

## Asst. Prof. BERAT AYTÜL HAMZALIOĞLU

### Personal Information

Office Phone: [+90 312 297 7100](tel:+903122977100)

Office Phone: [+90 312 297 6261](tel:+903122976261)

Email: [aytulhamzalioglu@hacettepe.edu.tr](mailto:aytulhamzalioglu@hacettepe.edu.tr)

Web: <https://avesis.hacettepe.edu.tr/aytulhamzalioglu>

### International Researcher IDs

ORCID: 0000-0002-3659-2023

Publons / Web Of Science ResearcherID: D-8026-2013

ScopusID: 54412405300

Yoksis Researcher ID: 60611

### Education Information

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Gıda Mühendisliği, Turkey 2011 - 2017

Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Gıda Mühendisliği, Turkey 2009 - 2011

Undergraduate Minor, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği, Turkey 2006 - 2009

Undergraduate, Hacettepe University, Mühendislik Fakültesi, Gıda Mühendisliği, Turkey 2005 - 2009

### Dissertations

Doctorate, Investigation of the reactivities of monomeric and polymeric components in some foods in digestion conditions in vitro, Hacettepe Üniversitesi, Mühendislik Fakültesi, Gıda Mühendisliği Bölümü, 2017

Postgraduate, Biyoaktif karbonillerin akrilamid oluşumu üzerine etkisinin incelenmesi, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Gıda Mühendisliği (YI) (Tezli), 2011

### Research Areas

Food Engineering, Food Science, Food Chemistry, Food Technology, Food Processing (pasteurisation, sterilisation, refrigeration, lyophilisation, etc.), Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Gıda Mühendisliği Bölümü, 2020 - Continues

Research Assistant, Hacettepe University, Mühendislik Fakültesi, Gıda Mühendisliği Bölümü, 2010 - 2020

### Published journal articles indexed by SCI, SSCI, and AHCI

- Investigating the Formation of In Vitro Immunogenic Gluten Peptides after Covalent Modification of Their Structure with Green Tea Phenolic Compounds under Alkaline Conditions**  
Aksoy M., HAMZALIOĞLU B. A., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, no.24, pp.13898-13905, 2024 (SCI-Expanded)

- II. **Casein-phenol interactions occur during digestion and affect bioactive peptide and phenol bioaccessibility**  
HAMZALIOĞLU B. A., Tagliamonte S., GÖKMEN V., Vitaglione P.  
Food and Function, vol.14, no.20, pp.9457-9469, 2023 (SCI-Expanded)
- III. **Acrylamide in Corn-Based Thermally Processed Foods: A Review**  
Zilic S., Nikolic V., ATAÇ MOGOL B., Hamzalioglu A., Tas N., KOCADAĞLI T., Simic M., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.70, no.14, pp.4165-4181, 2022 (SCI-Expanded)
- IV. **Optimization of microwave-assisted extraction of anthocyanins in red cabbage by response surface methodology**  
Yigit U., YOLAÇANER E., Hamzalioglu A., GÖKMEN V.  
JOURNAL OF FOOD PROCESSING AND PRESERVATION, vol.46, no.1, 2022 (SCI-Expanded)
- V. **Dietary exposure to acrylamide: A critical appraisal on the conversion of disregarded intermediates into acrylamide and possible reactions during digestion**  
Aktag I. G., Hamzalioglu A., Kocadagh T., GÖKMEN V.  
CURRENT RESEARCH IN FOOD SCIENCE, vol.5, pp.1118-1126, 2022 (SCI-Expanded)
- VI. **Potential reactions of thermal process contaminants during digestion**  
Hamzalioglu A., GÖKMEN V.  
TRENDS IN FOOD SCIENCE & TECHNOLOGY, vol.106, pp.198-208, 2020 (SCI-Expanded)
- VII. **Multiresponse kinetic modelling of 5-hydroxymethylfurfural and acrylamide formation in sesame (Sesamum indicumL.) seeds during roasting**  
Berk E., Hamzalioglu A., GÖKMEN V.  
EUROPEAN FOOD RESEARCH AND TECHNOLOGY, vol.246, no.12, pp.2399-2410, 2020 (SCI-Expanded)
- VIII. **5-Hydroxymethylfurfural accumulation plays a critical role on acrylamide formation in coffee during roasting as confirmed by multiresponse kinetic modelling**  
Hamzalioglu A., GÖKMEN V.  
FOOD CHEMISTRY, vol.318, 2020 (SCI-Expanded)
- IX. **Lactose hydrolysis and protein fortification pose an increased risk for the formation of Maillard reaction products in UHT treated milk products**  
AKTAĞ I., Hamzalioglu A., GÖKMEN V.  
JOURNAL OF FOOD COMPOSITION AND ANALYSIS, vol.84, 2019 (SCI-Expanded)
- X. **Investigations on the Maillard Reaction in Sesame (Sesamum indicum L.) Seeds Induced by Roasting**  
Berk E., Hamzalioglu A., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.67, no.17, pp.4923-4930, 2019 (SCI-Expanded)
- XI. **Investigations on the effect of broccoli and wine sulphur compounds on glyoxal scavenging under simulated physiological conditions**  
Hamzalioglu A., GÖKMEN V.  
JOURNAL OF FUNCTIONAL FOODS, vol.55, pp.220-228, 2019 (SCI-Expanded)
- XII. **Investigation and kinetic evaluation of the reactions of hydroxymethylfurfural with amino and thiol groups of amino acids**  
HAMZALIOĞLU B. A., GÖKMEN V.  
FOOD CHEMISTRY, vol.240, pp.354-360, 2018 (SCI-Expanded)
- XIII. **Formation and elimination reactions of 5-hydroxymethylfurfural during in vitro digestion of biscuits**  
HAMZALIOĞLU B. A., GÖKMEN V.  
FOOD RESEARCH INTERNATIONAL, vol.99, pp.308-314, 2017 (SCI-Expanded)
- XIV. **INVESTIGATION OF THE REACTIONS OF THERMAL PROCESS CONTAMINANTS IN BISCUITS DURING DIGESTION**  
Hamzalioglu A., GÖKMEN V.  
ANNALS OF NUTRITION AND METABOLISM, vol.71, pp.1290-1291, 2017 (SCI-Expanded)
- XV. **Investigations on the reactions of alpha-dicarbonyl compounds with amino acids and proteins during in vitro digestion of biscuits**  
Hamzalioglu A., GÖKMEN V.

