



## Mehmet KARAASLAN, Ph.D.

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### LANGUAGES

Turkish (Native)

English (Fluent)

### EDUCATION

2004/2009 Cornell University, Ithaca, New York, USA

**Ph.D.**

1998/2002 Akdeniz University, Antalya, Turkey

**Bachelor of Science**

### PROFESSIONAL APPOINTMENTS

2021 - **Professor (Full), Food Biochemistry – Biotechnology (HARRAN UNIVERSITY)**

2016 - 2021 **Associate Professor, Food Biochemistry – Biotechnology (HARRAN UNIVERSITY)**

2010 – 2016 **Assistant Professor, Food Biochemistry – Biotechnology (HARRAN UNIVERSITY)**

2004 – 2009 **Research Assistant, Food Biotechnology - (CORNELL UNIVERSITY)**

### SELECTED PUBLICATIONS

1. Başığit B, Yücepe M, Karaaslan A, **Karaaslan M\*** (2021) High efficiency microencapsulation of extra virgin olive oil (EVOO) with novel carrier agents: fruit proteins. *Materials Today Communications*. 28, 102618. DOI: 10.1016/j.mtcomm.2021.102618
2. Alihanoglu S, Ektiren D, **Karaaslan M\*** (2021) Recombinant expression and characterization of rabbit (*Oryctolagus cuniculus*) chymosin in *Pichia pastoris*, *Protein Expression and Purification*. 183, 105874. <https://doi.org/10.1016/j.pep.2021.105874>
3. Yücepe M, Başığit B, **Karaaslan M\*** (2021) Design of novel nutritious microcapsules comprising  $\omega$ -5 fatty acids and essential amino acids by assembling pomegranate seed derived macromolecules. *LWT-Food Science and Technology*. 143, 111162. DOI: [10.1016/j.lwt.2021.111162](https://doi.org/10.1016/j.lwt.2021.111162)
4. **Karaaslan M\***, Şengün Fatih, Cansu Ümran, Başığit Bülent, Sağlam Hidayet, Karaaslan Asliye (2021). Gum arabic/maltodextrin microencapsulation confers peroxidation stability and antimicrobial ability to pepper seed oil. *Food Chemistry*, 337, 127748, <https://doi.org/10.1016/j.foodchem.2020.127748>
5. Al-Sataf S, Başığit B, **Karaaslan M\*** (2021) Multivariate analyses of the antioxidant, antidiabetic, antimicrobial activity of pomegranate tissues with respect to pomegranate juice, *Waste and Biomass Valorization*, <https://doi.org/10.1007/s12649-021-01427-9>
6. Yüksekaya Ş, Başığit B, Sağlam H, Pekmez H, Cansu Ü, Karaaslan A, **Karaaslan M\*** (2021). Valorization of fruit processing by-products: Free, esterified, and insoluble bound phytochemical extraction from cherry (*Prunus avium*) tissues and their biological activities, *Journal of Food Measurement and Characterization*, 15(2), 1092-1107, DOI: 10.1007/s11694-020-00698-5
7. Başığit B, Sağlam H, Hayoğlu İ, **Karaaslan M\*** (2021) Spectroscopic (LC-ESI-MS/MS, FT-IR, NMR) and functional characterization of fruit seed oils extracted with green technology: A comparative

study with *Prunus cerasus* and *Punica granatum* oils, *Journal of Food Processing and Preservation*, DOI: 10.1111/jfpp.15451

