

## Res. Asst. HATİCE DUMAN

### Personal Information

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### International Researcher IDs

ScholarID: 5eYDtwgAAAAJ

Yoksis Researcher ID: 406299

### Education Information

Undergraduate, Canakkale Onsekiz Mart University, Fen Fakültesi, Moleküler Biyoloji Ve Genetik, Turkey 2015 - 2020

### Dissertations

Postgraduate, Recombinant production and characterization of a novel N-glycosidase (EndoBI-2) from *Bifidobacterium longum* subsp. *infantis* 157F, Canakkale Onsekiz Mart University, Lisansüstü Eğitim Enstitüsü, Fen Bilimleri Enstitüsü, 2022

### Academic Titles / Tasks

Research Assistant, Canakkale Onsekiz Mart University, Fen Fakültesi, Moleküler Biyoloji Ve Genetik, 2024 - Continues

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

- I. **Functional chocolate: exploring advances in production and health benefits**  
Saritas S., DUMAN H., Pekdemir B., Rocha J. M., ÖZ F., KARAV S.  
INTERNATIONAL JOURNAL OF FOOD SCIENCE AND TECHNOLOGY, 2024 (SCI-Expanded)
- II. **Nutritional and functional aspects of fermented algae**  
Saritas S., DUMAN H., KARAV S.  
INTERNATIONAL JOURNAL OF FOOD SCIENCE AND TECHNOLOGY, 2024 (SCI-Expanded)
- III. **Antimicrobial Properties of Colostrum and Milk**  
Eker F., Akdaşçı E., Duman H., Yalçıntaş Y. M., Canbolat A. A., Kalkan A. E., KARAV S., Şamec D.  
Antibiotics, vol.13, no.3, 2024 (SCI-Expanded)
- IV. **Distinguishing Turkish pine honey from multi-floral honey through MALDI-MS-based N-glycomics and machine learning**  
Masri S., Aksoy S., DUMAN H., KARAV S., Kayili H. M., SALİH B.  
Journal of Food Measurement and Characterization, 2024 (SCI-Expanded)
- V. **Lactoferrin: neuroprotection against Parkinson's disease and secondary molecule for potential treatment.**  
Eker F., Bolat E., Pekdemir B., Duman H., Karav S.  
Frontiers in aging neuroscience, vol.15, pp.1204149, 2023 (SCI-Expanded)
- VI. **Release of bifidogenic N-glycans from native bovine colostrum proteins by an endo- $\beta$ -N-acetylglucosaminidase**

Bunyatratchata A., Parc A. L., de Moura Bell J. M. L. N., Cohen J. L., Duman H., Arslan A., KAPLAN M., Barile D., KARAV S.

Enzyme and Microbial Technology, vol.162, 2023 (SCI-Expanded)