- FOOD & FUNCTION, vol.7, no.6, pp.2544-2550, 2016 (SCI-Expanded)
- XVI. **Investigation of the reactions of acrylamide during in vitro multistep enzymatic digestion of thermally processed foods**  
Hamzalioglu A., GÖKMEN V.  
FOOD & FUNCTION, vol.6, no.1, pp.109-114, 2015 (SCI-Expanded)
- XVII. **Acrylamide and 5-hydroxymethylfurfural formation during baking of biscuits: NaCl and temperature-time profile effects and kinetics**  
Van Der Fels-Klerx H., Capuano E., Nguyen H., ATAÇ MOGOL B., KOCADAĞLI T., Göncüoğlu Taş N., Hamzalioglu A., Van Boekel M., GÖKMEN V.  
Food Research International, vol.57, pp.210-217, 2014 (SCI-Expanded)
- XVIII. **Role of curcumin in the conversion of asparagine into acrylamide during heating**  
HAMZALIOĞLU B. A., ATAÇ MOGOL B., Lumaga R. B., Fogliano V., GÖKMEN V.  
AMINO ACIDS, vol.44, no.6, pp.1419-1426, 2013 (SCI-Expanded)
- XIX. **Role of bioactive carbonyl compounds on the conversion of asparagine into acrylamide during heating**  
HAMZALIOĞLU B. A., GÖKMEN V.  
EUROPEAN FOOD RESEARCH AND TECHNOLOGY, vol.235, no.6, pp.1093-1099, 2012 (SCI-Expanded)
- XX. **Controlling the Maillard Reaction by Reactant Encapsulation: Sodium Chloride in Cookies**  
Fiore A., Troise A. D., Mogol B. A., Roullier V., Gourdon A., Jian S. E. M., HAMZALIOĞLU B. A., GÖKMEN V., Fogliano V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.60, no.43, pp.10808-10814, 2012 (SCI-Expanded)
- XXI. **In depth study of acrylamide formation in coffee during roasting: Role of sucrose decomposition and lipid oxidation**  
KOCADAĞLI T., Göncüoğlu N., Hamzalioglu A., GÖKMEN V.  
Food and Function, vol.3, no.9, pp.970-975, 2012 (SCI-Expanded)

## **Books & Book Chapters**

- I. **Formation of acrylamide in thermally processed foods and its reactions during in vitro digestion**  
HAMZALIOĞLU B. A., GÖKMEN V.  
in: Food-Borne Toxicants: Formation, Analysis, and Toxicology, Michael Granvogl, Shaun MacMahon, Editor, American Chemical Society, pp.45-66, 2019

