

**PERSEPHONI GIANNOULI**

**Associate Professor**  
**“Food Biochemistry and Technology”**

School of Health Sciences,  
Department of Biochemistry and  
Biotechnology  
University of Thessaly  
Greece

**Curriculum Vitae**

# PERSEPHONI GIANNOULI

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## EDUCATION

- May 1997 ~ June 2001 **Cranfield University**, Institute of AgriTechnology, Silsoe, Bedford, UK Ph.D. in Food Technology and Quality Control  
Main area of research: "Segregative Interactions in Food Biopolymer Gelation"  
  - Received full sponsorship from St. Ivel Ltd.
  - Learned to work in strict confidentiality.
  - Presentation of ideas and results of my work to Managers of St. Ivel.
  - Organization of taste panels / Sensory Analysis of dairy products.
- September 1998 **University of Gent**, Gent, Belgium  
'Socrates' intensive course in Food Packaging ~2 weeks.  
(Funded by the European Union).
- Sept.1991~July 1996 **Aristotle University**, Thessaloniki, Greece  
Degree in Chemistry  
Final year research project: 'The adsorption of surface-active agents on emulsions ~ The dependence of emulsification on interfacial tension.'

## EMPLOYMENT HISTORY

- July 2024 - now **Associate Professor in "Food Biochemistry and Technology"**  
**University of Thessaly**, School of Health Science, Department of Biochemistry and Biotechnology, Larissa Greece
- Feb 2020 -July 2024 **Assistant Professor in "Technology and Quality Control of Food of Plant Origin"** **University of Thessaly**, School of Health Science, Department of Biochemistry and Biotechnology, Larissa Greece
- May 2008-Febr. 2020 **Assistant Professor in "Technology and Quality Control of Food of Plant Origin"** **Head of the Lab Food Technology - Quality Control and Safety** **University of Thessaly**, School of Agricultural Sciences, Department of Agriculture Crop Production and Rural Environment, Volos, Greece  
Supervision twenty (24) 5th-year students during their final year project, of fourteen (14) MSc Students during their research project and of one PhD student
- Sept. 2003-Febr.2009 **The University of Thessaly**, Department of Biochemistry Biotechnology, Larissa, Greece, Contract Lecturer in "Food Biochemistry"

Sept. 2000 - Dec. 2002 Supervision of two (2) 4<sup>th</sup> year students during their final year project  
**University College Cork**, Food Chemistry, Department of Food Science, Food Technology and Nutrition, Cork, Ireland.

**Postdoctoral Research Scientist in Food Biopolymers**

Participation in two research projects: a) Molecular understanding of food structure and functionality, funded by the Higher Education Authority of Ireland ~ H.E.A. and b) Fractionation of whey proteins using novel membrane filtration process (es) and characterization of their functionality in model and food systems, by the Irish Department of Agriculture, Food and Rural Development ~ D.A.F.R.D.).

**TEACHING - Undergraduate Level (BSc)**

(Representative)

**9/2000 -12/2002** Organization and teaching of Thermochemistry & Rheology laboratory exercises of the course “Food Chemistry” laboratory, (5 semesters), **in the undergraduate program of the Department of Food Science, Food Technology and Nutrition University College Cork (U.C.C) Ireland.**

**9/2003-2/2009:** Organizing and teaching the course “**Food Biochemistry**”, (with P.D. 407/80 -Lecturer) **in the undergraduate program of the Department of Biochemistry-Biotechnology, University of Thessaly Greece (4 Winter Semesters).** Organization of laboratory exercises and writing of university notes "**Laboratory Exercises in Food Biochemistry**", University of Thessaly, Greece.

**22/4/2008-2020** Organizing and teaching **at the School of Agricultural Sciences, in the undergraduate program of the Department of Plant Production and Rural Environment, University of Thessaly, Greece** the following courses.

