

## **Mahta Mirzaei**

Department of food science and technology, Shahr-e-Qods branch of Islamic Azad University, Tehran, Iran, Tell: (+98)9123709882

Email: Mahtam86@gmail.com

### **Summary of Expertise:**

- Solid Food chemistry (especially protein chemistry).
- functional foods and bioactive compounds.
- food fermentation process and its importance in production of functional foods.
- enzymatic and microbial production, purification and identification of bioactive peptides.
- probiotic bacteria and cell culture
- Having experience in "in silico" studies including protein-ligand and protein-protein docking.

### **Academic History:**

Ph.D.: Food science and Technology

2010 -2016

Science and Research branch of Islamic Azad university, Tehran, Iran.

Dissertation: Production and purification of bioactive peptides from *S. cerevisiae* protein hydrolysates having antioxidant and antimicrobial activities.

- Yeast cell culture
- Protein hydrolysis
- Considering production of antimicrobial, antioxidant and ACE-inhibitory peptides
- Purification and identification of bioactive peptides

M.Sci: Food Science and Technology

2001 -2004

Shiraz University, Shiraz, Iran

Dissertation: Replacing Sugar with HFCS (High fructose Corn Syrup) in Non-Alcoholic Carbonated Beverages.

- New formulation of soft drinks
- Physico-chemical and organoleptic properties
- Shelf life stability

B. Sci.: Food Science and Technology

1995-1999

Technology University of Isfahan, Isfahan, Iran.

### **Employment history:**

2004 -current          Islamic Azad University, Shahr-e-Qods branch (Food Dept.)

Role: Senior lecturer

- Teaching undergraduate and postgraduate students
- Supervisor of post graduate food research projects
- Observer and technical head of the university Labs

### **Courses that I taught:**

- Fermentation industries
- Industrial Microbiology
- Food chemistry

### **Ongoing research projects**

Considering the production possibility of stable peptides with cellular antioxidant activity from protein hydrolysis of *Saccharomyces cerevisiae*.

Synthesis and considering antioxidant and ACE-inhibitory activities of peptide sequences identified from *Saccharomyces cerevisiae* protein hydrolysates.

Synthesis and antioxidant and ACE-inhibitory activities of peptide (VL-9) identified from *Kluyveromyces marxianus* protein hydrolysate.

### **Articles:**

Mirzaei, M; Mirdamadi, S; Ehsani, M R; Aminlari, M; Hoseini, E., 2015, Characterization of yeast protein enzymatic hydrolysis and autolysis in *Saccharomyces cerevisiae* and *Kluyveromyces marxianus*, Journal of Food Biosciences and Technology, 5(2), 19-30.

Mirzaei, M; Mirdamadi, S; Ehsani, M R; Aminlari, M; Hoseini, E., 2015, Purification and identification of antioxidant and ACE-inhibitory peptide from *Saccharomyces cerevisiae* protein hydrolysate, Journal of Functional Foods, 19, 259–268.

Mirzaei, M; Mirdamadi, S; Ehsani M R; Aminlari, Antioxidant, ACE -Inhibitory and Antibacterial Activities of *Kluyveromyces marxianus* Protein Hydrolysates and Their Peptide Fractions, Journal of functional foods in health and diseases, 2016; 6(7): 425-439.

Mirzaei, M; Mirdamadi, S; Ehsani, M R; Aminlari; Production of antioxidant and ACE-inhibitory peptides from *Kluyveromyces marxianus* protein hydrolysates: Purification and molecular docking, Journal of food and drug analysis, (2017), <http://dx.doi.org/10.1016/j.jfda.2017.07.008>.

Mirzaei, M; Mirdamadi, Maliheh Safavi; Mahnaz Hadizadeh, In vitro and *in silico* studies of novel synthetic ACE-inhibitory peptides derived from *Saccharomyces cerevisiae* protein hydrolysate, Under review.

Mirzaei, M; Mirdamadi, Maliheh Safavi, Antioxidant activity and protective effects of *Saccharomyces cerevisiae* peptide fractions against H<sub>2</sub>O<sub>2</sub>-induced oxidative stress in Caco2-cells, Submitted.

### **Conferences and presentations:**

1- Mirzaei, M; Mirdamadi, S; Ehsani, M R; Aminlari, M; Hoseini, E., A novel antioxidant and ACE-inhibitory peptide from *Saccharomyces cerevisiae* protein hydrolysate, 19th International Conference of Functional Food Center, Functional and Medical Foods, Bioactive Compounds and Biomarkers: Longevity and Quality of Life, Kobe, Japan, November 18, 2015.

2- Mirzaei, M; Mirdamadi, S; Ehsani, M R; Aminlari, M; Hoseini, E., Antioxidant, ACE inhibitory and antimicrobial activities of *Kluyveromyces marxianus* protein hydrolysates and their peptide fractions, 19th International Conference of Functional Food Center, Functional and Medical Foods, Bioactive Compounds and Biomarkers: Longevity and Quality of Life, Kobe, Japan, November 18, 2015.

3- Mirzaei, M; Mirdamadi, S; Ehsani, M R., Antibacterial peptide fractions from *Saccharomyces cerevisiae* and *Kluyveromyces marxianus* protein hydrolysates, The 19th International and Iranian Congress of Microbiology, Shahid Beheshti International Conference Center, Tehran, Iran, August 25-27 2015.

4- Mirzaei, M; Mirdamadi, S; Ehsani, M R; Aminlari, M; Hoseini, E., Considering the production of antioxidant peptides during physical-enzymatic treatment and autolysis of *Saccharomyces cerevisiae*, 1st international and 9th National Biotechnology Congress of Islamic Republic of Iran, Shahid Beheshti University, Tehran, Iran, May 24-26 2015.

5- Mirzaei, M; Mirdamadi, S; Ehsani M R; Aminlari, M; Hoseini, E, Cosidering the production of ACE-inhibitory peptides in the yeast extract of *Kluyveromyces marxianus*, 1st international and 9th National Biotechnology Congress of Islamic Republic of Iran, Shahid Beheshti University, Tehran, Iran, May 24-26 2015.

6- Mirzaei, M; Mirdamadi, S; Ehsani M R; Aminlari, *Bioactive Peptide with Antioxidant and ACE Inhibitory Activities Purified from Kluyveromyces Marxianus Protein Hydrolysates*, 2nd Annual International Conference on Biology, Athens Institute for education and research, Athens, Greece, June 20-23 2016.

### **Book publication:**

Translation of “microbiology and technology of fermented foods” First edition, 2006.

### **Professional Development and Training:**

- Optimization the production of Biotechnological products situation in fermenters, 2011, Tehran university.
- High Performance Liquid Chromatography (HPLC), 2015, Iranian Research organization for Science and Technology ((IROST)
- Molecular Docking, 20-22, July 2016, Laboratory of systems Biology and Bioinformatics, Tehran university.

- Advanced course in molecular Docking, 27-29 July 2016, Laboratory of systems Biology and Bioinformatics, Tehran university.
- Protein-Protein interaction and Molecular Dynamics, 17-19, August 2016, Laboratory of systems Biology and Bioinformatics, Tehran university.

Cell culture, 2016, Iranian Research organization for Science and Technology (IROST)