

## Curriculum Vitae (CV)

### 1) Personal details

**Name:** Farzad

**Surname:** Khademi

**Gender:** Male

**Date of birth:** December 1, 1985-Ardabil

**Majored in:** Medical Bacteriology

**Academic department:** Ardabil University of Medical Sciences, Faculty of Medicine, Ardabil, Iran.

**Academic degree:** Associate Professor

**Work address:** Ardabil, Daneshgah street

**Tel:** ++989144601513

**E-mail:** [k\\_farzad@yahoo.com](mailto:k_farzad@yahoo.com)/[f.khademi@arums.ac.ir](mailto:f.khademi@arums.ac.ir)

### 2) Academic educations

- **Ph.D. in Medical Bacteriology (2013-2017)**, Mashhad University of Medical Sciences, Faculty of Medicine, Mashhad, Iran.  
**Dissertation:** "Design and construction of a nanovaccine consist of *Mycobacterium tuberculosis* HspX/EsxS Fusion Protein encapsulated with MPLA (Monophosphoryl Lipid A) in a new cationic lipid-modified PLGA nanoparticle and evaluation of its immunogenicity after nasal and subcutaneous immunization in Mice"
- **M.Sc. in Medical Microbiology (2010-2013)**, Isfahan University of Medical Sciences, Faculty of Medicine, Isfahan, Iran.  
**Dissertation:** "The study of mutation in *23SrRNA* gene of clarithromycin resistance *Helicobacter pylori* and resistance pattern to clarithromycin, metronidazole and amoxicillin in patients with gastrointestinal disorders in Isfahan city"
- **B.Sc. in Biology (2006-2010)**, Department of Biology, Faculty of Basic Sciences, University of Mohaghegh Ardabili, Ardabil, Iran.

### 3) Research activities

**A) Publications in the journals of level I (ISI), level II (PubMed) and level III: (Scopus, Chemical Abstract, Embase, Biological Abstract)**

- 1) Ghanbari F, Vaez H, Taheri RA, Sahebkar A, Behshod P, **Khademi F (Corresponding Author)**. *Helicobacter pylori* in water, vegetables and foods of animal origin: A systematic review and meta-analysis on the prevalence, antibiotic resistance and genotype status in Iran. *Gene Reports*. **2020** Oct 14:100913.
- 2) **Khademi F**, Sahebkar A. Prevalence of Fluoroquinolone-Resistant *Campylobacter* Species in Iran: A Systematic Review and Meta-Analysis. *International Journal of Microbiology*. **2020** Oct 30;2020.

- 3) **Khademi F**, Vaez H, Sahebkar A, Taheri RA. Group A *Streptococcus* antibiotic resistance in Iranian children: A meta-analysis. *Oman Medical Journal*. **2021** Jan;36(1): e222.
- 4) Gharibani KM, Azami A, Parvizi M, **Khademi F**, Mousavi SF, Arzanlou M. High frequency of macrolide-resistant *Streptococcus pneumoniae* colonization in respiratory tract of healthy children in Ardabil, Iran. *Tanaffos*. **2019** Feb;18(2):118.
- 5) **Khademi F**, Sahebkar A. A Systematic Review and Meta-analysis on the Epidemiology of Antibiotic-resistant *Yersinia* Species in Food and Clinical Specimens in Iran. *Int J Enteric Pathog*. **2019**;7(4):113-20.
- 6) Vaez H, Sahebkar A, Mohammadi A, Arzanlou M, **Khademi F (Corresponding Author)**. Diversity of Toll-like Receptor Genes and *Helicobacter Pylori* Infections: A Meta-Analysis Study. *International Journal of Medical Laboratory*. **2020** Jun 2.
- 7) Mousavi SH, Peeri-Doghaheh H, Mohammadi-Ghalehbin B, Teimourpour R, Maleki D, **Khademi F**, Arzanlou M. High-level resistance to aminoglycosides and ampicillin among clinical isolates of *Enterococcus* species in an Iranian referral hospital. *Iranian Journal of Microbiology*. **2020** Aug;12(4):319.
- 8) Vaez H, Ghanbari F, Sahebkar A, **Khademi F (Corresponding Author)**. Antibiotic resistance profiles of *Salmonella* serotypes isolated from animals in Iran: a meta-analysis. *Iranian Journal of Veterinary Research*. **2020**;21(3):188.
- 9) Mohammadi A, Khanbabaei H, Nasiri-Kalmarzi R, **Khademi F**, Jafari M, Tajik N. Vitamin D receptor ApaI (rs7975232), BsmI (rs1544410), FokI (rs2228570), and TaqI (rs731236) gene polymorphisms and susceptibility to pulmonary tuberculosis in an Iranian population: a systematic review and meta-analysis. *Journal of Microbiology, Immunology and Infection*. **2020** Dec 1;53(6):827-35.
- 10) Delarampour A, Ghalehnoo ZR, **Khademi F**, Vaez H. Antibiotic resistance patterns and prevalence of class I, II and III Integrons among clinical isolates of *Klebsiella pneumoniae*. *Le infezioni in medicina*. **2020** Mar 1;28(1):64-9.
- 11) **Khademi F**, Sahebkar A. An updated systematic review and meta-analysis on the *Helicobacter pylori* antibiotic resistance in Iran (2010–2020). *Microbial Drug Resistance*. **2020** Oct 1;26(10):1186-94.
- 12) **Khademi F**, Vaez H, Ghanbari F, Arzanlou M, Mohammadshahi J, Sahebkar A. Prevalence of fluoroquinolone-resistant *Salmonella* serotypes in Iran: a meta-analysis. *Pathogens and global health*. **2020** Jan 2;114(1):16-29.
- 13) **Khademi F**, Sahebkar A. Group B streptococcus drug resistance in pregnant women in Iran: a meta-analysis. *Taiwanese Journal of Obstetrics and Gynecology*. **2020**;59(5):635-42.
- 14) Vaez H, Sahebkar A, **Khademi F (Corresponding Author)**. A systematic review and meta-analysis on the epidemiology of antibiotic resistance of *Vibrio cholerae* in Iran. *Annali di Igiene, Medicina Preventiva e di Comunità*. **2019** May 1;31(3):279-90.
- 15) Delarampour A, Ghalehnoo ZR, **Khademi F**, Delarampour M, Vaez H. Molecular detection of carbapenem-resistant genes in clinical isolates of *Klebsiella pneumoniae*. *Ann Ig*. **2019** Jul 1;31(4):349-55.
- 16) **Khademi F**, Vaez H, Momtazi-Borojeni AA, Majnooni A, Banach M, Sahebkar A. Bacterial infections are associated with cardiovascular disease in Iran: a meta-analysis. *Archives of medical science: AMS*. **2019** Jul;15(4):902.