8. Guruk Mümine, **Karaaslan M\*** (2020). Production and Biochemical Characterization of Cellulase Enzyme by *Trichoderma* Strains from Harran Plain. *International Journal of Life Sciences and Biotechnology*, 3(3), 258-274.
9. Başığit Bülent, Sağlam Hidayet, Kandemir Şifanur, Karaaslan Asliye, **Karaaslan M\*** (2020). Microencapsulation of sour cherry oil by spray drying: Evaluation of physical morphology, thermal properties, storage stability, and antimicrobial activity. *Powder Technology*, 364, 654-663., Doi: 10.1016/j.powtec.2020.02.035
10. Başığit Bülent, Sağlam Hidayet, Köroğlu Kübra, **Karaaslan M\*** (2020). Compositional analysis, biological activity, and food protecting ability of ethanolic extract of *Quercus infectoria* gall. *Journal of Food Processing and Preservation* <https://doi.org/10.1111/jfpp.14692>
11. BAŞIĞIT Bülent, DAĞHAN Şahabettin, **Karaaslan M\*** (2020). Biochemical, compositional, and spectral analyses of İ sot (Urfa pepper) seed oil and evaluation of its functional characteristics. *GRASAS Y ACEITES*, 71(4), 1-10.
12. Yılmaz, FM, Görgüç A, **Karaaslan M**, Vardin H, Bilek S, Uygun Ö, & Bircan, C. (2019). Sour Cherry By-products: Compositions, Functional Properties and Recovery Potentials—A Review. *Critical reviews in Food Science and Nutrition*. <https://doi.org/10.1080/10408398.2018.1496901>.
13. Dağhan, Ş., Yıldırım, A., Yılmaz, F. M., Vardin, H., & **Karaaslan, M.** (2018). The Effect of Temperature and Method of Drying on İ sot (Urfa Pepper) and its Vitamin C Degradation Kinetics. *Italian Journal of Food Science*, 30(3), 504-521.
14. Alihanoglu, S., Ektiren, D., Akbulut Çakır, Ç., Vardin, H., Karaaslan, A., & **Karaaslan, M\***. (2018). Effect of *Oryctolagus cuniculus* (rabbit) rennet on the texture, rheology, and sensory properties of white cheese. *Food Science & Nutrition*. 6:1100 - 1108.
15. **Karaaslan M\***, Yılmaz Fatih Mehmet, Karaaslan Asliye, Vardin Hasan (2016). Synthesis and accumulation of anthocyanins in sour cherries during ripening in accordance with antioxidant capacity development and chalcone synthase expression. *European Food Research and Technology*. 242(2): 189-198.
16. **Karaaslan M\***, Yusuf Arslanğray (2015). Aflatoxins B1, B2, G1, and G2 contamination in ground red peppers commercialized in Sanliurfa, Turkey. *Environmental Monitoring and Assessment*, 187(4): 184, Doi: 10.1007/s10661-015-4402-0
17. **Karaaslan M\***, Hrazdina Geza (2010). Characterization of an expansin gene and its ripening specific promoter fragments from sour cherry (*Prunus cerasus* L.) cultivars. *Acta Physiol. Plant.*, 32(6), 1073-1084.
18. Yılmaz Fatih Mehmet, **Karaaslan M**, Vardin Hasan (2015). Optimization of extraction parameters on the isolation of phenolic compounds from sour cherry (*Prunus cerasus* L.) pomace. *Journal of Food Science and Technology*, 52(5), 2851-2859.
19. **Karaaslan M**, Vardin Hasan, Varliklioz Suzan, Yılmaz Fatih Mehmet (2014). Antiproliferative and antioxidant activities of Turkish pomegranate (*Punica granatum* L.) accessions. *International Journal of Food Science and Technology*, 49(1), 82-90.
20. **Karaaslan M**, Yılmaz Fatih Mehmet, Cesur Ozge, Vardin Hasan, İkinci Ali, Dalgic Ali Coskun (2014). Drying kinetics and thermal degradation of phenolic compounds and anthocyanins in pomegranate arils dried under vacuum conditions. *International Journal of Food Science and Technology*, 49(2), 595-605.
21. **Karaaslan M**, Ozden Mustafa, Vardin Hasan, Yılmaz Fatih Mehmet (2013). Optimisation of phenolic compound biosynthesis in grape (*Bogazkere* Cv.) callus culture. *A. J. Biotech.*, 12(25), 3922-3933.
22. **Karaaslan M\***, Ozden Mustafa, Vardin Hasan, Turkoglu Huseyin (2011). Phenolic fortification of yogurt using grape and callus extracts. *LWT-Food Science and Technology*, 44(4), 1065-1072.
23. Ozden Mustafa, **Karaaslan M** (2011). Effects of cytokinin on callus proliferation associated with physiological and biochemical changes in *Vitis vinifera* L.. *Acta Physiol. Plant.*, 33(4), 1451-1459.
24. Ozden Mustafa, Vardin Hasan, Simsek Mehmet, **Karaaslan M** (2010). Effects of rootstocks and irrigation levels on grape quality of *Vitis vinifera* L. cv. Shiraz. *A. J. Biotech.*, 9(25), 3801-3807.

25. Yılmaz Fatih Mehmet, Sultan Yüksekaya, Vardin Hasan, **Karaaslan M** (2017). The effects of drying conditions on moisture transfer and quality of pomegranate fruit leather (pestil). Journal of the Saudi Society of Agricultural Sciences, Doi: 10.1016/j.jssas.2015.01.003
26. **Karaaslan M**, İzol Gülsah (2014). Physicochemical Properties of Zivzik and Gorumlu Pomegranates. Harran Tarım ve Gıda Bilimleri Dergisi, 18(1), 1-14.
27. Kandemir Ş, Başıyigit B, Karaaslan A, Cansu Ü, **Karaaslan M\*** (2021) Concurrent use of sour cherry derived hemicellulose and pectin crystalline structures as being encapsulating and antibacterial olive oil microcarriers (Under Review)

