



Marzieh Hosseini Nezhad (Associate Prof.)

Date of Birth: June, 22, 1968

Nationality: Iranian

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EDUCATION:

Doctor of Philosophy (PhD) in Food Biotechnology, The University of Melbourne, Australia (March 2005-July 2008).

PhD Thesis title: Acid Stress Responses in the Probiotic Bacteria *Lactobacillus casei* / *paracasei* Group.

Master of Science (MSc) in Food Technology Engineering, University of Tarbiat Modarres, Tehran, Iran (1993-1995).

M.S Thesis title: Study on Clarification and Production of Carbonated Pomegranate Drink.

Bachelor of Science (BSc) in Agricultural Products Technology Engineering, Ferdowsi University of Mashhad, Iran (1986-1990).

AWARDS:

A scholarship to carry out PhD research in abroad, awarded by the Ministry of Science, Research and Technology of Iranian Government (September 2004 to August 2008).

An award to attend a scientific trip in Italy, from Special Faculty Postgraduate Scholarships and Awards, by Faculty of Land and Food Resources, The University of Melbourne, Australia (July 2007).

The Melbourne International Fee Remission Scholarship (MIFRS), awarded by the University of Melbourne, (May 2008).

WORK EXPERIENCES:

Academic staff member of The Research Institute of Food Science and Technology (RIFST), 2004 to present.

Director of International Scientific Cooperation Office, RIFST. 2016 (continued)

Head of Food Biotechnology Dept., RIFST. 2013 to 2015.

Director of Intellectual Property Committee, RIFST, 2014- 2016.

Director of Postgraduate Education and Training, RIFST, 2008-2013.

Director of RIFST Press Committee. 2010 to 2015.

Academic staff member of The Department of Food Science and Technology, Iranian Research Organization for Science and Technology, Mashhad, 1993-2004.

Member of Intellectual Property Council of Khorasan Science and Technology Park, 2010-2013.

Member of Asia-Pacific Institute of Food Professionals (APIFP), 2014 to present.

Member of Probiotic and Prebiotic Society of Iran and director of Research Committee, 2011 to present.

Member of ASM (Australian Symposium of Microbiology), 2005-2010.

Member of scientific team of Standards and Industrial Research Organization of Iran, Mashad, 2008 to present.

Scientific Member of Food Biotechnology, HACCP Commissions of Khorasan Province, Iran.

Technical Manager and contributor in establishment of Food Analysis Laboratory in Jahad Research Centre of Engineering, 1991-1992.

Contributor in establishment of Pilot Plant and Food Technology Laboratories in Iranian Research Organization for Science and Technology, Mashad, Iran. 1997-2000.

TEACHING BACKGROUND:

Advanced Chemistry of Food Enzymes (for PhD students). Research Institute of Food Science and Technology, Mashhad, Iran. 2013.

New Methods in Food Microbial Detections (for PhD students). Research Institute of Food Science and Technology, Mashhad, Iran. 2013-2015.

Part time teaching in the field of Food Science and Technology and Food Microbiology, at The University of Applied Science and Technology, Mashad, Iran, 2009-2013.

Part time teaching experiences in the fields of Food Technology, Food Biochemistry, Food Microbiology, Canning and Food Preservation, Food Quality Control (for B.Sc Students) 1994-2004.

Part time teaching assistance in The Department of Agriculture and Food Systems, The University of Melbourne, 2006-2007.

THESIS SUPERVISION:

Abedfar, A. Evaluating the effect of controlled fermentation of sourdough on microbial exopolysaccharides and qualitative properties of pan bread. PhD Thesis submitted to The Research Inst. of Food Sci. and Tech. ongoing.

Mohammad Zadeh, B. Production of raw and ready to eat fillet containing prebiotic inulin from rainbow trout (*Oncorhynchus mykiss, walbaum 1972*) using edible coatings and modifying in batter formulation. PhD Thesis submitted to Tarbiat Modarres University, Tehran, Iran. ongoing.

Darjani, P. Effect of the inulin extracted from Iranian landraces chicory with different length of chain, together with free and encapsulated probiotics on a synbiotic dairy dessert. PhD Thesis submitted to The Research Inst. of Food Sci. and Tech. ongoing.