- “**Food Safety and Quality Assurance**” (2007- 2019).
- “**Food Standardization and Quality Control**” (2018- 2019)
- “**Technology and Processing of Agricultural Products**” (2007-2020) **Organization of laboratory exercises.**

**2020 - 2021** Organizing and teaching the course "**Food Technology and Quality Control**" **in the undergraduate program of the Department of Biochemistry and Biotechnology, University of Thessaly, Greece**

**2021 – present.** Organizing and teaching the course «**Biochemistry and Food Technology**» **in the undergraduate program of the Department of Biochemistry and Biotechnology, University of Thessaly, Greece**

**2020 - 2024** Teaching the course «**General Chemistry for Biosciences**» **in the undergraduate program of the Department of Biochemistry and Biotechnology, University of Thessaly, Greece**

## Teaching - Postgraduate Level (MSc)

(Representative)

**4/2009–5/2009** Teaching in the Postgraduate Studies Program “Biotechnology - Food Quality & Environment” framework of the **School of Health Sciences, Department of Biochemistry and Biotechnology**, course “**Quality Assurance**”. Lectures with titles

- **Quality Assurance Systems**
- **HACCP**
- **Safety of Agricultural Products**

**28/4/2009** Teaching in the **Postgraduate Program “Applications of Molecular Biology - Molecular Genetics, Diagnostic Markers”** of the School of Health Sciences, Department of Biochemistry and Biotechnology, University of Thessaly, Greece the course “**Quality Assurance**”- the lecture titled: “**Quality Assurance Systems**”

**2012-2014** Organizing and teaching in the **Postgraduate Studies Program “Modern Agricultural Production Systems in the Mediterranean Area with Emphasis on Sustainable Production and the Use of New Technologies”** of the Department of Agriculture, Plant Production and Rural Environment, University of Thessaly, Greece.

- “**Innovation & Technology Management in Agriculture**”

**2014-2018** Organizing and teaching 2 courses in the **Postgraduate Program "Sustainable Agricultural Production and Environmental Management"** of the Department of Agronomy, Crop Production and Rural Environment of the University of Thessaly, Greece

- **Advanced Topics in Food Biochemistry and Organoleptic Testing Technology and Preservation of Plant-Based Foods**

**2018-2020** Teaching and organization of a course for the Postgraduate Program "**Sciences & Systems of Sustainable Crop Production**" of the Department of Crop Production and Rural Environment of the University of Thessaly, Greece.

- "**Innovations in Technology & Quality Control of Food & Beverages**"

**2020 - present** Teaching in the Postgraduate Program "**BIOTECHNOLOGY - NUTRITION QUALITY AND ENVIRONMENT**" of the Department of Biochemistry and Biotechnology University of Thessaly, Greece. Responsible for four (4) courses and Teaching participation in another three (3) Postgraduate Courses

- 2020-2021 & 2021-2022 **Food Technology** (Winter semester) A. Basic concepts - The role of additives in Food Technology and B. Innovative Technologies in Food Processing and Preservation.
- 2020-2021 & 2021-2022 **Quality Assurance** (Spring Semester) A. Introduction to the ELOT EN ISO 9001:2015 standard and B. Introduction to the ELOT 1801:2008 standard, OHSAS 18001:200
- 2023 to present **Modern Approaches to Biotechnology in Nutrition and the Environment:** Teaching – Lecture: 3D printing and its applications in food
- 2023 to present: **Food Safety and Quality Assurance**, A. ELOT Standard 1801:2008, OHSAS 18001:2007, and B. Genetically Modified Foods - Safety and Quality Assurance
- 2023 to present: **Food Technology and Biotechnology** A. Advanced topics in food composition and their applications in Technology and Biotechnology. and B. Olive Oil Technology and Quality Parameters.
- 2023 to present Course: **Nutritional Quality and Well-being** (co-teaching) Sustainable Nutrition and Environment – New and Old Food Sources

### Supervising of three (3) Doctoral Theses (PhD)

**2017-2022: Supervisor of PhD thesis of Bari Anastasia** was completed in February **2022 with the title: "Effect of edible films on the preservation of fresh and processed foods"** Department of Agriculture, Plant Production and Rural Environment, University of Thessaly Volos Greece

**2022-present: Supervisor of PhD thesis of Manola Eleni, title: "Effects of edible coatings and films, enriched with extracts containing natural pigments, on the quality characteristics of foods"**. Department of Biochemistry and Biotechnology, University of Thessaly, Larisa, Greece.

**2023-present: Supervisor of PhD thesis by Maggou Serafias** entitled: **"The effects of pigments and plant extracts on the quality characteristics and nutritional value of baked goods"**. Department of Biochemistry and Biotechnology, University of Thessaly, Greece.