- 17) **Khademi F**, Sahebkar A. Antibiotic resistance of *Neisseria* species in Iran: A systematic review and meta-analysis. Asian Pacific Journal of Tropical Medicine. **2019** Jan 1;12(1):8.
- 18) **Khademi F**, Tafaghodi M, Ahmadipour Z, Moradi B, Meshkat Z. The roles of latency-associated antigens in tuberculosis vaccines. Indian Journal of Tuberculosis. **2019** Oct 1;66(4):487-91.
- 19) **Khademi F**, Derakhshan M, Najafi A, Tafaghodi M. Enhancing immunogenicity of novel multistage subunit vaccine of *Mycobacterium tuberculosis* using PLGA: DDA hybrid nanoparticles and MPLA: Subcutaneous administration. Iranian journal of basic medical sciences. **2019** Aug;22(8):893.
- 20) Vaez H, Sahebkar A, Pourfarzi F, **Khademi F (Corresponding Author)**. Prevalence of antibiotic resistance of *Haemophilus influenzae* in Iran-a meta-analysis. Iranian journal of otorhinolaryngology. **2019** Nov;31(107):349.
- 21) **Khademi F**, Derakhshan M, Abbaspour MR, Sadri K, Tafaghodi M. Formulation and optimization of a new cationic lipid-modified PLGA nanoparticle as delivery system for *Mycobacterium tuberculosis* hspx/esxs fusion protein: an experimental design. Iranian journal of pharmaceutical research: IJPR. **2019**;18(1):446.
- 22) Vaez H, Salehi-Abargouei A, Ghalehnoo ZR, **Khademi F (Corresponding Author)**. Multidrug resistant *Pseudomonas aeruginosa* in Iran: A systematic review and meta-analysis. Journal of global infectious diseases. **2018** Oct;10(4):212.
- 23) Vaez H, Sahebkar A, **Khademi F (Corresponding Author)**. Carbapenem-resistant *Klebsiella pneumoniae* in Iran: a systematic review and meta-analysis. Journal of Chemotherapy. **2019** Jan 2;31(1):1-8.
- 24) **Khademi F**, Sahebkar A. A systematic review and meta-analysis on the prevalence of antibiotic-resistant *Listeria* species in food, animal and human specimens in Iran. Journal of food science and technology. **2019** Dec;56(12):5167-83.
- 25) Vaez H, **Khademi F (Corresponding Author)**, Sahebkar A. Metallo-beta-Lactamase-producing *Pseudomonas aeruginosa* in Iran: a systematic review and meta-analysis. Le infezioni in medicina. **2018** Sep 1;26(3):216-25.
- 26) **Khademi F**, Derakhshan M, Najafi A, Tafaghodi M. A novel antigen of *Mycobacterium tuberculosis* and MPLA adjuvant co-entrapped into PLGA: DDA hybrid nanoparticles stimulates mucosal and systemic immunity. Microbial pathogenesis. **2018** Dec 1;125:507-13.
- 27) **Khademi F**, Sahebkar A. The prevalence of antibiotic-resistant *Clostridium* species in Iran: a meta-analysis. Pathogens and global health. **2019** Feb 17;113(2):58-66.
- 28) **Khademi F**, Sahebkar A, Mohammadi-Ghalehbin B, Arzanlou M, Peeridogaheh H. Drug resistance of clinical and environmental isolates of *Brucella* species in Iran: a meta-analysis. Reviews in Medical Microbiology. **2018** Oct 1;29(4):166-72.
- 29) **Khademi F**, Sahebkar A. Fluoroquinolones-resistant *Shigella* species in Iranian children: a meta-analysis. World Journal of Pediatrics. **2019** Oct;15(5):441-53.
- 30) **Khademi F**, Taheri RA, Vaez H, Momtazi-Borojeni AA, Soleimanpour S. Are chitosan natural polymers suitable as adjuvant/delivery system for anti-tuberculosis vaccines?. Microbial pathogenesis. **2018** Aug 1;121:218-23.
- 31) Vaez H, Tafaghodi M, Sahebkar AH, Arzanlou M, **Khademi F (Corresponding Author)**. Antibiotic resistance of *Helicobacter pylori* in Iranian children: a

