



School of Nutrition Sciences and Food Technology  
Kermanshah University of Medical Sciences

**First Name:** Zahra

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## Personal Information

Place of Birth: Lorestan

Marital Status: Married

## Tertiary Education

- **Ph.D**  
Food Hygiene and Safety  
Science  
2017- 2021
- Shahid Beheshti University of Medical Sciences, Tehran, Iran.  
Dissertation: Development and validation of TaqMan real-time PCR assays for quantification of chicken adulteration in raw and heat-treated hamburgers Supervisors: Dr. Saeedeh Shojaee, and Dr. Nayebali Rezvani
- **MSc**  
Food Science and  
Technology  
(Food Quality Control)  
2010-2013
- Shahid Beheshti University of Medical Sciences, Tehran, Iran.  
Thesis: Effects of probiotic strains and inoculated population, physiology of probiotic bacteria and fermentation final pH on decontamination of aflatoxin M1 in Doogh  
Supervisors: Dr. Amir Mohammad Mortazavian and Dr. Ramin Khaksar
- **BSc.**  
Food Science and  
Technology  
(Food Quality Control)  
2004 - 2008
- Shahid Beheshti University of Medical Sciences, Tehran, Iran

## Responsibilities

- 2014-2017
- Instructor at the Department of Food Hygiene and Quality Control, School of

Nutrition and Food Sciences, Shiraz University of Medical Sciences, Shiraz, Iran.

- 2009-2010
- Food & Drug Expert, Food & Drug Administration, Vice-Chancellor's Office for Food and Drug at Lorestan University of Medical Sciences.

## Key Areas of Research Expertise

- Food Toxicology
- Decontamination Methods of Food
- Probiotics and Prebiotics in Food Products
- Functional Foods
- Food Authenticity (Detection of Food Fraud and Genetically Modified Foods (GM foods))
- Molecular techniques relevant to food biology

## Skills

- Language
- Technical
- Software
- Farsi, English
- PCR conventional, Real time PCR, MIC, ELISA, HPLC, FTIR, Integrated Management System (IMS)
- Microsoft Office, SPSS, Rest Software, Design Expert, End Note

## Articles

- ❖ **Sarlak Z**, Hosseini H, Garavand F, Mohammadi R, Rouhi M\*. The occurrence of lead in animal source foods in Iran in the 2010s decade: a systematic review. *Biological Trace Element Research*. 2021.
- ❖ **Sarlak Z**, Khosravi-Darani K\*, Rouhi M\*\*, Garavand F, Mohammadi R, Sobhiyeh MR. Bioremediation of organophosphorus pesticides in contaminated foodstuffs using probiotics. *Food Control*. 2021;126:108006.
- ❖ Heydari M, Rostami O, Mohammadi R, Banavi P, Farhoodi M, **Sarlak Z**, Rouhi M\*. Hydrodistillation ultrasound-assisted green extraction of essential oil from bitter orange peel wastes: Optimization for quantitative, phenolic, and antioxidant properties. *Journal of Food Processing and Preservation*. (2021).
- ❖ Paimard G, Mohammadi R, Bahrami R, Khosravi- Darani K, **Sarlak Z**, Rouhi M\*. Detoxification of patulin from juice simulator and apple juice via cross-linked Se-chitosan/L-cysteine nanoparticles. *LWT-Food Science and Technology*. 2021;143:111146.
- ❖ Zibaei R, Hasanvand S, Hashami Z, Roshandel Z, Rouhi M, Guimarães J, Mortazavian AM, **Sarlak Z**, Mohammadi R\*. Applications of emerging botanical hydrocolloids for edible films: A review. *Carbohydrate Polymers*. 2021;256:117554.
- ❖ Mohammadi R, Erfani N, Sohrabvandi S\*, Mortazavi SA, Mortazavian AM, **Sarlak Z**, Alizadeh Moghadam M. Aflatoxin M1 reduction by probiotic strains in Iranian feta cheese. *Iranian Journal Chemistry and Chemical Engineering*. (2021).
- ❖ Hemmati V, Garavand F\*, Goudarzi M, **Sarlak Z**, Cacciotti I, Tiwari BK. Cold atmospheric- pressure plasma treatment of turmeric powder: microbial load, essential oil profile, bioactivity, and microstructure analyses. *International Journal of Food Science & Technology*. 2020;56(5):2224–2232.
- ❖ Abedi AS, Hashempour F, Mirza Alizadeh A, Beikzadeh S, Hosseini H\*, Bashiry M, Taslikh MR, Javanmardi F, Sheidaei Zh, **Sarlak Z**, Mofid V, Fakhri Y, Mousavi Khaneghah A\*\*. The prevalence of *Brucella* spp. in dairy products in the Middle East region: A systematic review and meta-analysis. *Acta Tropica*. 2020;202:105241.
- ❖ Ahmadi E, Mohammadi R, Hasanvand S, Rouhi M, Mortazavian AM\*, **Sarlak Z**. Effects of fermentative

factors on biochemical, microbiological and sensory characteristics of probiotic Iranian fermented milk (Doogh). *Current Nutrition & Food Science*. 2019;15(1):40-47.