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **Investigation of the effect of different shapes on digestible starch levels in baked or fried potatoes**  
HAMZALIOĞLU B. A., GÖKMEN V.  
13th Congress of Nutrition, Belgrade, Serbia, 26 - 28 October 2016
- II. **Effect of in vitro gastrointestinal digestion on dicarbonyl compounds in biscuits**  
HAMZALIOĞLU B. A., GÖKMEN V.  
12th International Symposium on the Maillard Reaction, Japan, 1 - 04 September 2015
- III. **Fate of acrylamide during in vitro multistep enzymatic digestion of thermally processed foods**  
HAMZALIOĞLU B. A., GÖKMEN V.  
4th International Conference on Food Digestion, Italy, 17 - 19 March 2015
- IV. **Kinetic modeling of the formation of acrylamide and HMF in biscuits**  
Van der Fels Klerx H., Nguyen H., ATAÇ MOGOL B., Capuano E., KOCADAĞLI T., TAŞ N., HAMZALIOĞLU B. A.  
EuroFoodChem XVII, 7 - 10 May 2013
- V. **In depth study of acrylamide formation in coffee during roasting**  
KOCADAĞLI T., TAŞ N., HAMZALIOĞLU B. A., GÖKMEN V.  
11th International Symposium on the Maillard Reaction "Centenary of the Maillard Reaction Discovery (1912-

## Supported Projects

- GÖKMEN V., BAŞBOZKURT D. N., PAÇACIOĞLU E., TAŞ N., KOCADAĞLI T., HAMZALIOĞLU B. A., TAVŞANOĞLU Ç., Başbozkurt D. N., Paçacıoğlu E., Baysal M., Project Supported by Higher Education Institutions, Biyoisleme Teknikleri Kullanılarak Akrilamid Riski Azaltılmış Protein Biyoyararlanım ve Aroma Özellikleri Geliştirilmiş Girdilerin ve Gıdaların Üretimi, 2023 - Continues
- Hamzalıoğlu B. A., Çelik Yılmaz E. E., Gökmen V., TÜBİTAK Project, Fırıncılık Ürünlerinde Kullanılmak Üzere Kimyasal ve Biyokimyasal Reaksiyon Mekanizmalarıyla İmmünojenik Peptitleri Azaltılmış Modifiye Gluten Eldesi, 2023 - 2025
- Ataç Mogol B., Gökmen V., Hamzalıoğlu B. A., TÜBİTAK International Bilateral Joint Cooperation Program Project, Controlling toxic effects of acrylamide during digestion and metabolism of thermal processed foods. , 2023 - 2025
- TENGİLİMOĞLU METİN M., HAMZALIOĞLU B. A., Kaya F., Project Supported by Higher Education Institutions, Farklı Pişirme Yöntemleri ve Farklı Yağ Türleri Kullanımının Patateslerin Tahmini Glisemik İndeks Değeri Üzerine Etkisi, 2022 - 2024
- ATAÇ MOGOL B., HAMZALIOĞLU B. A., TAŞ N., KOCADAĞLI T., Project Supported by Higher Education Institutions, Farklı Tarım Uygulamalarının Mısır Genotiplerinin Serbest Asparajin Seviyesi Ve Akrilamid Oluşturma Potansiyeli Üzerine Etkileri (220N414 nolu TÜBİTAK Projesi Ek Desteği), 2022 - 2023
- Ataç Mogol B., Hamzalıoğlu B. A., Taş N., Kocadağlı T., TÜBİTAK International Bilateral Joint Cooperation Program Project, Farklı Tarım Uygulamalarının Mısır Genotiplerinin Serbest Asparajin Seviyesi Ve Akrilamid Oluşturma Potansiyeli Üzerine Etkileri, 2021 - 2023
- YOLAÇANER E., Yiğit Ü., Demirci C., HAMZALIOĞLU B. A., Project Supported by Higher Education Institutions, Kırmızı Lahana Antosiyaninlerinin Mikrodalga ve Konvansiyonel Yöntemler ile Özütleme ve Antosiyanin Özütlelerinin Enkapsülasyonu, 2017 - 2021
- HAMZALIOĞLU B. A., Project Supported by Higher Education Institutions, Protein Fenol Etkileşiminin Proteinlerin ve Protein Bazlı Bazı Gıda İngrediyenlerinin Antioksidan Glikasyon ve Sindirilebilirlik Özellikleri Üzerine Etkisinin İncelenmesi, 2018 - 2018
- HAMZALIOĞLU B. A., Project Supported by Higher Education Institutions, Fenolik Bileşiklerin Sindirim Enzimleri Üzerine Etkilerinin İncelenmesi, 2017 - 2018
- HAMZALIOĞLU B. A., GÖKMEN V., Project Supported by Higher Education Institutions, 12. Uluslararası Maillard Reaksiyonu Sempozyumu, 2015 - 2015

## Metrics

- Publication: 29  
Citation (WoS): 403  
Citation (Scopus): 625  
H-Index (WoS): 12  
H-Index (Scopus): 14

## Non Academic Experience

- Universita degli di studi Napoli Federico II  
Napoli Universita degli di Studi Federico II  
Kopenhag Üniversitesi