teas against extended-spectrum b-lactamase-producing pseudomonas aeruginosa. Iranian Journal of Public Health. 2014;43(2):298
2. 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;2(4):33-35
3. Taherpour A, Hashemi A, Fallah F, Erfani-Manesh S, **Taki E**. Evaluation of Zenian and Avishan-e Shirazi antibacterial activity against Vibrio cholerae strains. Journal of Medical Bacteriology. 2014;3(1-2):17-21
4. 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;24(119):48-61
5. Sadredinamin M, Hashemi A, Goudarzi H, Tarashi S, Yousefi Nojookambari N, **Taki E**. Detection of blaIMP, blaVIM and OprD genes among Pseudomonas aeruginosa isolated from burn patients. Journal of Mazandaran University of Medical Sciences. 2016;26(138):181-186
6. Kashfi M, Hashemi A, Eslami G, Amin MS, Tarashi S, **Taki E**. The prevalence of aminoglycoside-modifying enzyme genes among Pseudomonas aeruginosa strains isolated from burn patients. Archives of Clinical Infectious Diseases. 2017;12(1)
7. Tarashi S, Goudarzi H, Hashemi A, Yousefi NN, Aadreddin Am, **Taki E**, et al. Evaluation of carbonyl cyanide 3-chlorophenyl hydrazone effect and efflux pump expression level of mexCD-oprJ among Pseudomonas aeruginosa strains isolated from hospitalized patients in Shahid Motahari hospital in Tehran during 2014-2015. 2017
8. Rahdar HA, Kazemian H, Bimanand L, Shahraki-Zahedani S, Feyisa SG, **Taki E**, et al. Community Acquired Pseudomonas Aeruginosa Pneumonia in a Young Athlete Man: A Case Report and Literature Review. Infectious Disorders-Drug Targets (Formerly Current Drug Targets-Infectious Disorders). 2018;18(3):249-254

9. Jabalameli F, **Taki E**, Emaneini M, Beigverdi R. Prevalence of metallo- β -lactamase-encoding genes among carbapenem-resistant *Pseudomonas aeruginosa* strains isolated from burn patients in Iran. *Revista da Sociedade Brasileira de Medicina Tropical*. 2018;51:270-276
10. Keykhah M, Karami M, Rahdar H, **Taki E**. Infections, Identification Tests and New Therapeutic Techniques for NonTuberculosis Mycobacteria. *Journal of Sabzevar University of Medical Sciences*. 2019;26(5):627-640
11. Mirhosseini SA, **Taki E**, Erfanimanesh S, Karami-Zarandi M, Jasemi SS, Afrasiabi S, et al. Strategies to Designing Chimeric Recombinant Vaccines. *Journal of Applied Biotechnology Reports*. 2021;8(3):203-220
12. Khoshnood S, **Taki E**, Sadeghifard N, Kaviar VH, Haddadi MH, Farshadzadeh Z, et al. Mechanism of action, resistance, synergism, and clinical implications of delamanid against multidrug-resistant *Mycobacterium tuberculosis*. *Frontiers in microbiology*. 2021;12:717045
13. Khoshnood S, Goudarzi M, **Taki E**, Darbandi A, Kouhsari E, Heidary M, et al. Bedaquiline: Current status and future perspectives. *Journal of global antimicrobial resistance*. 2021;25:48-59
14. **Taki E**, Soleimani F, Asadi A, Ghahramanpour H, Namvar A, Heidary M. Cabotegravir/Rilpivirine: the last FDA-approved drug to treat HIV. *Expert Review of Anti-infective Therapy*. 2022;20(8):1135-1147
15. Heidary M, Ebrahimi Samangani A, Kargari A, Kiani Nejad A, Yashmi I, Motahar M, et al. Mechanism of action, resistance, synergism, and clinical implications of azithromycin. *Journal of Clinical Laboratory Analysis*. 2022;36(6):e24427
16. Kyu HH, Vongpradith A, Sirota SB, Novotney A, Troeger CE, Doxey MC, et al. Age–sex differences in the global burden of lower respiratory infections and risk factors, 1990–2019: results from the Global Burden of Disease Study 2019. *The Lancet infectious diseases*. 2022;22(11):1626-1647
17. **Taki E**, Jabalameli F, Beigverdi R, Emaneini M. Microbial Profile and Antibiotic Susceptibility Pattern in Diabetic Patients with Mild, Moderate, and Severe Foot Infections in Tehran. *Archives of Razi Institute*. 2022;77(5):1925
18. Ikuta KS, Swetschinski LR, Aguilar GR, Sharara F, Mestrovic T, Gray AP, et al. Global mortality associated with 33 bacterial pathogens in 2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*. 2022;400(10369):2221-2248
19. **Taki E**, Ghanavati R, Navidifar T, Dashtbin S, Heidary M, Moghadamnia M. Ebanga™: The most recent FDA-approved drug for treating Ebola. *Frontiers in Pharmacology*. 2023;14:1083429
20. **Taki E**, Jabalameli F, Tehrani MRM, Feizabadi MM, Halimi S, Sanjari M, et al. Molecular Characteristics of *Staphylococcus aureus* Strains Isolated from Nasal Cavity and Wound Infections Among Diabetic Patients. *Current Microbiology*. 2023;80(5):147