- systematic review and meta-analysis. *Microbial Drug Resistance*. **2018** Sep 1;24(7):980-6.
- 32) Vaez H, Vaez V, **Khademi F (Corresponding Author)**. Effect of mutation in efflux pump regulatory protein (MexR) of *Pseudomonas aeruginosa*: a bioinformatic study. *Medical Laboratory Journal*. **2017** Nov 10;11(6):35-41.
- 33) **Khademi F**, Momtazi-borojeni AA, Reiner Ž, Banach M, Al-Rasadi KA, Sahebkar A. PCSK9 and infection: A potentially useful or dangerous association?. *Journal of cellular physiology*. **2018** Apr;233(4):2920-7.
- 34) **Khademi F**, Sahebkar AH, Vaez H, Arzanlou M, Peeridogaheh H. Characterization of clarithromycin-resistant *Helicobacter pylori* strains in Iran: A systematic review and meta-analysis. *Journal of global antimicrobial resistance*. **2017** Sep 1;10:171-8.
- 35) Naderi K, Ghanbari F, **Khademi F**, Zamanzad B. Prevalence of *erm* gene among clinical isolates of *staphylococcus aureus* in Shahrekord, Iran. *Journal of Kerman University of Medical Sciences*. **2018**; 25 (1): 67-76.
- 36) **Khademi F**, Vaez H. Cholera Outbreak in Yemen: A Regional or a Global Health Crisis?. *Int J Infect*. **2018** Jan 1;5(2).
- 37) **Khademi F**, Derakhshan M, Tafaghodi M. Potential of polymeric particles as future vaccine delivery systems/adjuvants for parenteral and non-parenteral immunization against tuberculosis: A systematic review. *Iranian journal of basic medical sciences*. **2018** Feb;21(2):116.
- 38) Vaez H, Salehi-Abargouei A, **Khademi F (Corresponding Author)**. Systematic review and meta-analysis of imipenem-resistant *Pseudomonas aeruginosa* prevalence in Iran. *Germs*. **2017** Jun;7(2):86.
- 39) Tafaghodi M, Soleimanpour S, **Khademi F**. HspX protein as a candidate vaccine against *Mycobacterium tuberculosis*: an overview. *Frontiers in Biology*. **2018** Aug;13(4):293-6.
- 40) **Khademi F**, Sahebkar A, Ghanbari F, Vaez H. Bacterial co-infections in HIV/AIDS-positive subjects: A systematic review and meta-analysis. *Folia medica*. **2018**;60(3):339-50.
- 41) **Khademi F**, Derakhshan M, Tafaghodi M, Soleimanpour S. Multi-stage subunit vaccines against *Mycobacterium tuberculosis*: an alternative to the BCG vaccine or a BCG-prime boost?. *Expert review of vaccines*. **2018** Jan 2;17(1):31-44.
- 42) Sabour S, Arzanlou M, Vaez H, Rahimi G, Sahebkar A, **Khademi F (Corresponding Author)**. Prevalence of bacterial vaginosis in pregnant and non-pregnant Iranian women: a systematic review and meta-analysis. *Archives of gynecology and obstetrics*. **2018** May;297(5):1101-13.
- 43) **Khademi F**, Sahebkar A, Fasihi-Ramandi M, Taheri RA. Induction of strong immune response against a multicomponent antigen of *Mycobacterium tuberculosis* in BALB/c mice using PLGA and DOTAP adjuvant. *Apmis*. **2018** Jun;126(6):509-14.
- 44) Ghanbari F, **Khademi F**, Saberianpour S, Shahin M, Ghanbari N, Naderi K, Motalebi-Rad T. An epidemiological study on the prevalence and antibiotic resistance patterns of bacteria isolated from urinary tract infections in central Iran. *Avicenna Journal of Clinical Microbiology and Infection*. **2017** May 9;4(3):422-14.

