

**Name:** Shadi Aghamohammad

**Birthdate:** 7<sup>th</sup> July, 1987

**Contact Info:** Bacteriology Department, Pasteur Institute of Iran, 69 Pasteur Ave.,1316943551. Tehran, Iran. Email: [shadi.ghamohammad@yahoo.com](mailto:shadi.ghamohammad@yahoo.com)

**Educational records:**

- 2005-2007, Associate degree, Laboratory Science, Tehran University of Medical Sciences
- 2009-2011, Bachelor's degree, Laboratory Science, Shahid Beheshti University of Medical Sciences
- 2011-2013, Master's degree, Medical Microbiology, Shahid Beheshti University of Medical Sciences
- 2013-2019, PhD, Medical Bacteriology, Pasteur Institute of Iran
- 2020-2021, Postdoctoral research, Probiotics and Inflammatory Diseases, Pasteur Institute of Iran

**Teaching Experiences:**

- 2011-2013, Bacteriology Lab, Shahid Beheshti University of Medical Sciences
- 2021-Present, Antibiotic mechanisms, Bacteriology Lab, Systematic of Bacteriology, Pasteur Institute of Iran

**Research Experiences:**

- Antibioqram and identification of *bla*<sub>TEM</sub>, *bla*<sub>SHV</sub>, *bla*<sub>CTX-M</sub> genes in *E.coli* isolated from children under 14 years of age with urinary tract infections of Tehran Children's Medical Center Hospital
- Molecular typing of carbapenemase producing Enterobacteriaceae isolates and determining the genomic structure of plasmids carrying carbapenemase genes.
- Investigating the presence of common bacterial respiratory pathogens in samples suspected of being infected with COVID-19 sent to the Pasteur Institute of Iran
- Investigating the effect of bifidobacterium and lactobacillus probiotics cocktail on the autophagy signaling pathway in the in-vitro model of inflammatory bowel disease
- Investigating the effect of bifidobacterium and lactobacillus probiotics cocktail on the autophagy signaling pathway in the in-vitro model of inflammatory bowel disease
- Typing of Lyme disease-causing *Borrelia* and *Borrelia miamatoii* of relapsing fever in the resinous exudates of the northern provinces of Iran by MLST method
- Investigating the prevalence of *Streptococcus pneumoniae* in negative samples sent to the national pertussis reference laboratory and serotyping the samples by sequencing the *cpsB* gene

**Skills and Expertise:**

- Reviewer for national and international journals
- PCR, Multiplex PCR, Real-Time PCR
- Molecular typing methods of bacteria (PFGE, MLVA, MLST, RAPD-PCR, RFLP-PCR)
- Plasmid typing technique
- Conjugation technique
- Cell culture methods
- Evaluation of antibiotic resistance
- Biofilm measurement techniques quantitatively (Crystal violet) and qualitatively (wrinkled colony)
- Gel compare software
- PhyloViz software
- REST software, Graphpad prism
- Statistical software (SPSS)
- Bioinformatics databases (oriT finder, CARD, genomic epidemiology)

**Awards:**

- Selected and distinguished student of the master's degree of the Faculty of Medicine, Shahid Beheshti University of Medical Sciences, year 2013
- Top student of the PhD by course, Fourth Medical Bacteriology, Pasteur Institute of Iran, 2018
- Top student of Academic Pasteur Institute of Iran, 2018
- Selected top researcher of Pasteur Institute of Iran, 2022