Moasheri, S. M. Application of Inulin and encapsulated probiotic bacteria in formulation of a synbiotic bread. PhD Thesis submitted to The Research Inst. of Food Sci. and Tech. ongoing.

Chamani, M. Effect of nanoparticles TiO₂, nanosilver and UV on chemical and microbial characteristics of water. 2013. MSc Thesis submitted to Azad University of Mashhad, Iran.

Kamali, S. Promoting effect of inulin extracted from chicory and jerusalem artichoke on the survival of two probiotic *Lactobacillus* strains at low pH condition. 2012. MSc Thesis submitted to Ferdowsi University of Mashhad, Iran.

Alamshahi, L. Growth inhibitory effects of medicinal plants against two specific plant pathogenic bacteria. 2010. MSc Thesis submitted to Zabol University, Iran.

Nahardanee, M. Extraction and prebiotic effects of chicory root. 2010. MSc. Thesis submitted to Azad University of Sabzevar.

Shamlou, M. Performing model system of quality control by HACCP in Toos Factory producing Mayonnaise sauce. 2003. MSc. Thesis submitted to University of Applied Science and Technology.

OTHER ACTIVITIES:

Contribution and collaboration in running some National Congresses and Workshops and giving lectures in the field of Food Science and Technology and Food Biotechnology, 1994-2013.

Publications and Books:

1. **Darjani ,P., Hosseini Nezhad , M., Kadkhodae, R. , Milani, E.** 2016. Influence of prebiotic and coating materials on morphology and survival of a probiotic strain of *Lactobacillus casei* exposed to simulated gastrointestinal conditions. LWT - Food Science and Technology Journal. (accepted for publication).
2. **Hosseini Nezhad, M and Britz ML.** 2015. Nano-structure of S-layer Proteins Synthesized under Environmental Stress Conditions in a Probiotic Lactobacilli Strain. Asia-Pacific Journal of Probiotics and Microbial Technologies, 1(1):3-7. ISSN 2422-9598

3. **Alamshahi L. and Hosseini Nezhad M.** 2015. Effect of essential oils of five medicinal plants on two microbial diseases of potato and tomato under laboratory and field condition. *Int. J. of Agriculture Innovations and Research*. 4(2) 390-395.
4. **Hosseini Nezhad, M, Shafiabadi, J. and Hussain, M.** 2015. Microbial Resources to Safeguard Future Food Security. *Advances in Food Technology and Nutritional Sciences Open Journal*. ISSN 2377-8350. S(1): 8-13.
5. **Hosseini Nezhad, M, Hussain, M. and Britz, M.** 2015. Stress response in probiotic *Lactobacillus casei*. *Critical Reviews in Food Science and Nutrition*. 55 (6) 740-749.
6. **Malik A. Hussain, Marzieh N. Hossieni, Yu Sheng and Omega Amofo** 2013. Proteomics and the stressful life of lactobacilli. *FEMS Microbiol Letters*. 349(1): 1-8.
7. **Hosseini Nezhad, M and Britz, M.** 2015. Characterization of S-layer proteins synthesized under stress conditions in a probiotic strain of lactic acid bacteria. *IPCBE 75: 72-75*.
8. **Darjani P., Hosseini Nezhad M., Kadkhodae R., Milani E. and Balandari A.** 2015. Methods of isolating and physiochemical properties of inulin fractions with different chain lengths from chicory plants. *Journal of Innovation in Food Science and Technology*, 4(3): 247-256 (in Farsi).
9. **Darjani P., Hosseini Nezhad M., Shoorideh H., Abdollahian N., Kadkhodae, Balandari A. And R., Milani E.** 2015. Comparison of fructan yield of foreign cultivars and indigenous landrace of chicory and optimizing its extraction by response surface method (RSM). *Journal of Innovation in Food Science and Technology*, 4(4). 343-354(in Farsi).
10. **Hosseini Nezhad M., Mohtashami M., Kamali S., Elahi, M.,** 2014. Optimizing the formula of a low calorie fruit powder jelly using sucralose and isomalt. . *Journal of Innovation in Food Science and Technology*, 4(1): 65-74. (in Farsi).
11. **Kamali S., Elahi, M., Hosseini Nezhad M., Yavarmanesh, M.** 2014. The effectiveness of inulin extracted from different plant sources on gastric acid resistance of two lactobacillus species. *Iranian Journal of Medicinal and Aromatic Plants*, 30 (5): 780-792 (in Farsi).
12. **Shoorideh, H., Peyghambari, S. A., Omid, M., and Hosseini Nezhad, M.** 2013. Alignment of the enzymes in inulin biosynthesis pathway in plants. *Iranian Journal of Genetic and food Safety*, 2 (1): 49-58 (in Farsi).
13. **Nahardani, M, Hosseini Nezhad, M., Elhami Rad A.H. and Pourfallah, Z.** 2013. Inulin extraction from pharmaceutical perennial chicory plant and evaluating its prebiotic effects on the growth of *Lactobacillus rhamnosus*. *Journal of Innovation in Food Science and Technology*, 5(20): 91-100 (in Farsi).