- 45) Ghanbari F, Saberianpour S, Zarkesh-Esfahani FS, Ghanbari N, Taraghian A, **Khademi F**. Staphylococcal cassette chromosome mec (SCCmec) typing of methicillin-resistant *Staphylococcus aureus* strains isolated from community-and hospital-acquired infections. *Avicenna Journal of Clinical Microbiology and Infection*. **2017** Apr 23;4(2):42244-.
- 46) **Khademi F**, Ghanbari F, Mellmann A, Najafzadeh MJ, Khaledi A. Phylogenetic relationships among *Staphylococcus aureus* isolated from clinical samples in Mashhad, Iran. *Journal of infection and public health*. **2016** Sep 1;9(5):639-44.
- 47) **Khademi F**, Faghri J, Moghim S, Esfahani BN, Fazeli H, Poursina F, Adibi P, Madhi M, Safaei HG. The study of mutation in 23S rRNA resistance gene of *Helicobacter pylori* to clarithromycin in patients with gastrointestinal disorders in Isfahan—Iran. *Advanced biomedical research*. **2014**;3.
- 48) **Khademi F**, Faghri J, Poursina F, Esfahani BN, Moghim S, Fazeli H, Adibi P, Mirzaei N, Akbari M, Safaei HG. Resistance pattern of *Helicobacter pylori* strains to clarithromycin, metronidazole, and amoxicillin in Isfahan, Iran. *Journal of research in medical sciences: the official journal of Isfahan University of Medical Sciences*. **2013** Dec;18(12):1056.
- 49) **Khademi F**, Poursina F, Hosseini E, Akbari M, Safaei HG. *Helicobacter pylori* in Iran: A systematic review on the antibiotic resistance. *Iranian journal of basic medical sciences*. **2015** Jan;18(1):2.
- 50) Havaei SA, Ghanbari F, Rastegari AA, Azimian A, **Khademi F**, Hosseini N, Ebrahimzadeh Namvar A, Vaez H, Havaei SM, Shahin M. Molecular typing of hospital-acquired *Staphylococcus aureus* isolated from Isfahan, Iran. *International scholarly research notices*. **2014**;2014.
- 51) **Khademi F**, Derakhshan M, Vaez H, Sadeghi R. Middle east *Mycobacterium tuberculosis* antibiotic resistance: a systematic review and meta-analysis. *Infection Epidemiology and Microbiology*. **2017** Jan 10;3(1):25-35.
- 52) **Khademi F**, Karami P, Ghazvini K, Ghanbari F. Prevalence and antimicrobial susceptibility patterns of bacteria isolated from different clinical infections in Hamadan, Iran. *Infection Epidemiology and Microbiology*. **2016** Jul 10;2(3):8-13.
- 53) Khaledi A, **Khademi F**, Esmaili D, Esmaili SA, Rostami H. The role of HPaA protein as candidate vaccine against *Helicobacter pylori*. *Der Pharma Chemica*. **2016**;8(3):235-7.
- 54) **Khademi F**, Aryan E. Vincent's angina in a 17-year old girl with emotional stress: A case report. *Archives of Clinical Infectious Diseases*. **2015** Jul 1;10(3).
- 55) **Khademi F**, Derakhshan M, Sadeghi R. The role of toll-like receptor gene polymorphisms in tuberculosis susceptibility: a systematic review and meta-analysis. *Reviews in Clinical Medicine*. **2016** Nov 1;3(4):133-40.
- 56) **Khademi F**, Derakhshan M, Meshkat Z, Tafaghodi M, Ghazvini K, Aryan E, Sankian M. *Mycobacterium tuberculosis* HspX/EsxS fusion protein: gene cloning, protein expression, and purification in *Escherichia coli*. *Reports of biochemistry & molecular biology*. **2017** Oct;6(1):15.
- 57) Madhi M, Poursina F, Moghim S, **Khademi F**, Adibi P, Faghr J, Fazeli H, Esfahani BN, Kiani SJ, Safaei HG. Recommendation of *flaA* and *flaB* as housekeeping genes in detection of *Helicobacter pylori*. *J Chem Biol Phys Sci*. **2013** Aug 1;3(4):2687-96.