- ❖ Mirza Alizadeh A, Jazaeri S, Shemshadi B\*, Hashempour F, **Sarlak Z**, Pilevar Z, Hosseini H, Mohammadi R, Yousefi M, **Sarlak Z**, Shah NP, Mortazavian AM\*, Sadeghi E, Zabihzadeh Khajavi M. Influence of commercial culture composition and cow milk to soy milk ratio on the biochemical, microbiological, and sensory characteristics of a probiotic fermented composite drink. *Food Science and Biotechnology*. 2017;26(3):749-757.
- ❖ **Sarlak Z**, Rouhi M, Mohammadi R, Khaksar R, Mortazavian AM\*, Sohrabvandi S\*\*, Garavand F. Probiotic biological strategies to decontaminate aflatoxin M1 in a traditional Iranian fermented milk drink (Doogh). *Food Control*. 2017;71:152-159.
- ❖ Rouhi M, Mohammadi R, Mortazavian AM\*, **Sarlak Z**. Combined effects of replacement of sucrose with D-tagatose and addition of different probiotic strains on quality characteristics of chocolate milk. *Dairy Science & Technology*. 2015;95(2):115-133.
- ❖ Fallah M, Rouhi M, Sadeghi E, **Sarlak Z**, Mohammadi R\*. Effects of olibanum essential oil on physicochemical, structural, antioxidant and microbial characteristics of gelatin edible films. *Iranian Journal of Nutrition Sciences & Food Technology*. 2021;15(4):93-102. [In Persian]
- ❖ **Sarlak Z**, Garavand F, Mohammadi R, Hosseini M, Rouhi M\*. Development of an optimal formulation for flavored Doogh-based soft drink using response surface methodology and evaluate the resulting powder. *Journal of Food Technology and Nutrition*. 2018;15(2):5-18. [In Persian]
- ❖ Mohammadi R, Zabihzadeh M, Hasanvand S, **Sarlak Z**, Mortazavian AM\*, Shadnoosh M, Ayad Bahadori Monfared A. Effects of type and concentration of dry matter and final pH of fermentation on biochemical, microbial and sensory properties of probiotic dough. *Koomesh*. 2017;19(4):798-811. [In Persian]
- ❖ **Sarlak Z**, Mohammadi R, Abdolmaleki Kh, Mortazavian AM\*, Shadnoosh M. Effects of addition of different probiotic strains on the biochemical and microbiological properties of Aloe vera drink. *Koomesh*. 2016;18(1):117-127. [In Persian]
- ❖ Mohammadi R, Zabihzadeh M, Delshadian Z, **Sarlak Z**, Mortazavian A.M\*, Hosseini M. Study on the biochemical and microbiological characteristics of several probiotic strains in non-Alcoholic beer during storage period. *Iranian Journal of Nutrition Sciences & Food Technology*. 2016;11(3):53-62. [In Persian]
- ❖ Rouhi M, Taslimi A, **Sarlak Z**, Mohammadi R, Shadnoosh M, Mortazavian AM\*, Sabouri S. Sucrose and D-tagatose fermentation profile by different probiotic strains and its effect on physical properties of chocolate milk. *Koomesh*. 2015;17(1):239-249. [In Persian]
- ❖ Rouhi M, Mohammadi R, **Sarlak Z**, Taslimi A, Zabihzadeh M, Mortazavian AM\*. Study on the biochemical, microbiological and sensory characteristics of synbiotic chocolate milk. *Iranian Journal of Nutrition Sciences & Food Technology*. 2015; 10(2):47-58. [In Persian]
- ❖ **Sarlak Z**, Rouhi M, Mohammadi R, Mortazavian AM\*, Khaksar R. Effects of probiotic strains and inoculated population, physiology of probiotic bacteria and fermentation final pH on free aflatoxin M1 binding in Doogh. *Iranian Journal of Nutrition Sciences & Food Technology*. 2013; 8(3):241-249. [In Persian]

## Research Projects

- 2020
  - Authentication of red meat hamburger brands in Iran for chicken meat fraud using real-time PCR based on TaqMan assay/ Kermanshah University of Medical Sciences/ Assistant.
- 2019
  - Study of SYBR Green-based real time PCR modeling methods for estimation of chicken and chicken paste adulteration in red meat hamburger/ Shahid Beheshti University of Medical Sciences/ Supervisor.

