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EDUCATION

Istanbul Technical University, Food Engineering Department, Istanbul, Turkey

2013-2019

PhD in Food Engineering

- Advisor: Prof. Dr. Meral Kilic Akyilmaz
- Co-advisor: Assoc. Prof. Dr. Funda Karbancioglu Guler
- Dissertation: Valorization of industrial food wastes by production of phenolic antioxidants via fermentation with newly isolated *Aspergillus* spp.

University of Saskatchewan, Dept. of Food and Bioproduct Sciences, Saskatoon, Canada

2018

Visiting scientist

- Promoter: Assoc. Prof. Dr. Takuji Tanaka
- Research subject: Deoxynivalenol (DON) accumulation in Black Soldier Fly Larvae (*Hermetia illucens*) feeding with wheat grain infested by *Fusarium* spp.

Ghent University, Lab of Food Microbiology and Biotechnology, Kortrijk, Belgium

2015- 2016

Visiting scientist

- Promoter: Prof. Dr. Katleen Raes
- Research subject: Screening of molds to produce hydrolytic enzymes and optimization of fermentation parameters

Istanbul Technical University, Food Engineering Department, Istanbul, Turkey

2011-2013

M.Sc. in Food Engineering

- Advisor: Prof. Dr. Necla Aran
- Co-advisor: Assoc. Prof. Dr. Fatma Nese Kok
- Dissertation: The effect of coacervation technique on the viability of model microorganisms

Ankara University, Food Engineering Department, Ankara, Turkey

2005-2010

B.Sc. in Food Engineering

- Advisor: Prof. Dr. Sedat Velioglu
- Graduation Project: High viscosity gum production using different combinations

WORK EXPERIENCE IN UNIVERSITY

Istanbul Aydın University Nutrition and Dietetics Department Istanbul, Turkey **October 2020-present**
Asst. Prof. Dr.

Okan University Food Engineering Department, Istanbul, Turkey **Jan 2020-May 2020**
Adjunct Professor

Istanbul Sabahattin Zaim University Food Engineering Department, Istanbul, Turkey **Jan-May 2020**
Adjunct Professor

Istanbul Technical University Food Engineering Department, Istanbul, Turkey **Jan 2013- Sept 2019**
Research and Teaching Assistant

GIVING COURSES

Undergraduate

Food Processing and Preservation (Turkish)
Food Chemistry (Turkish)
Food Technology (Turkish)
Food Additives (Turkish)
Food Biotechnology (Turkish)
Food Quality Control (English)
Food Microbiology (English)
Dairy Technology (English)

Graduated

Food Toxicology (Turkish)

MASTER'S PROMOTING ACTIVITY

From 2020 to 2022, 2 master students got the master's degree under my supervision at Istanbul Aydın University and I am presently the promoter of other 4 master's students. Two of them are working about the investigating antioxidant activity of *Tenebrio molitor* larvae fed with apple and pomegranate peel. Two of them are performed their master study about development of functional gluten-free bakery products.

PROJECTS

- Development of gluten-free functional new products enriched with fruit-vegetable wastes, Guided Scientific Research Project supported by Istanbul Aydın University (Project manager, 2021-Continuing)
- Utilization of food wastes for production of antioxidants by molds, Scientific research project supported by Istanbul Technical University (BAP), (Researcher, 2015-2019).
- The effect of coacervation technique on the viability of model microorganisms, Scientific research project supported by Istanbul Technical University (BAP), (Researcher, 2012-2013).

PUBLICATIONS

- **Peer-reviewed journal articles:**

Gulsunoglu-Konuskan, Z., & Kilic-Akyilmaz, M. (2022). Microbial Bioconversion of Phenolic Compounds in Agro-industrial Wastes: A Review of Mechanisms and Effective Factors. *Journal of Agricultural and Food Chemistry*.

Quispe, C., Herrera-Bravo, J., Javed, Z., Khan, K., Raza, S., **Gulsunoglu-Konuskan, Z.,** ... & Calina, D. (2022). Therapeutic applications of curcumin in diabetes: a review and perspective. *BioMed Research International*, 2022.