- 58) Karimi SM, Sankian M, **Khademi F**, Tafaghodi M. Chitosan (CHT) and trimethylchitosan (TMC) nanoparticles as adjuvant/delivery system for parenteral and nasal immunization against *Mycobacterium tuberculosis* (MTb) ESAT-6 antigen. *Nanomedicine Journal*. **2016** Oct 1;3(4):223-9.
- 59) Ghanbari F, Ghajavand H, Havaei R, Jami MS, **Khademi F**, Heydari L, Shahin M, Havaei SA. Distribution of *erm* genes among *Staphylococcus aureus* isolates with inducible resistance to clindamycin in Isfahan, Iran. *Advanced biomedical research*. **2016**;5.
- 60) **Khademi F**, Sahebkar A. An updated systematic review and meta-analysis on *Mycobacterium tuberculosis* antibiotic resistance in Iran (2013-2020). *Iranian Journal of Basic Medical Sciences*. **2021** Apr;24(4):428.
- 61) Meshkat Z, **Khademi F**, Tafaghodi M. Immunogenicity of HspX/EsxS fusion protein of *Mycobacterium tuberculosis* along with ISCOMATRIX and PLUSCOM nano-adjuvants after subcutaneous administration in animal model. *Microbial Pathogenesis*. **2021** May 1;154:104842.
- 62) **Khademi F**, Maarofi K, Arzanlou M, Peeri-Dogaheh H, Sahebkar A. Which missense mutations associated with DNA gyrase and topoisomerase IV are involved in *Pseudomonas aeruginosa* clinical isolates resistance to ciprofloxacin in Ardabil?. *Gene Reports*. **2021** Sep 1;24:101211.
- 63) **Khademi F**, Sahebkar A. Is Penicillin-Nonsusceptible *Streptococcus pneumoniae* a Significant Challenge to Healthcare System? A Systematic Review and Meta-Analysis. *Scientifica*. **2021** May 27;2021.
- 64) Hasanpour F, Neyestani Z, Arzanlou M, Moradi-Asl E, Sahebkar A, **Khademi F (Corresponding Author)**. Vancomycin-resistant enterococci in Iran: A systematic review and meta-analysis of non-clinical studies. *Gene Reports*. **2021** Jul 6:101265.
- 65) Safarirad S, Arzanlou M, Mohammadshahi J, Vaez H, Sahebkar A, **Khademi F (Corresponding Author)**. Prevalence and Characteristics of Metallo-beta Lactamase-positive and High-risk Clone ST235 *Pseudomonas aeruginosa* at Ardabil Hospitals. *Jundishapur J Microbiol*. **2021**;14(3): e115819.
- 66) Najafi A, Ghazvini K, Sankian M, Gholami L, Amini Y, Zare S, **Khademi F**, Tafaghodi M. T helper type 1 biased immune responses by PPE17 loaded core-shell alginate-chitosan nanoparticles after subcutaneous and intranasal administration. *Life Sciences*. **2021**; 282: 119806.
- 67) Maleki D, Manouchehrifar M, Kheljan MN, Mossavi SH, Jannati E, Doghaheh HP, Teimourpour R, **Khademi F**, Arzanlou M. Vancomycin-resistant *Enterococcus* species: Antimicrobial resistance and virulence genes profile. *Gene Reports*. **2021**: 101338.
- 68) **Khademi F**, Ashrafi SS, Neyestani Z, Vaez H, Sahebkar A. Prevalence of class I, II and III integrons in multidrug-resistant and carbapenem-resistant *Pseudomonas aeruginosa* clinical isolates. *Gene Reports*. **2021** Oct 21:101407.
- 69) Bazghandi SA, Arzanlou M, Peeridogaheh H, Vaez H, Sahebkar A, **Khademi F (Corresponding Author)**. Prevalence of Virulence Genes and Drug Resistance Profiles of *Pseudomonas aeruginosa* Isolated from Clinical Specimens. *Jundishapur Journal of Microbiology*. **2021** Aug 31; 14(8): e118452.
- 70) Namaki M, Habibzadeh S, Vaez H, Arzanlou M, Safarirad S, Bazghandi SA, Sahebkar A, **Khademi F (Corresponding Author)**. Prevalence of resistance genes

- to biocides in antibiotic-resistant *Pseudomonas aeruginosa* clinical isolates. Molecular Biology Reports. **2021** Dec 1:1-7.
- 71) Vaez H, Kalarestaghi H, Sahebkar A, **Khademi F (Corresponding Author)**. Prevalence of antibiotic resistance of *Proteus* species in urinary tract infections in Iran: A systematic review and meta-analysis. Gene Reports. **2022** Jun 7:101632.
- 72) Saeid M, Yazdanpour Z, **Khademi F**, Vaez H. Prevalence of extended-spectrum beta lactamase *bla*CTXM, *bla*SHV and *bla*TEM genes in *Escherichia coli* strains isolated from clinical samples of patients with urinary tract infections. Int J Basic Sci Med. **2022**; 7(2):89-93.
- 73) **Khademi F**, Vaez H, Neyestani Z, Sahebkar A. Prevalence of ESBL-Producing *Enterobacter* Species Resistant to Carbapenems in Iran: A Systematic Review and Meta-Analysis. International Journal of Microbiology. **2022** Oct 21;2022.
- 74) Yousefi S, Nazari M, Ramazanzadeh R, Sahebkar A, Safarzadeh E, **Khademi F (Corresponding Author)**. Association of carbapenem and multidrug resistance with the expression of efflux pump-encoding genes in *Pseudomonas aeruginosa* clinical isolates. Acta Microbiologica et Immunologica Hungarica. **2023** Jun 16;70(2):161-6.
- 75) Nazari M, Ahmadi H, Hosseinzadeh S, Sahebkar A, **Khademi F (Corresponding Author)**. Imipenem resistance associated with amino acid alterations of the OprD porin in *Pseudomonas aeruginosa* clinical isolates. Acta Microbiologica et Immunologica Hungarica. **2023** Jun 21.
- 76) Hasanpour F, Ataei N, Sahebkar A, **Khademi F (Corresponding Author)**. Distribution of Class A Extended-Spectrum  $\beta$ -Lactamases Among *Pseudomonas aeruginosa* Clinical Strains Isolated from Ardabil Hospitals. Jundishapur Journal of Microbiology. **2023** Mar 31;16(4).
- 77) Neyestani Z, **Khademi F**, Teimourpour R, Amani M, Arzanlou M. Prevalence and mechanisms of ciprofloxacin resistance in *Escherichia coli* isolated from hospitalized patients, healthy carriers, and wastewaters in Iran. BMC Microbiology. **2023** Jul 17;23(1):191.
- 78) Vaez H, Yazdanpour Z, **Khademi F**, Pishdadian A. Prevalence and Antibiotic Resistance Patterns of Metallo-Beta-Lactamase-Producing *Pseudomonas aeruginosa* Isolated from Patients in a Hospital in Zabol, Southeast of Iran. Infection Epidemiology and Microbiology. **2023** Oct 10;9(3): 201-208.
- 79) Jannati E, **Khademi F**, Manouchehrifar M, Maleki D, Amirmozaffari N, Sadat Nikbin V, Arzanlou M. Antibiotic resistance and virulence potentials of *E. faecalis* and *E. faecium* in hospital wastewater: a case study in Ardabil, Iran. Journal of Water and Health. **2023** Sep 1;21(9):1277-90.
- 80) Manouchehrifar M, **Khademi F**, Doghaheh HP, Habibzadeh S, Arzanlou M. Macrolide-Lincosamide Resistance and Virulence Genes in Staphylococcus aureus Isolated from Clinical Specimens in Ardabil, Iran. Iranian Journal of Pathology. **2023**;18(4):415.
- 81) Yousefi Avarvand A, Meshkat Z, **Khademi F**, Aryan E, Sankian M, Tafaghodi M. Enhancement of the immunogenicity of a *Mycobacterium tuberculosis* fusion protein using ISCOMATRIX and PLUSCOM nano-adjuvants as prophylactic vaccine after nasal administration in mice. Iran J Basic Med Sci. **2024**; 27: 24-30.