- 2018
  - A systematic study on contamination levels of lead (Pb) in Iranian food sources/ Shahid Beheshti University of Medical Sciences/ Supervisor.
  - A systematic study on effect of probiotics on pesticide degradation in foodstuffs/ Shahid Beheshti University of Medical Sciences/ Supervisor.
  - Fate of antinutritional compounds in plant sources during fermentation/ Shahid Beheshti University of Medical Sciences/ Supervisor.
- 2017
  - Development of an optimal formulation for flavored Doogh-based soft drink using response surface methodology and evaluate the resulting powder/ Shiraz University of Medical Sciences/ Supervisor.
- 2014
  - Effects of probiotic strains and inoculated population, physiology of probiotic bacteria and fermentation final pH on free aflatoxin M1 binding in Doogh/ Shahid Beheshti University of Medical Sciences/ Assistant.

## Books

- 2020
  - Cacciotti I, Garavand F, Rostamabadi H, Khorshidian N, Sarlak Z, Jafari SM. Chapter 8- Nano/micro-encapsulated ingredients in chewing gum, pp. 345-386. In Application of Nano/Microencapsulated Ingredients in Food Products. Seid Mahdi Jafari (Ed.). Elsevier Academic Press, United States.

## Conferences

- 2021
  - Heidari M, Banavi P, Rostami O, Sarlak Z, Mohammadi R, Rouhi M\*. Modeling and optimization of essential oil properties extracted from bitter orange peel. *3rd International Congress on Food Science & Technology & Agriculture and Food Security*
- 2018
  - **Sarlak Z**, Rouhi M\*. Effect of live or heat-killed *L. acidophilus* on free aflatoxin M<sub>1</sub> in Doogh. *The 19th international & Iranian congress of microbiology*.
- 2016
  - Rouhi M, **Sarlak Z\***, Mortazavian AM, Mohammadi R, Khaksar R. The ability of *L. acidophilus* in reducing aflatoxin in Doogh. *3rd national conference on probiotics and functional foods*.
  - Rouhi M, Taslimi A, Mortazavian AM\*, **Sarlak Z**, Mohammadi R, Yousefi M. Production of dietetic synbiotic cocoa milk. *3rd national conference on probiotics and functional foods*.
- 2015
  - **Sarlak Z**, Rouhi M, Monsef AM, Mohammadi R. Effect of *S. thermophilus* and *L. bulgaricus* on aflatoxin M<sub>1</sub> binding in milk, PBS and yogurt. *The 2nd national congress of milk safety from production to consumption and its role in human nutrition*.
- 2012
  - Rouhi M, Mohammadi R\*, **Sarlak Z**, Shafiei SG, Ahmadi E. Effects of incubation temperatures on biochemical and microbiological characteristics in Doogh inoculated with Iranian probiotic lactobacillus species during

fermentation and refrigerated storage. *13th Iranian and the second international congress of microbiology, Ardebil University of Medical Sciences.*

- Mohammadi R, Rouhi M\*, **Sarlak Z**, Shafiei SG, Ahmadi E. A comparative study of viability of Iranian and imported bifidobacterium species during refrigerated storage in probiotic Doogh. *13th Iranian and the second international congress of microbiology, Ardebil University of Medical Sciences.*
- Mohammadi R, Rouhi M\*, **Sarlak Z**, Mortazavian AM. Effects of partial or total replacement of cow's milk with soy milk and the type of commercial starter culture composition on biochemical and microbiological characteristics of probiotic soy-Doogh. *13th Iranian and the second international congress of microbiology, Ardebil University of Medical Sciences.*
- Mohammadi R, Roozitalab A, Rouhi M\*, Mortazavian AM, **Sarlak Z**. Effects of the type of commercial starter culture composition and partial or total replacement of cow's milk with soy milk on biochemical and microbiological characteristics of probiotic fruity soy yogurt. *13th Iranian and the second international congress of microbiology, Ardebil University of Medical Sciences.*

## Editorial Board and Reviewing Activities

- Reviewer
  - Food Control
  - Journal of the Science of Food and Agriculture
  - Applied Food Biotechnology

## Awards & Grants

- 2017
  - 3rd Rank, entrance exam for the Ph.D. course in food hygiene and safety science.
  - 6th Rank, entrance exam for the Ph.D. course in food science and technology (food quality control).
- 2010
  - 3rd Rank, entrance exam for the master course in food science and technology (food quality control).