Karimidastjerd A. & **Gulsunoglu-Konuskan, Z.** (2021). Biological, functional and nutritional properties of caseinomacropetide from sweet whey. *Critical Reviews in Food Science and Nutrition*, 1-13.

Gulsunoglu-Konuskan Z, Karbancioglu-Guler F. & Kilic-Akyilmaz M. (2021). Development of A Bioprocess for Production of Ellagic Acid from Chestnut (*Castanea sativa* mill.) Waste by Fermentation with *Aspergillus* spp. *Food Bioscience*, 42: 101058.

Yagdi S. D., **Gulsunoglu-Konuskan Z.** (2021). Glutensiz Ürünlerde Kullanılan Alternatif Protein Kaynakları. *European Journal of Science and Technology* (32), 32-39., Doi:10.31590/ejosat.1045522

Gulsunoglu Z., Purves, R., Karbancioglu-Guler F., Kilic-Akyilmaz M. (2020) Enhancement of phenolic antioxidants in industrial apple waste by fermentation with *Aspergillus* spp. *Biocatalysis and Agricultural Biotechnology*, 25: 101562.

Gulsunoglu Z., Aravind S., Bai Y., Wang L., Kutcher H.R., Tanaka T. (2019) Deoxynivalenol (DON) accumulation in Black Soldier Fly Larvae (*Hermetia illucens*) feeding with wheat grain infested by *Fusarium* spp. *Fermentation*, 5(83), 2-10.

Gulsunoglu Z, Karbancioglu-Guler F, Raes K, Kilic-Akyilmaz M. (2019) Soluble and insoluble-bound phenolics and antioxidant activity of various industrial plant wastes. *International Journal of Food Properties* 22 (1): 1501-1510.

Gulsunoglu Z., Karbancioglu-Guler F, Kilic-Akyilmaz M, Raes K. (2019). Production of multiple hydrolytic enzymes by black *Aspergilli* isolated from date and grape. *Journal of Agricultural Sciences*, 25 (4), 459-466.

Atil O., **Gulsunoglu Z.,** Kilic-Akyilmaz M. (2019). Stability of palace halva in relation to storage temperature and relative humidity. *Gıda*, 44 (2), 260-273. <https://dx.doi.org/10.15237/gida.GD18050>

Dikmetas D., Konusur G., Mutlu-Ingok A., **Gulsunoglu Z.,** Karbancioglu-Guler F. (2019). Antimicrobial and antioxidant properties of hydrosol/essential oils obtained from orange (*Citrus sinensis*) peels. *Düzce University Journal of Science and Technology*, 7 (1), 274-283.

Kilic-Akyilmaz M., Kocaman E., **Gulsunoglu Z.,** Sagdic C., Mavazekhan S. M. (2018). Changes in physicochemical properties and gelation behavior of caseinomacropetide isolate by treatment with transglutaminase. *International Dairy Journal*, 84: 85-91. <https://doi.org/10.1016/j.idairyj.2018.04.005>

Erguney E., **Gulsunoglu Z.,** Firatligil-Durmus E. and Kilic-Akyilmaz M. (2015). Improvement of physical properties of cherry laurel powder. *Academic Food Journal* 13(2): 108-114.

- **Book chapters:**

Gulsunoglu-Konuskan, Z., Tacer-Caba Z & Kilic-Akyilmaz M. (2021). Innovative Approaches in High Pressure Processing for Extraction of Antioxidants from Grains. In: *Non-Thermal Processing Technologies for The Grain Industry* (Ed. M. Selvamuthukumaran), CRC Press. ISBN:978-036-7608-57-6.

Karimidastjerd A. & **Gulsunoglu-Konuskan, Z.** (2021). Health Benefits of Plant-Based Milks as Alternatives to Conventional Milk. In: *Health and Science-2021*, (Ed. Huseyin Erdal) (1st ed., pp. 293-310), Efe Academy, ISBN:978-625-7601-81-8.