21. Wunrow HY, Bender RG, Vongpradith A, Sirota SB, Swetschinski LR, Novotney A, et al. Global, regional, and national burden of meningitis and its aetiologies, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet Neurology*. 2023;22(8):685-711
22. Ong KL, Stafford LK, McLaughlin SA, Boyko EJ, Vollset SE, Smith AE, et al. Global, regional, and national burden of diabetes from 1990 to 2021, with projections of prevalence to 2050: a systematic analysis for the Global Burden of Disease Study 2021. *The Lancet*. 2023
23. Ghaffarpour M, Karami-Zarandi M, Rahdar HA, Feyisa SG, **Taki E**: Periodontal disease in down syndrome: Predisposing factors and potential non-surgical therapeutic approaches. *Journal of Clinical Laboratory Analysis* 2024, 38:e25002.
24. Bostanghadiri N, Narimisa N, Mirshekar M, Dadgar-Zankbar L, **Taki E**, Navidifar T, Darban-Sarokhalil D: Prevalence of colistin resistance in clinical isolates of *Acinetobacter baumannii*: a systematic review and meta-analysis. *Antimicrobial Resistance & Infection Control* 2024, 13:24.
25. Shirani M, Shariati S, Bazdar M, Sojoudi Ghamnak F, Moradi M, Shams Khozani R, **Taki E**, Arabsorkhi Z, Heidary M, Eskandari DB: The immunopathogenesis of *Helicobacter pylori*-induced gastric cancer: a narrative review. *Frontiers in Microbiology* 2024, 15:1395403.
26. Bostanghadiri N, Kouhzad M, **Taki E**, Elahi Z, Khoshbayan A, Navidifar T, Darban-Sarokhalil D: Oral microbiota and metabolites: key players in oral health and disorder, and microbiota-based therapies. *Frontiers in Microbiology* 2024, 15:1431785.
27. Kouhzad M, Götz F, Navidifar T, **Taki E**, Ghamari M, Mohammadzadeh R, Seyedolmohadesin M, Bostanghadiri N: Carcinogenic and anticancer activities of microbiota-derived secondary bile acids. *Frontiers in Oncology* 2025, 15:1514872.

Projects:

1. Investigating the antibacterial properties of new synthetic derivatives of sulfonamides
2. Investigating the phenotypic and genotypic pattern of multi-drug resistant *Pseudomonas aeruginosa* containing bla_{VEB}, bla_{GES}, and bla_{DHA} genes using PCR and sequencing methods
3. Determination of mexCD-oprJ pump in *Pseudomonas aeruginosa* strains isolated from hospitalized patients using Real-Time PCR technique
4. Investigating the expression level of oprD gene and MexAB-oprM pumps in carbapenem-resistant *Pseudomonas aeruginosa* using Real-Time PCR method in Shahid Motahari Hospital, Tehran

5. Examining the profile of bacteria in different grades of diabetic foot ulcer and comparing the clonal complex of *S. aureus* isolates isolated from the ulcer and nasal cavity of patients
6. Phenotypic and genotypic identification of *S. aureus* isolates obtained from diabetic foot ulcer
7. Investigation of nosocomial infections among infants admitted to Shariati Hospital in Tehran during 2017-2020
8. Studying the rate of *Streptococcus mutans* biofilm formation on different types of coated orthodontic wires under laboratory conditions
9. Prevalence of human papillomavirus (HPV) and HIV co-infection in Asia: A meta-analysis study
10. Global prevalence of respiratory viruses in patients with idiopathic pulmonary fibrosis: a meta-analysis study.
11. Comparison of the frequency of urinary tract infections caused by gram-negative bacilli and their antibiotic resistance profile in outpatients referred to Yas Hospital in 2023 and 2024.

Presentation:

1. Phenotypic detection of *Pseudomonas aeruginosa* isolated from burn patients by disk diffusion and MIC methods, mini-oral presentation, 5th National and 1st International congress on Novel and Innovative Laboratory Technologies, Razi International Conference Center, October 2017
2. Phenotypic screening of extended spectrum beta lactamases and metallo beta lactamases in multi-drug resistant *Pseudomonas aeruginosa* strains isolated from burn patient, National Congress of Antimicrobial Resistant Infectious Diseases, Sari, Mazandaran, 2014
3. In Vitro evaluation of antimicrobial effects of Capsaicin, 15th International Congress of Iran's Microbiology, Tehran, Iran, August 2014

4. Detection of bla_{IMP}, bla_{VIM} and bla_{NDM} genes among *Pseudomonas aeruginosa* strains isolated from hospitalized patients in Shahid Motahari Burn hospital Tehran, Iran, 9th International Congress of Clinical Microbiology, 2014

5. Efficacy of methanolic extract of green and black Teas against extended spectrum beta lactamases producing *Pseudomonas aeruginosa*, 15th International Congress of Iran's Microbiology, Tehran, Iran, August 2014

Technical Experience:

- Specialized sampling, diagnosis and investigation of microbiology of diabetic wounds and burn wounds
- DNA and RNA extraction
- PCR
- Real time PCR
- SDS-PAGE
- Western blot
- *spa*-typing
- SCC-mec typing
- MLST
- Systematic review and Meta analyses

Research Interests:

- Antibiotic resistance mechanisms of bacteria
- Host-pathogen interactions
- Molecular typing in bacterial infections

Honor, and Awards:

- The Best Graduated MSc student in Medical Microbiology 2015 (Score:19.66)

- The Best Graduated PhD student in Medical Bacteriology 2020 (Score: 18.68)
- Awarded as the best student in the 9th academic festival of Shahid Motahari, Shahid Beheshti University of Medical Sciences, 2015