14. **Kamali S., Hosseini Nezhad M., Elahi, M., Yavarmanesh, M.** 2013. Effect of inulin extracted from chicory and *Jerusalem artichoke* on bile tolerance and inhibition of two *Lactobacillus* species against *E.coli* O157:H7. *Journal of Research Innovation in Food Science and Technology*. 2(4): 311-322 (in Farsi).
15. **Nahardani, M., Hosseini Nezhad, M. and Elhami Rad A.H.** 2013. Characterization and prebiotic effects of inulin extracted from non-native chicory plants. *Journal of Innovation in Food Science and Technology*, 4(14): 87-96 (in Farsi).
16. **Hosseini Nezhad, M, Knight, M. and Britz, M.** 2012. Evidence of changes at membrane bound proteins during growth of *Lactobacillus casei* under acidic conditions. *Food Science and Biotechnology*. 21(1): 253-260.
17. **Hosseini Nezhad, M. Alamshahi, L. Panjehkeh, L.** 2012. Biocontrol efficiency of medicinal plants against *Pectobacterium carotovorum*, *Ralstonia solanacearum* and *Escherichia coli*. *The Open Conference Proceedings Journal*. 3: 41-46.
18. **Hosseini Nezhad, M** 2012. Application of nanotechnology in Food Science and Biotechnology. *Periodical Journal of Donyaye Nano*. 23: 7-11 (in Farsi).
19. **Hosseini Nezhad M., Nahardani, M., and Elhami Rad A.H.** 2011. Characterization of inulin extract from iranian native chicory in comparison with some other sources. *Journal of Research Innovation in Food Science and Technology*. 1(1): 37-46 (in Farsi).
20. **Hosseini Nezhad, M, Stenzel D. J and Britz, M.** 2010. Effect of growth at low pH on the cell surface properties of a typical strain of *Lactobacillus casei* group. *Iranian Journal of Microbiology*. 2(3): 144-151.
21. **Hosseini Nezhad, M.;** D. Joan Stenzel and M. L. Britz. 2009. Phenomic and proteomic characterization of *Lactobacillus casei* in response to acid stress. *New Biotechnology*, ISSN: 18716784, 25: 347-347.
22. **Hosseini Nezhad, M and Razavizadeh, M.** 2009. Toxicity of Nanoparticles. *Periodical Journal of Donyaye Nano*. 15: 39-49 (in Farsi).
23. **Hosseini Nezhad, M.** and R. Malekzadeh. 2005. Principals of HACCP in Food Science. S. Mortomore and C. Wallace (Translated into Persian). Jahane farad Press.
24. **Nejad, H. M.** 2004. Evaluation of quality characteristics and microbial contamination of saffron samples dried by microwave. *Acta Horticulturae (ISHS)*. 650: 345-353.
25. **Hosseini Nezhad, M.,** F. Shahidi and R. Malekzadeh. 2003. Study on Microbial Contamination and Quality of Dried Microwave Saffron Samples. *J. of Agricultural Science and Technology*. 16(2): 51-57.