- 82) Rashedi F, Yazdanpour Z, **Khademi F**, Vaez H. Prevalence of carbapenem-resistant Metallo-Beta-Lactamase-producing *Escherichia coli* strains isolated from urinary tract infections. Medical Laboratory Journal. **2023** Nov 10;17(6):19-22.
- 83) Jafari-Ramedani S, Nazari M, Arzanlou M, Peeri-Dogaheh H, Sahebkar A, **Khademi F (Corresponding Author)**. Prevalence and molecular characterization of colistin resistance in *Pseudomonas aeruginosa* isolates: insights from a study in Ardabil hospitals. BMC Microbiology. **2024** May 3;24(1):152.
- 84) Saeli N, Jafari-Ramedani S, Ramazanzadeh R, Nazari M, Sahebkar A, **Khademi F (Corresponding Author)**. Prevalence and mechanisms of aminoglycoside resistance among drug-resistant *Pseudomonas aeruginosa* clinical isolates in Iran. BMC Infectious Diseases. **2024** Jul 9;24(1):680.
- 85) Mohammadnezhad N, Nazari M, Mostafavi SK, Sahebkar A, **Khademi F (Corresponding Author)**. Phenotypic and genotypic identification of class C and D  $\beta$ -lactamases in clinical isolates of *Pseudomonas aeruginosa*: a cross-sectional study. Health Science Reports. **2024** Sep;7(9):e70095.
- 86) Hasanpour F, **Khademi F**, Ghalehbin BM, Kheljan MN, Jannati E, Iranpour S, Arzanlou M. A comprehensive One Health investigation of erythromycin and quinupristin/dalfopristin resistant *Enterococcus* spp. in Iran. Journal of Water and Health. **2025** Apr 1;23(4):439-49.
- 87) Shakib P, Arzanlou M, Sobhi P, Mojebi M, Bahrami M, Mahdizadeh F, Asadi L, Amanzadeh M, Mohammadnia A, **Khademi F**, Ramazanzadeh R. Lessons from an 11-year retrospective cohort study of *Escherichia coli* causing UTI in Imam Hospital Ardabil, Iran. Iranian journal of microbiology. **2024** Dec;16(6):737.
- 88) Sarmast M, Peeri-Dogaheh H, Karami C, **Khademi F**. Isolation and characterization of a lytic phage and its efficacy against multi-drug resistant strains of *pseudomonas aeruginosa*. European Journal of Clinical Microbiology & Infectious Diseases. **2025** Oct 14:1-9.
- 89) Bagali FM, Moradi-Asl E, Abbasi-Ghahramanloo A, Sahebkar A, **Khademi F (Corresponding Author)**. Molecular detection of foodborne pathogens in Ardabil's milk supply. BMC Veterinary Research. **2025** Oct 2;21(1):554.
- 90) **Khademi F**, Vaez H. Why is early and accurate detection of infections caused by carbapenem-resistant enterobacteriaceae important? International Journal of Basic Science in Medicine. 2025;10(2):101-102.
- 91) Malek Bagali F, **Khademi F**, Enferadi A, Golshani R, Heidari Z. Molecular Detection of *Babesia* Spp. and *Theileria* Spp. in Ticks Collected from Livestock in Ardabil Province, Northwestern Iran. Vector-Borne and Zoonotic Diseases. 2026 Jan 9:15303667251403852.
- 92) Bagali FM, **Khademi F**, Rezaverdinejad M, Enferadi A. Molecular surveillance reveals *Rickettsia aeschlimannii* in ticks from livestock in northwestern Iran: A short communication. Medical and Veterinary Entomology. 2026 Mar 30.
- 93) Bagali FM, Abedi HR, Rezaverdinejad M, **Khademi F (Corresponding Author)**. Genomic investigation of *Mycobacterium bovis* in bulk unpasteurized dairy products in Ardabil Province, Iran. Scientific Reports. 2026 Apr 12.
- 94) Bagali FM, Rezaverdinejad M, **Khademi F**, Asadi-moghaddam A, Heidari Z. Molecular epidemiology and phylogenetic analysis of *Anaplasma ovis* and

*Anaplasma marginale* in Ixodidae infesting livestock in northwestern Iran. BMC Veterinary Research. **2026**.