Gulsunoglu-Konuskan, Z. (2021). Sert Kabuklu Sebze ve Meyveler (Ceviz, Fındık, İncir, Kuru Kayısı, Kuru Üzüm) (Fenoller). İçinde *Fonksiyonel Besinlerin Sağlıkta Rolü* (Ed. Müge Arslan), (1st ed., pp. 179-213), Güven Plus Grup A.Ş. Yayınları, E-ISBN: 978-605-7594-54-9.

Guldiken, B., **Gulsunoglu, Z.**, Bakir, S., Catalkaya, G., Capanoglu, E., & Nickerson, M. (2021). Innovations in functional foods development. In *Food Technology Disruptions* (pp. 73-130). Academic Press.

Kilic-Akyilmaz M. and **Gulsunoglu Z.** (2015). “Additives and Preservatives” In book: Handbook of Vegetable Preservation and Processing, Second Edition, (Eds.) Hui Y. H. and Evranuz E. O., *CRC Press*, pp. 301-318.

INTERNATIONAL CONFERENCE PRESENTATIONS

Yagdi S. D., **Gulsunoglu Konuskan Z.** (2021). Alternative Protein Sources Used in Gluten-Free Products. *International Conference on Design, Research & Development* (Oral presentation)

Gulsunoglu Z., Karbancioglu-Guler F., Kilic-Akyilmaz M. (2020). Antioxidant activities of stirred yoghurt fortified with fermented apple peel and chestnut shell. *IFT Annual Meeting & Food Expo*, July 13-15, Webinar. (Poster presentation)

Gulsunoglu Z., Yigit H., Turan K., Karbancioglu-Guler F., Kilic-Akyilmaz M. (2020). Evaluation of antibacterial and antiviral activities of fermented chestnut shell. *IFT Annual Meeting & Food Expo*, July 13-15, Webinar. (Poster presentation)

Gulsunoglu Z., Karbancioglu-Guler F., Kilic-Akyilmaz M. (2019). Utilization of apple and pomegranate peels for production of pectinase by *Aspergillus* spp. *1st International and 11th National Food Engineering Congress*, November 7-9, Antalya, Turkey. (Oral presentation)

Kabataş B., Demirkurt B., **Gulsunoglu Z.**, Kilic-Akyilmaz M. (2019). The effect of different stabilizer combinations on the structural quality of ice cream. *2nd National Dairy Congress*, April 25-26, Izmir, Turkey. (Oral presentation)

Gulsunoglu Z., Aravind S., Bai Y., Wang L., Kutcher H.R., Tanaka T. (2019). Recovery of nutrients from *Fusarium*-damaged grain using solid-state fermentation and insect culture combinations. *69th Annual Conference of the Canadian Society of Microbiologists*, June 10-13, Quebec, Canada. (Poster presentation)

Demirkurt B., Kabatas B., Kilic Akyilmaz M., **Gulsunoglu Z.** (2018). Influence of stabilizers on physical properties of ice cream. *13th International conference of Food Physicists- ICFP*, October 23-25, Antalya, Turkey. (Poster presentation)

Gulsunoglu Z., Varol A., Ayhan N., Velioglu S. (2018). Synergistic interaction of xanthan, guar and locust bean gum investigated by viscosity. *The International Symposium of Food Rheology and Texture*, October 19-21, Istanbul, Turkey. (Proceeding paper)

Filonenko O., Kaya M., **Gulsunoglu Z.**, Kilic-Akyilmaz M. (2018). Development of flavored milk with carob. *The International Symposium of Food Rheology and Texture*, October 19-21, Istanbul, Turkey. (Poster presentation)

Gulsunoglu Z., Karbancioglu-Guler F., Kilic-Akyilmaz M. (2018). Hydrolytic enzyme production by *Aspergillus aculeatus* on pre-treated pomegranate peel-supplemented medium. *Nutricon*, June 13-15, Ohrid, Macedonia. (Oral presentation)