26. **Hosseini Nezhad, M.** and F. Shahidi. 2002. Enzymes in Food Processing. G. A. Tocker. (Translated into Persian). Ferdowsi University of Mashhad Press.
27. **Hosseini Nezhad, M.** and M. Fallahi. 1997. Elements of Food Engineering. E. Watson and Harper J. C. (Translated to Persian). Barsawa Press, 347 p.
28. **Hosseini Nezhad, M.** Food Science and Industry, in *University and Awareness Selection*. Behnashr Press.2001, chap. 5.
29. **Hosseini Nezhad, M.** and H. Pourazarang. Carbonated Fruit Drinks. J. of Standard, 1997, No. 2.
30. Scientific editor of the book: Conservation and decay. Completed by: Fatemeh Mozafar – Nejad, Behnashr press. 2002.
31. Scientific editor of the book: Food diets for body makers. 2001. Compiled by Dr. Masoud Naghizade. Behnashr Press.

Participating in Scientific Congresses by Oral Lecturers or Posters:

1. Pegah darjani, **Marzieh Hosseini Nezhad**, Rassoul Kadkhodae, Elnaz Milani, Ahmad Balandari, Mohammad Abdollahian-Noghabi. (2014). Methods of isolating different structural fraction of inulin from chicory plants and physiochemical properties of the resulting compounds. 1st International Conference on Natural Food Hydrocolloids, 22-23 October. Mashhad, Iran.
2. Pegah darjani, **Marzieh Hosseini Nezhad**, Rassoul Kadkhodae, Elnaz Milani, Ahmad Balandari, Mohammad Abdollahian-Noghabi. (2014). Optimizing the method of inulin extraction from Iranian landraces chicory roots using response surface methodology. 1st International Conference on Natural Food Hydrocolloids, 22-23 October. Mashhad, Iran.
3. **Hosseini Nezhad, M** and Britz, M. 2014. Characterization of S-layer proteins synthesized under stress conditions in a probiotic strain of lactic acid bacteria. 4th International Conference on Biotechnology and Environmental Management (ICBEM 2014), Paris, France, Sep. 15-16.
4. **Hosseini Nezhad, M.** 2014. Understanding the survival of probiotics in food systems. Asia-Pacific Probiotic Workshop. Lincoln, New Zealand, 21-22 Oct.
5. **Hosseini Nezhad, Marzieh.** (2013). Investigation of prebiotic effects of inulin extracted from Iranian medicinal plants and its functional products. 3rd International Conference on Functional Foods and Nutraceuticals (NUTRICON-2013). December 22-23, 2013. Faisalabad, Pakistan.
6. Sarabi, M., **Hosseini Nezhad M.** and Mehraban, M. (2012). PCR-based detection of ochratoxigenic fungal and quantification of ochratoxin in Iranian rasin. Swiss International Conference on Industrial Microbiology. October 16-17, 2012. Switzerland.
7. **Hosseini Nezhad, Marzieh.** (2012). Limitation and Technological aspects of probiotic strains in dairy production. 2nd International Conference on Future

Perspectives of Food Processing Industry in Pakistan. December 11-12, 2012. Faisalabad, Pakistan.

8. **Hosseini Nezhad, Marzieh.** (2012). Probiotics and industrial challenges in production and utilization of probiotic foods. International Seminar on “Food Production and Processing Technologies” November 6-8, 2012. COMSTECH, Islamabad, Pakistan.
9. Kamali, S., **Hosseini Nezhad M.** and Elahi, M. (2012). Promoting effect of inulin on the survival of two probiotic *Lactobacillus* strains at low pH condition. National Congress on Medicinal Plants. 16-17 May, 2012, Kish, Iran.
10. **Hosseini Nezhad, M.,** Kamali, S. And Nahardani, M. (2012). Prebiotic compounds from medicinal plants, extraction, characterization and inhibition on pathogenic bacteria. National Congress on Medicinal Plants. 16-17 May, 2012, Kish, Iran.
11. **Hosseini Nezhad, M.** Alamshahi L. and Panjehkeh N. (2012). Antibacterial effects of some essential oils on the growth of *Ralstonia solanacearum* (race 3, biotype 2). 1st Biotechnology World Congress. February 14–15, 2012, Dubai Men’s College, Dubai, UAE.
12. Mahboobe Sarabi Jamab, **Marzieh Hosseini Nejad,** Masoomeh Mehraban Sangatash, Fakhri Shahidi, Ahmad Reza Bahrami, Seyed Ali Mortazavi and Mohammad Reza Nassiry. (2012). Isolation and identification of fungi from raisins varieties in khorasane razavi. 1st Biotechnology World Congress. February 14–15, 2012, Dubai Men’s College, Dubai, UAE.
13. S. Kamali, **M. Hosseini Nezhad** and M. Elahi. (2012). Effect of inulin extracted from chicory and jerusalem artichoke on the survival of *Lactobacillus casei* and *Lb. rhamnosus* under acidic conditions. 1st Biotechnology World Congress. February 14–15, 2012, Dubai Men’s College, Dubai, UAE.
14. L Alamshahi, **M Hosseini Nezhad.** (2011). Antibacterial effects of some essential oils on the growth of *Ralstonia solanacearum*. *Planta Med* 2011; 77 - PE55.
15. Britz, ML, **Hosseini Nezhad, M.** and Pepper, SJ, (2010) Induction of glycolytic enzymes in the cell-surface proteome of *Lactobacillus casei* after growth at low pH, Program Handbook, 11th International Symposium on the Genetics of Industrial Microorganisms, 28 June - 1 July 2010, Melbourne, Australia.
16. **Hosseini Nezhad, M.** (2010) Study on saffron production in Australia. 5th The National Festival of Saffron. 14-15 November, 2010. Qaen, Iran.
17. **Hosseini Nezhad, M.,** M. Mohtashami, M. Shadkami. (2010) Quality characteristics of sugar free sponge cakes formulated by sucralose. 1st International congress of food Technology. 3-6 November, 2010. Antalya, Turkey.