**Publications:**

- Aghamohammad S, Sepehr A, Miri ST, Najafi S, Pourshafie MR, Rohani M. Ameliorating inflammation in an in vitro model by screening the anti-inflammatory and immunomodulatory roles of putative probiotics in inflammatory bowel disease. *Heliyon*. 2023 Aug 28.
- Aghamohammad S, Hafezi A, Rohani M. Probiotics as functional foods: How probiotics can alleviate the symptoms of neurological disabilities. *Biomedicine & Pharmacotherapy*. 2023 Jul 1;163:114816.
- Noori M, Aghamohammad S, Ashrafian F, Gholami M, Dabiri H, Goudarzi H. A Retrospective Cross-sectional Study on Prevalence and Susceptibility Pattern of Bacterial Pathogens Causing Urinary Tract Infections at a Teaching Hospital in Tehran, Iran. *Archives of Pediatric Infectious Diseases*. 2023 Apr 30;11(2).
- Aghamohammad S, Rastin M, Mostafavi E, Anaraki AH, Rahravani M, Sadaf RA, Moravedji M, Rohani M. Determination of seroprevalence of brucellosis in livestock and high-risk population in Kurdistan, Western Iran. *Comparative Immunology, Microbiology and Infectious Diseases*. 2023 Feb 1;93:101942.

- Aghamohammad S, Rohani M. Antibiotic resistance and the alternatives to conventional antibiotics: The role of probiotics and microbiota in combating antimicrobial resistance. *Microbiological Research*. 2022 Dec 5:127275.
- Aghamohammad S, Sepehr A, Miri ST, Najafi S, Pourshafie MR, Rohani M. The Role of Combining Probiotics in Preventing and Controlling Inflammation: A Focus on the Anti-Inflammatory and Immunomodulatory Effects of Probiotics in an In Vitro Model of IBD. *Canadian Journal of Gastroenterology and Hepatology*. 2022 Nov 8;2022.
- Aghamohammad S, Sepehr A, Miri ST, Najafi S, Pourshafie MR, Rohani M. The potential role of *Bifidobacterium* spp. as a preventive and therapeutic agent in controlling inflammation via affecting inflammatory signalling pathways. *Letters in Applied Microbiology*. 2022 Nov 1;75(5):1254-63.
- Aghamohammad S, Sepehr A, Miri ST, Najafi S, Pourshafie MR, Rohani M. Anti-inflammatory and immunomodulatory effects of *Lactobacillus* spp. as a preservative and therapeutic agent for IBD control. *Immunity, Inflammation and Disease*. 2022 Jun;10(6):e635.
- Aghamohammad S, Nikbin VS, Badmasti F, Shahcheraghi F. High heterogeneity of fecal carriage extended-spectrum beta-lactamase-producing *E. coli* isolated from Iranian community and clinical settings. *BMC infectious diseases*. 2022 Mar 31;22(1):318.
- Aghamohammad S, Sepehr A, Miri ST, Najafi S, Rohani M, Pourshafie MR. The effects of the probiotic cocktail on modulation of the NF- $\kappa$ B and JAK/STAT signaling pathways involved in the inflammatory response in bowel disease model. *BMC immunology*. 2022 Dec;23(1):1-0.
- Aghamohammad S, Anaraki AH, Rahravani M, Rastin M, Sadaf RA, Moravedji M, Rohani M. Seroepidemiology of leptospirosis in livestock and workers of high-risk occupation in Kurdistan, Iran. *Comparative Immunology, Microbiology and Infectious Diseases*. 2022 Mar 1;82:101758.
- Aghamohammad S, Cohan HA, Ghasemi A, Mostafavi E, Rohani M. The monitoring of *Francisella tularensis* in surface water of East Azerbaijan province, Iran. *Comparative Immunology, Microbiology and Infectious Diseases*. 2022 Feb 1;81:101744.
- Salimi A, Sepehr A, Ajdarkosh H, Aghamohammad S, Talebi M, Rohani M, Pourshafie MR. Dynamic Population of Gut Microbiota as an Indicator of Inflammatory Bowel Disease. *Iranian biomedical journal*. 2022 Sep;26(5):350.
- Rezaie N, Aghamohammad S, Rohani M, Javadi A, Badmasti F, Soltani Shirazi A. Isolation of MDR *Providencia stuartii* from tracheal aspirates of two hospitalized patients. *Health Biotechnology and Biopharma (HBB)*. 2022 Dec 1;6(3):73-9.
- Aghamohammad S, Nouri M, Ashrafian F, Kashi MS, Gholami M, Dadashi M, Dabiri H. Investigation of Antimicrobial Susceptibilities Among Bacteria Isolated from Blood Cultures in Hospitalized Patients, Tehran, Iran. *Archives of Clinical Infectious Diseases*. 2021 Apr 30;16(2).
- Aghamohammad S, Badmasti F, Shirazi AS, Dabiri H, Solgi H, Sabeti S, Shahcheraghi F. Considerable rate of putative virulent phylo-groups in fecal carriage of extended-spectrum