**B) Publications in the Persian journals**

- 1) Bazghandi SA, Safarirad S, Arzanlou M, Peeri-Dogaheh H, Ali-Mohammadi H, **Khademi F (Corresponding Author)**. Prevalence of multidrug-resistant *Pseudomonas aeruginosa* strains in Ardabil. J. Ardabil Univ. Med. Sci. **2020**; 20(2): 1–7.
- 2) Sarafan Sadeghi A, Ansari N, **Khademi F**, Mir Nejad R, Zamanzad B. Drug Resistance Patterns and Genotyping of *Acinetobacter baumannii* Strains Isolated from Patients Admitted to Shahrekord Teaching Hospitals Using REP-PCR. Journal of Ardabil University of Medical Sciences. **2019**;19(1).
- 3) Ghanbari F, Ghajavand H, Behshod P, Ghanbari N, **Khademi F (Corresponding Author)**. Prevalence of Hospital-Acquired Infections in Hospitalized Patients in Different Wards of Shariati Hospital of Isfahan, 2014. Journal of Health. **2018** Jan 10;8(5):511-7.
- 4) **Khademi F**, Ghazvini K, Nakhzari Moghadam M, Meshkat Z. Colonization rate of *Streptococcus agalactiae* in pregnant women in Iran: A systematic review. The Iranian Journal of Obstetrics Gynecology and Infertility. **2017** Mar; 19(40): 45-54.
- 5) **Khademi F**, Faghri J, Poursina F, Madhi M, Adibi P, Safaei HG. Comparative Evaluation of Disk Diffusion and E-Test in Determining the Susceptibility of *Helicobacter pylori* to Metronidazole, Clarithromycin and Amoxicillin. Journal of Isfahan Medical School. **2013** Mar 22;30(222).
- 6) Madhi M, Moghim S, Pursina F, Adibi P, **Khademi F**, Farajzadegan Z, Safaei HG. Evaluating *Helicobacter pylori* FlaA in Clinical Isolates from Alzahra Hospital, Isfahan, Iran. Journal of Isfahan Medical School. **2013** Apr 1;31(223).
- 7) Meshkat Z, **Khademi F (Corresponding Author)**. Investigation of Antibiotic resistance profiles of Enterococci isolated from different clinical specimens in Qaem hospital, Mashhad. Journal of Torbat Heydariyeh University of Medical Sciences. **2017**; 4(3): 48-54.
- 8) Hamidian K, Abdollahi E, Yazdanpour Z, Shahrakimojehed L, **Khademi F**, Vaez H. Antibiotic Resistance Patterns and Prevalence of Class I, II and III Integrons among *Escherichia coli* Strains collected from Urinary Tract Infections in Patients Referred to Amiralmomenin Hospital, Zabol, Iran. J Ardabil Univ Med Sci. **2021**; 21(1): 66-75.
- 9) Nazari M, Ahmadi H, Vaez H, **Khademi F (Corresponding Author)**. The Role of Insertion Sequence (IS) Elements in Inactivation of Outer Membrane Porin OprD and Resistance to Carbapenems among *Pseudomonas aeruginosa* Clinical Strains in Ardabil. J Ardabil Univ Med Sci. **2021** Jul 10;21(3):171-8.
- 10) Nazari M, Saeli N, Arzanlou M, Jafari-Ramedani S, Mirzanejad-Asl H, **Khademi F (Corresponding Author)**, Alinezhad A. Prevalence of Plasmid-Mediated Quinolone Resistance Genes in *Pseudomonas aeruginosa* Clinical Strains in Northwest Iran. J Ardabil Univ Med Sci. **2024**;24(1): 46-57.
- 11) Jafari-Ramedani S, Hasanpour F, Mohammadnia A, **Khademi F (Corresponding Author)**, Alinezhad A. Tracking Antibiotic Resistance in *Pseudomonas*

- aeruginosa*: A Four-Year Surveillance Study in Ardabil City Hospitals. Journal of Ardabil University of Medical Sciences. **2024** Oct 10;24(3):349-63.
- 12) Vaez H, Sargazi MA, Zeidabadi A, Javan M, **Khademi F**, Pishdadian A. Study of *Klebsiella pneumoniae* Vaccine Based on the Epitopes of Outer Membrane Proteins: An Immunoinformatic Approach. Journal of Ardabil University of Medical Sciences. **2025** Apr 10;25(1):74-89.
  - 13) Malek Bagali F, Rostamizad Kheljani A, Asadi L, **Khademi F (Corresponding Author)**, Alinezhad A. Frequency and Antimicrobial Resistance Profiles of Bacterial Pathogens Isolated from Urinary Tract Infections in Ardabil, Iran. Journal of Ardabil University of Medical Sciences. **2025**;25(2):222-33.
  - 14) Malek Bagali F, Aghaazizi A, Arzanlou M, Asadi L, **Khademi F (Corresponding Author)**, Alinezhad A. Antibiotic Resistance Profiles of Bloodstream Infection Pathogens: A Growing Concern in Hospital Care in Ardabil. J Ardabil Univ Med Sci. **2026**; 25 (4) :402-415.