18. **Hosseini Nezhad, M.**, M. Nahardani. (2010) Extraction of Inulin from two medicinal plants and study on the growth promoting effects on a selection of probiotic bacteria. 1st International congress of food Technology. 3-6 November, 2010. Antalya, Turkey.
19. Alamshahi, L., **M. Hosseini Nezhad**, N. Panjehkeh, S. Sadri. (2010). Antibacterial effects of some essential oils on the growth of *Pectobacterium carotovorum* subsp. *Carotovorum*. The 8th International Symposium on Biocontrol and Biotechnology. October 4-6, 2010, Patayya, Tailand. Conference Proceeding pp: 170-176
20. Sadri, S., **M. Hosseini Nezhad**, L. Alamshahi. (2010). Evaluation of various herbicide mixtures for Biomass broad leaved weeds and Yield of sugar beet cropping. 19th Cogress of Plant Patology, 31-2 August, 2010, Tehran, Iran.pp 65.
21. **Hosseini Nezhad, M.**, S.J. Pepper, M. A. Hussain, and M. L. Britz. (2010). Stress responses in bacteria: when cell surfaces count. 7th International Symposium of Industrial Microbiology and Biotechnology, 1-3 July 2010, Melbourne, Australia, pp. 28-29.
22. Britz, M.L., **M. Hosseini Nezhad**, M.A Hussain, M.I. Knight, M.B. McDonagh and S.J. Pepper. (2009) Influence of stress on lactic acid bacteria on flavour and functional properties. The Globalization of Kimchi, International Kimchi Academic Symposium: Gwangju Kimchi Cultural Festival 2009, Gwangju, Korea, pp. 101-127.
23. **Hosseini Nezhad, M.**; D. Joan Stenzel and M. L. Britz. (2009) Phenomic and proteomic characterization of *Lactobacillus casei* in response to acid stress. 14 European Congress on Food Biotechnology. Barcelona, Spain.
24. **Hosseini Nezhad, M.**; M. Knight and M. L. Britz (2008) Involvement of cell surface proteins of *Lactobacillus casei* strain 46 in response to acid stress and heat shock. Annual Symposium of Microbiology. 7-10 July 2008. Melbourne, Australia.
25. **Hosseini Nezhad, M.**, M. A. Hussain, and M. L. Britz. (2007) Stress responses in *Lactobacillus* species involved in flavour production in cheese. Proceedings, 6th International Symposium on Industrial Microbiology and Biotechnology, 5-8 August 2007, Boston (Cambridge-MIT), USA. pp. 49-50. 2007.
26. **Hosseini Nezhad, M.**; M. Knight and M. L. Britz. (2007) Identification of proteins involved in the stress responses of *Lactobacillus casei* using 2DE and MALDI-TOF Mass Spectrometry. Oral presentation at the Land and Food Resources Postgraduate Conference. 31st Oct-1st Nov. 2007. Melbourne, Australia.
27. **Hosseini Nezhad, M.**, Knight, M., and Britz, M. L. (2007) Acid stress responses of probiotics *Lactobacillus casei* and *Lb. paracasei*. Oral presentation at 4th Probiotics, Prebiotics and New Foods, jointly with XXX International Congress on Microbial Ecology and Disease (SOMED),16-18th September 2007, Roma, Italy. P 51.