- VII. **A toolbox of machine learning software to support microbiome analysis**  
Marcos-Zambrano L. J., López-Molina V. M., GÜNGÖR B., Frohme M., Karaduzovic-Hadziabdic K., Klammsteiner T., Ibrahim E., Lahti L., Loncar-Turukalo T., Dhamo X., et al.  
Frontiers in Microbiology, vol.14, 2023 (SCI-Expanded)
- VIII. **Role of milk glycome in prevention, treatment, and recovery of COVID-19**  
KAPLAN M., ŞAHUTOĞLU A. S., Saritas S., Duman H., Arslan A., Pekdemir B., KARAV S.  
FRONTIERS IN NUTRITION, vol.9, 2022 (SCI-Expanded)
- IX. **Benefits of A2 Milk for Sports Nutrition, Health and Performance**  
KAPLAN M., BAYDEMİR B., GÜNAR B. B., Arslan A., Duman H., KARAV S.  
FRONTIERS IN NUTRITION, vol.9, 2022 (SCI-Expanded)
- X. **Immobilization of a Bifidobacterial Endo- $\alpha$ -N-Acetylglucosaminidase to Generate Bioactive Compounds for Food Industry**  
Pekdemir B., Duman H., Arslan A., KAPLAN M., Karyelioglu M., ozer T., Kayili H. M., SALİH B., Henrick B. M., Duar R. M., et al.  
FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY, vol.10, 2022 (SCI-Expanded)
- XI. **Production of Bovine Colostrum for Human Consumption to Improve Health**  
KAPLAN M., Arslan A., Duman H., Karyelioglu M., BAYDEMİR B., Guenar B. B., Alkan M., Bayraktar A., Tosun H. I., Ertuerk M., et al.  
FRONTIERS IN PHARMACOLOGY, vol.12, 2022 (SCI-Expanded)
- XII. **Determining Total Protein and Bioactive Protein Concentrations in Bovine Colostrum**  
Arslan A., Duman H., Kaplan M., Uzkuç H., Bayraktar A., Ertürk M., Alkan M., Frese S. A., Duar R. M., Henrick B. M., et al.  
Journal of Visualized Experiments, vol.2021, no.178, 2021 (SCI-Expanded)
- XIII. **Recombinant Production of Bifidobacterial Endoglycosidases for N-glycan Release**  
Sucu B., Bayraktar A., Duman H., Arslan A., KAPLAN M., Karyelioglu M., Ntelitze E., Tastekin T., Yetkin S., Erturk M., et al.  
JOVE-JOURNAL OF VISUALIZED EXPERIMENTS, vol.2021, no.173, 2021 (SCI-Expanded)
- XIV. **Bovine Colostrum and Its Potential for Human Health and Nutrition**  
Arslan A., KAPLAN M., Duman H., Bayraktar A., Erturk M., Henrick B. M., Frese S. A., KARAV S.  
FRONTIERS IN NUTRITION, vol.8, 2021 (SCI-Expanded)
- XV. **Potential Applications of Endo- $\beta$ -N-Acetylglucosaminidases From Bifidobacterium longum Subspecies infantis in Designing Value-Added, Next-Generation Infant Formulas**  
Duman H., KAPLAN M., Arslan A., ŞAHUTOĞLU A. S., Kayili H. M., Frese S. A., KARAV S.  
FRONTIERS IN NUTRITION, vol.8, 2021 (SCI-Expanded)
- XVI. **Structural insights of two novel N-acetyl-glucosaminidase enzymes through in silico methods**  
ŞAHUTOĞLU A. S., Duman H., Frese S. A., KARAV S.  
TURKISH JOURNAL OF CHEMISTRY, vol.44, no.6, pp.1703-1715, 2020 (SCI-Expanded)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Recombinant Production and Characterization of a Novel N-glycosidases (EndoBI-2) from Bifidobacterium longum subsp. infantis 157F**  
Duman H., Karav S.  
5th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem), 2022, 23 November 2022, pp.293
- II. **Selective Deglycosylation of Therapeutic Proteins via Novel Bifidobacterial Glycosidases**  
Sucu B., Bayraktar A., Kaplan M., Arslan A., Duman H., Karyelioglu M., Ntelitze E., Yetkin S., Karav S.

3rd International Eurasian Conference on Biological and Chemical Sciences, İstanbul, Turkey, 19 - 20 March 2020

**III. Comparison of two Novel Endo- $\beta$ -N-aceylglucosaminidase Enzymes of Bifidobacterium longum subsp. infantis**

Duman H., Karav S., Şahutoğlu A. S.

7th International BAU Drug Design Congress, İstanbul, Turkey, 19 - 21 December 2019

**IV. Use of Human Associated Novel Enzymes to Understand How Lactoferrin Shapes Our Gut Microbiome**

Karav S., Sucu B., Bayraktar A., Pekdemir B., Duman H., Arslan A., Kaplan M.

3rd International Human Microbiome Congress, İstanbul, Turkey, 7 - 09 November 2019

## Supported Projects

Karav S., TUBITAK Project, Farklı Alternatif Protein Kaynaklarından Biyoaktif Glikan Üretimi, 2023 - 2024

Karav S., TUBITAK Project, Farklı Tekniklerle Aktivitesi Manipüle Edilmiş Yeni Bacteroides ve Bifidobakteri Glikosidazları Yardımıyla Glikanların Glikoproteinlerin Biyolojik Özelliklerine Olan Katkılarının Belirlenmesi, 2019 - 2023

Karav S., Duman H., TUBITAK Project, A1 Ve A2 Sığır Kolostrum Örneklerinin İn-Vitro Sindirimlerinin Gerçekleştirilmesi Ve Karşılaştırılması, 2021 - 2022

Karav S., Duman H., TUBITAK Project, Farklı Pastörizasyon Uygulamalarının (Uht, Llt, Htst) A2 Süt Glikan, Laktoferrin Ve İgg Miktarına Etkisinin Araştırılması, 2021 - 2022

Karav S., Duman H., TUBITAK Project, A1 Ve A2 Sütleri  $\beta$ -Kazein Proteinlerinin Sindirimi Sonucu Elde Edilen Peptitlerin Antimikrobiyal Özelliklerinin Araştırılması, 2021 - 2022

Karav S., TUBITAK Project, Yeni Endo- $\beta$ -N-Asetilglukozaminidaz Enzimi Kullanarak Üretilen İlk Seçici Prebiyotik Kaynağı; Glikanlar, 2017 - 2020

## Metrics

Publication: 20

Citation (WoS): 128

Citation (Scopus): 125

H-Index (WoS): 5

H-Index (Scopus): 5

## Scholarships

2211/E The Scientific and Technological Research Council of Turkey, TUBITAK, 2023 - Continues

Visiting Resarcher, Other International Organizations, 2023 - 2023

2210 - Yurt İçi Yüksek Lisans Burs Programı, TUBITAK, 2021 - 2022