#### **C) Articles under review**

- 1) Prevalence and Geographic Distribution of Tick-Borne Pathogens in Livestock: Insights from Ardabil Province, Iran (2024)
- 2) Characterizing tick diversity among domestic hosts, northwest Iran: A morphological study
- 3) Retrospective cohort study of the antibiotic resistance in *Pseudomonas* isolates at Ardabil City, Iran
- 4)

#### **D) Research projects underway**

- 1) Detection of species thermophilic bacteria producing enzymes and antimicrobial substances in hot water spring of Ardebil
- 2) Spatial analysis and determination of ecological niche of *Borrelia* bacteria in the endemic foci of relapsing tick fever in Ardabil province During the years 2001 to 2021
- 3) Investigation of frequency, antibiotic sensitivity and molecular characteristics of *Listeria monocytogenes* isolated from food produced in Ardabil city in 2023
- 4) Investigation of antibiotic resistance trend among *Pseudomonas aeruginosa* strains isolated from clinical samples of patients referred to Ardabil hospitals during the years 2018 to 2023
- 5) Investigation of the prevalence pattern of Malta fever in Ardabil province during the last 20 years
- 6) Investigation of the prevalence pattern of Tuberculosis disease in Ardabil province during the years 2016 to 2023
- 7) Investigation of the prevalence of causative agent of Q fever (*Coxiella burnetii*) in Ardabil province using the Nested PCR method

#### **E) Books**

- 1) Nanotechnology Based Approaches for Tuberculosis Treatment
- 2) Reviews of Physiology, Biochemistry and Pharmacology

- 3) A Photographic Atlas for the Microbiology Laboratory
- 4) Microbial Infections
- 5) Safety in the Clinical Microbiology Laboratory

**F) Gene bank submission**

KC417289, KP753971 to KP75400, KP774595 to KP774599, MW623053 to MW623082, ON009070, OK146924 to OK146931, MZ359353 to MZ359375, MZ215847, MW554493, MW485005 to MW485034, MW465352 to MW465381, MW446506 to MW446535, OM831129, OM791362 to OM791371, OM791372, OM791373, OM791374, OM791375, ON986770 to ON986774, ON920993 to ON920997, OP651437 to OP651440, OQ024009 to OQ024015, OR855380 to OR855387, PP468580 to PP468583

**G) International presentations**

1. The 15<sup>th</sup> International Congress on Infectious Diseases in Bangkok, 2012
2. The 13<sup>th</sup> Iranian and 2<sup>nd</sup> International Congress of Microbiology in Ardabil, 2012
3. The 14<sup>th</sup> International and Iranian Congress of Microbiology in Tehran, 2013
4. The 7<sup>th</sup> International and Iranian Congress of Clinical Microbiology in Shiraz, 2013
5. The 15<sup>th</sup> International and Iranian Congress of Microbiology in Tehran, 2014
6. The 7<sup>th</sup> International Congress of Laboratory and Clinic in Tehran, 2015
7. The 3<sup>rd</sup> National Congress on Medical Basic Sciences and Knowledge-based production and 10<sup>th</sup> International Congress of Laboratory and Clinic in Tehran, 2016
8. International Congress on Chest in Dubai, 2016
9. The 17<sup>th</sup> International and Iranian Congress of Microbiology in Tehran, 2016
10. Iran's 22<sup>nd</sup> International Virtual Congress of Microbiology in Tehran, 2021
11. Iran's 23<sup>rd</sup> International Congress of Microbiology in Tehran, 2022
12. Iran's 24<sup>rd</sup> International Congress of Microbiology in Tehran, 2023
13. Iran's 26<sup>rd</sup> International Congress of Microbiology in Tehran, 2025
14. The 3<sup>rd</sup> National Congress on Animal Parasitic Diseases and Parasites Common to Humans and Animals, Mashhad, 2025
15. The 13<sup>th</sup> Specialized Congress and the 7<sup>th</sup> International Congress of Medical Devices and Materials in field of Infection Control and Sterilization, Tehran, 2025

**H) Research interests**

- Bacterial antibiotic resistance
- Emerging and re-emerging infectious diseases
- Drug and vaccine delivery systems

**I) Honors and awards**

- 1) Awarded as Top Researcher of Ardabil province (2018)
- 2) Awarded as Top Researcher of Ardabil University of Medical Sciences (2019)
- 3) Awarded as Top Researcher of Ardabil University of Medical Sciences (2020)
- 4) Awarded as Top Researcher of Ardabil University of Medical Sciences (2021)
- 5) Awarded as Top Researcher of Ardabil province (2024)
- 6) Awarded as Top Researcher of Ardabil University of Medical Sciences (2025)

7)

**J) Membership**

- 1) Associate Editor & Executive Manager of Ardabil University of Medical Sciences
- 2) Editorial board in:
  - Frontiers in Antibiotics
  - World Journal of Meta-Analysis
  - Journal of Ardabil University of Medical Sciences

**4) Teaching activities**

- Medical Bacteriology (Ardabil University of Medical Sciences, Faculty of Medicine, Ardabil, Iran) (2016 to present)

**5) Experiences and skills**

- 1- Bioinformatics
- 2- DNA and RNA extraction
- 3- PCR
- 4- Real-time PCR
- 5- Sequencing analysis
- 6- SDS-PAGE
- 7- ELISA
- 8- Cell culture
- 9- Western blotting
- 10- Nanoparticle synthesis
- 11- Molecular cloning, expression and purification of proteins
- 12- Vaccine and drug delivery systems
- 13- Scientific writing (letter to editor, case report, original, systematic and meta-analysis articles)