28. **Hosseini Nezhad, M.**; M. Knight and M. L. Britz, (2007) Proteomic analysis of *Lactobacillus casei* and *Lb. paracasei* during acid stress. A poster presented at the 32nd Lorne conference on protein structure and function. 4-8th Feb 2007. Lorne, Australia. P 67.
29. **Hosseini Nezhad, M.**; S. J. Pepper and M. L. Britz. (2006) Up-regulation of surface proteins during growth of *Lactobacillus casei* strain 46 under acid conditions. Oral presentation at the Annual Symposium of Microbiology. 25-29th July 2006. Gold Coast, Australia. P 119.
30. **Hosseini Nezhad, M.**; S. J. Pepper and M. L. Britz. (2006) Acid Stress Response in lactic Acid Bacteria Strains *Lactobacillus casei* and *Lb. Paracasei*. Oral presentation at the land and food resources post graduate conference. 18-21 Sep. 2006. Melbourne, Australia.
31. **Hosseini Nezhad, M.** (2003) Evaluation of quality characteristics and microbial contamination of saffron dried by microwave. A poster presented at the International Symposium on Saffron Biology and Biotechnology .2003. Spain.
32. **Hosseini Nezhad, M.** (2000) Formulation of One Type of Isotonic Beverages for Physical Improvement of Sportsmen. 12th Nation Congress of Iranian Food Science and Technology, 2000, Tehran, Iran
33. **Hosseini Nezhad, M** Evaluation on Saffron Drying by Microwave and Qualitative Assays on Obtained Samples .12th. Native Congress of Iranian Food Science and Technology, 2000, Tehran.
34. **Hosseini Nezhad, M** Study on Possibility of Using Agricultural and Livestock Producing of Protein. 2nd Congress on Applied Dairy Products. 1997, Mashad , Iran.
35. **Hosseini Nezhad, M** and H. Pourazarang. Study on Possibility of Carbonated Drinks Production from Native Fruits of Iran. Great Fair of Food Industries, 1977, Mashad, Iran.
36. **Hosseini Nezhad, M.** and H. Pourazarang. Study on Production of Carbonated Beverage from Pomegranate .9th Native Congress of Iranian Food Industries. 1996
37. **Hosseini Nezhad, M.** Production of Fish Protein Concentrate. 4th Native Congress of Iranian Food Industries, 1990

Conducting Research Projects:

1. Production of Fish Protein Concentrate. 1990.
2. Clarification and Production of Carbonated Pomegranate Drink. 1994.
3. Study on Sport Drinks Production Based on Fruit Juices. 1997. (Research Project)
4. Formulation and Bench-Scale Production of Sports Drinks. 1999.

5. Bench-Scale Project on Production of Lactose, Whey Protein Powder, Conductor of Protein.2000.
6. Study on Drying and Decontamination of Saffron by Microwave Tunnel, 2003.
7. Formulation and Production of Carbonated Juice Beverage from Native Fruits of Iran 2002.
8. Study on prebiotic effects of native medicinal plants from Iran the growth promoting effects on a selection of probiotic bacteria. 2008.
9. Formulation of diet sugar free products using sugar substitutes mainly sucralose. 2009.
10. Application of Sensors in Food Technology. 2011.
11. Formulation of Prebiotic and Synbiotic Bread. 2013. Ongoing.
12. Extraction of Inulin from Iranian Native Chicory and Applying in the Formulation of Functional Foods. 2013. 2015.
13. Application of inulin in the formulation of edible coatings of raw and frayed marine products, and its effects on the quality characteristics and shelf-life. 2014. Ongoing.
14. Evaluation and identification of dominant lactic strains in sourdough and the effect of controlled fermentation on microbial exopolysaccharides and qualitative properties of pan bread.
15. Collaboration in Conduction Several Research Projects in Food Science (up to 20 Projects).