$\beta$ -lactamase producing *Escherichia coli*. *Infection, Genetics and Evolution*. 2019 Sep 1;73:184-9.

- Aghamohammad S, Badmasti F, Solgi H, Aminzadeh Z, Khodabandelo Z, Shahcheraghi F. First report of extended-spectrum betalactamase-producing *Klebsiella pneumoniae* among fecal carriage in Iran: high diversity of clonal relatedness and virulence factor profiles. *Microbial Drug Resistance*. 2020 Mar 1;26(3):261-9.
- Solgi H, Badmasti F, Giske CG, Aghamohammad S, Shahcheraghi F. Molecular epidemiology of NDM-1-and OXA-48-producing *Klebsiella pneumoniae* in an Iranian hospital: clonal dissemination of ST11 and ST893. *Journal of Antimicrobial Chemotherapy*. 2018 Jun 1;73(6):1517-24.
- Solgi H, Giske CG, Badmasti F, Aghamohammad S, Havaei SA, Sabeti S, Mostafavizadeh K, Shahcheraghi F. Emergence of carbapenem resistant *Escherichia coli* isolates producing blaNDM and blaOXA-48-like carried on IncA/C and IncL/M plasmids at two Iranian university hospitals. *Infection, genetics and evolution*. 2017 Nov 1;55:318-23.
- Soltani Shirazi A, Azizi O, Bolourchi N, Aghamohammad S, Badmasti F. Comparative in silico analyses of proteins involved in serum resistance as promising vaccine candidates against *Acinetobacter baumannii*. *Vaccine Research*. 2017 Nov 10;4(3):64-71.
- Aghamohammad S, Gholami M, Dabiri H, Rahimzadeh G, Souod N, Goudarzi H, Sardari S, Mohammadzadeh A. Distribution and antimicrobial resistance profile of *Yersinia* species isolated from chicken and beef meat. *International Journal of Enteric Pathogens*. 2016 Oct 6;3(4):3-29009.
- Dabiri H, Aghamohammad S, Goudarzi H, Noori M, Hedayati MA, Ghoreyshiamiri SM. Prevalence and antibiotic susceptibility of *Campylobacter* species isolated from chicken and beef meat. *International Journal of Enteric Pathogens*. 2016 Oct 5;2(2):6-17087.
- Noori M, Karimi A, Fallah F, Hashemi A, Alimehr S, Goudarzi H, Aghamohammad S. High prevalence of metallo-beta-lactamase producing *Acinetobacter baumannii* isolated from two hospitals of Tehran, Iran. *Archives of Pediatric Infectious Diseases*. 2014 Jul 1;2(3).
- Goudarzi H, Aghamohammad S, Hashemi A, Nikmanesh B, Noori M. Distribution of *bla*<sub>TEM</sub>, *bla*<sub>SHV</sub> and *bla*<sub>CTX-M</sub> genes among *Escherichia coli* isolates causing urinary tract infection in children.
- Vaezjalali M, Rashidpour S, Rezaee H, Hajibeigi B, Zeidi M, Gachkar L, Aghamohammad S, Najafi R, Goudarzi H. Hepatitis B viral DNA among HBs antigen negative healthy blood donors. *Hepatitis monthly*. 2013 Mar;13(3).