## **CONFERENCE PAPERS**

1. Recovery Potentials of Grape and Sour Cherry By Products, First International GAP Agriculture and Livestock Congress , 2018
2. Fresh and Dried Physico-chemical Properties of KEME (*Terfezia boudieri*) which has therapeutic compounds. 1st International Congress on Medicinal and Aromatic Plants , 2017
3. Quality Characteristics of Dried Mushroom (*Terfezia boudieri chatin*), ICAFOF, 2017
4. Recombinant Expression of Tomato Expansin Gene in *Pichia Pastoris*, International Advanced Researches and Engineering Congress (IAREC-17) , 2017
5. Optimization of Extraction Parameters on the Isolation of Carotenoids and Polyphenols from Persimmon Peel, International Conference on Agriculture, Forest, Food Sciences and Technologies (ICAFOF 2017) , 2017
6. **Karaaslan Mehmet**, Yılmaz Fatih Mehmet, Vardin Hasan (2013). Physico-Chemical Properties of Traditional Pomegranate Sour Produced in Southeastern and Mediterranean Regions of Anatolia. The 2nd International Symposium on Traditional Foods from Adriatic to Caucasus.
7. **Karaaslan Mehmet**, Yılmaz Fatih Mehmet, Yüksekaya Sultan, Vardin Hasan (2013). Pomegranate Pestil Production using Different Drying Methods. The 2nd International Symposium on Traditional Foods from Adriatic to Caucasus.
8. **Karaaslan Mehmet**, Hrazdina Geza (2009). Expansins in cherry: Expression of expansin proteins in cherries and detection of expansin promoter activity using agroinjection. 6th. International Post Harvest Symposium.
9. **Karaaslan Mehmet**, Hrazdina Geza (2006). Investigating the role of expansin genes in the softening of cherries.. Sustainable Development and New Technologies for Agricultural Production in GAP Region.
10. Seydim Atif Can, **Karaaslan Mehmet**, Çetintaş Gülhan, Sağlam Hidayet (2004). Novel packaging development for dairy products.. Recent Developments in Dairy Science and Technology.

## **RESEARCH PROJECTS**

1. Industrial production of cellulase in *Trichoderma* strains (**2021, Principal Investigator**)
2. Production of High Value Added Vegetable Protein Powder from Industrial Cherry Seed Waste, and Its Use in Protein Bar Production Formulation and Commercialization (**Principal Investigator, 2021,**
3. Establishment of organic food processing facility to convey innovation to organic fruit growers (**Project Coordinator, 2017**)
4. Recombinant Expansin Production in *Pichia pastoris* for Using in Fruit Juice Industry (**Principal Investigator, 2013,**
5. Cloning of Chalcone Synthase Genes from Sour Cherry Genome and Determination of Their Regulatory Effect on Anthocyanin Biosynthesis (**Principal Investigator, 2012**)
6. Determination of properties of Zivzik and Gorumlu pomegranates and processing into value added products (**Researcher, 2012**)
7. Production of Virus Free Materials from Sire and Kizilbanki Grape Varieties, (**Researcher, 2010**)
8. Determination of Aflatoxin Biosynthesis in Red Pepper Powders (**Principal Investigator**)
9. Determination of Effect of Drying Conditions on Pomegranate Aril Dehydration Kinetics and Quality, Principal Investigator (**Principal Investigator**)

10. Determination of Physicochemical Properties of Pomegranates Grown in South-East Anatolian Region (**Principal Investigator**)
11. The Biological and Antimicrobial activity of the extracts obtained from pomegranate tissues (**Principal Investigator**)
12. Investigation of phenolic content and biological activity of sweet cherry tissues (**Principal Investigator**)

#### **SUPERVISED THESIS (Philosophy of Doctorate)**

1. **SELİN ALİHANOĞLU:** *Optimization of Oryctolagus cuniculus chymosin gene expression in Pichia pastoris* (2018)

#### **SUPERVISED THESIS (Master of Science)**

1. **MELİKE YÜCETEPE:** *Protein powder production from pomegranate seed and utilization in pomegranate seed oil microencapsulation* (2020)
  2. **MUSTAFA ERDAL:** Investigation of effect of different gelatin types and enzymes on the clarification of pomegranate juice (2020)
  3. **ŞEHRİBAN YÜKSEKAYA:** *Investigation of phenolic content and biological activities of cherry (Prunus avium L.) tissues (pulp, fruit flesh, stalk and leaf)* (2019)
  4. **DEMET EKTİREN:** Determination of physicochemical, biochemical and microbiological properties of rabbit (Oryctolagus cuniculus) rennet (2019)
  5. **SEBA ALSATAF:** Biological and antimicrobial properties of extracts obtained from pomegranate tissues (2019)
  6. **FATİH ŞENGÜN:** Encapsulation of pepper seed oil with gum Arabic and maltodextrin composition (2019)
  7. **MÜMİNE GURUK:** Investigation of Cellulase production ability of Trichoderma spp. Strains isolated from Harran plain (2018)
  8. **MERAL ATLI:** Isolation and characterization of chymosin gene from Oryctolagus cuniculus (tavşan) genome (2017)
  9. **YUSUF ARSLANĞRAY:** Determination of aflatoxin occurrence steps in pepper flakes produced in Sanliurfa (2015)
  10. **ŞAHABETTİN DAĞHAN:** Effect of different drying methods on pepper flake quality and drying kinetics (2015)
  11. **SULTAN YÜKSEKAYA:** Determination of drying kinetics, phenolic and anthocyanin content in pomegranate fruit leather (2013)
  12. **ÖZGE CESUR:** Effect of drying methods and conditions on the drying kinetics and quality of pomegranate aril (2013)
  13. **GÜLŞAH İZOL:** Determination of physicochemical properties of Zivzik and Gorumlu pomegranates grown in GAP region (2012)
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