Gulsunoglu Z., Catalkaya G., Kilic-Akyilmaz M., Capanoglu E. (2018). Effect of *in-vitro* gastrointestinal digestion on phenolic contents and antioxidant capacities of carob fruit, molasses (pekmez) and leather (pestil). *Nutricon*, June 13-15, Ohrid, Macedonia. (Poster presentation)

Catalkaya G., **Gulsunoglu Z.**, Guldiken B., Capanoglu E. (2018). Investigation of changes in antioxidant activity of Hardaliye during in *in-vitro* gastrointestinal digestion. *Nutricon*, June 13-15, Ohrid, Macedonia. (Poster presentation)

Demiral M., **Gulsunoglu Z.**, Kocer E., Kilic-Akyilmaz M. (2018). Effect of inulin on physical properties of dried and reconstituted yoghurt. *International conference on Raw Materials to Processed Foods*, April 11-13, Antalya, Turkey. (Oral presentation)

Dastjerd A.K., **Gulsunoglu Z.**, Kilic-Akyilmaz M. (2017). pH effect on particle size and zeta potential of isolated caseinomacropeptide from sweet whey. *10th NIZO Dairy Conference Innovations in Dairy Ingredients*, October 1-3, Papendal, The Netherlands (Poster presentation)

Gulsunoglu Z., Karbancioglu-Guler F., Kilic-Akyilmaz M., Raes K. (2017). Chemical Composition of Plant-Origin Food Waste. *IFT Annual Meeting & Food Expo*, June 25-28, Las Vegas, USA. (Poster presentation)

Gulsunoglu Z., Karbancioglu-Guler F., Kilic-Akyilmaz M., Raes K. (2016). Screening of *Aspergillus* spp. to Produce Hydrolytic Enzymes. *3rd Congress of Baltic Microbiologists (CMB2016)*, October 18-21, Vilnius, Lithuania. (Poster presentation)

Ozer A., **Gulsunoglu Z.**, Kilic-Akyilmaz M. (2015). Stability of palace halva in relation to storage temperature and relative humidity. *Innovations in Food Packaging, Shelf Life and Food Safety*, September 15-17, Munich, Germany. (Poster presentation)

Erguney E., **Gulsunoglu Z.**, Firatligil-Durmus E. and Kilic-Akyilmaz M. (2014). Improvement of physical properties of cherry laurel powder. *Annual Conference & Exhibition, Functional Foods, Nutraceuticals, Natural Health Products and Dietary Supplements*, October 14-17, Istanbul, Turkey. (Poster presentation)

Gulsunoglu Z., Kok F. N. and Aran N. (2014). The Effect of Complex Coacervation Technique on The Viability of *Lactobacillus acidophilus* LA5 and *Saccharomyces cerevisiae* CEN PK 1137D. *3rd International Conference on Food Digestion*, March 11-13, Wageningen, The Netherlands. (Poster presentation)

Gulsunoglu Z., Kok F. N. and Aran N. (2014). The Effect of Freeze Drying on Viability of Encapsulated *Lactobacillus acidophilus* LA5 and The Effect of genipin concentration on the swelling ratio of freeze-dried microcapsules. *19th International Drying Symposium*, 24-27 August, Lyon, France. (Proceeding paper).

Keskin-Yaman O. and **Gulsunoglu Z.** (2012). Quality Management Systems in Dairy Industry. *International Conference on Industrial Engineering and Operations Management (IEOM)*, 3-6 July, Istanbul, Turkey. (Proceeding paper).

NATIONAL CONFERENCE PRESENTATIONS

Gulsunoglu Z. (2020). Effects of different solvent usage on total phenolic content and antioxidant activity of vegetable wastes. 13th Food Congress, 21-23 October 2020, Çanakkale, Türkiye. (Oral presentation)

Gulsunoglu Z. and Kilic-Akyilmaz M. (2017). Effect of microbial and chemical acidification on milk gelling. *1st National Dairy Congress*, May 25-26, Ankara, Turkey. (Poster presentation)