### **Representative C O N F E R E N C I E S**

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|-------------------|--|
| 18-19 March 2017  | <b>Athens, Greece, 6<sup>th</sup> International Conference on Food Technology, Title of Presentation: Different cacao concentration and storage temperature affects dark chocolate hardness and color</b>            |
| 18-21 April 2017  | <b>Thessaloniki, Greece Title of Presentation: 16th European Young Cereal Scientists and Technologists Workshop Temperature storage conditions affect the characteristics of rice starch gels mixed with gelatin</b> |
| 15 - 19 July 2002 | <b>Guelph, Ontario, Canada, 6<sup>th</sup> International Hydrocolloids Conference. Title of Presentation: Cryogels of Xanthan</b>  |

### PUBLICATIONS

- *Citation Index: 1219*
- *h index: 16*

1. Kasapis, S., Al - Marhoobi, I. M. A. and Giannouli, P., (1999). Molecular Order versus Vitrification in High-Sugar Blends of Gelatin and  $\kappa$ -Carrageenan, *J. Agric. Food Chem.*, Vol. 47, No. 12, 4944 – 4949.
2. Kasapis, S., Giannouli, P., Hember, M.W.N., Evageliou, V., Poulard, C., Tort - Bourgeois, B., Sworn, G., (1999). Structural aspects and phase behavior in deacylated and high acyl gellan systems, *Carbohydrate Polymers*, 38, 145-154.
3. Van Ruth S. M., Geja de Vries, Mike Geary and Giannouli P. (2002). Influence of composition and structure of oil-in-water emulsions on retention of aroma compounds, *J. Sci. Food Agric.*, 82:1028-1035.
4. Van Ruth S. M., King C., Delarue M. and Giannouli P. (2002) Release of volatile compounds from emulsions: Influence of  $\beta$ -lactoglobulin and pH. *Italian Journal of Food Science*, N2, 14, 145 -158.
5. Van Ruth S. M., King C., and Giannouli P. (2002). Influence of lipid fraction, emulsifier fraction, and particle size distribution of oil in water emulsions on the release of 20 aroma compounds. *J. Agric. Food Chem.* 50, 2365-2371.
6. Annika Hasson, Persephoni Giannouli and Saskia Van Ruth (2003). The Influence of Gel Strength on Aroma Release from Pectin Gels in a Model Mouth and In Vivo, Monitored with Proton-Transfer-Reaction Mass Spectrometry. *Journal of Agricultural and Food Chemistry* Vol. 51, No. 16, 4732-4740
7. Giannouli P. and Morris E. R., (2003). Cryogels of Xanthan. *Food Hydrocolloids* 17(4) 495 - 501.

8. Anie B. Boland, Katja Buhr, Persephoni Giannouli and Saskia M. van Ruth (2004). Influence of gelatin, starch, pectin and artificial saliva on releasing 11 aroma compounds from model gel systems. *Food Chemistry*, 12 (2) 235-244. (AΔ 08)
9. Giannouli P., Richardson R. K. and Morris E. R. (2004). Effect of polymeric cosolutes on calcium pectinate gelation: Part 1 - Galactomannans compared with partially depolymerized starches. *Carbohydrate Polymers*, 55, (4), 343-355. (AΔ 09)
10. Giannouli P., Richardson R. K. and Morris E. R. (2004). Effect of polymeric cosolutes on calcium pectinate gelation: Part 2 - Dextrans and Inulin. *Carbohydrate Polymer*, 55, (4), 357- 365.
11. Giannouli P., Richardson R. K. and Morris E. R. (2004). Effect of polymeric co-solutes on calcium pectinate gelation: Part 3 - Gum Arabic and overview. *Carbohydrate Polymers*, 55, (4), 367-377.
12. J. P. Doyle, P. Giannouli, E. J. Martin, M. Brooks and E. R. Morris (2006). Effect of sugars, galactose content and chain length on freeze – thaw gelation of galactomannans. *Carbohydrated Polymers*, *Carbohydrate Polymers*, Volume 64, Issue 3, Pages 391-401.
13. A. A. Agoub, A. M. Smith, P. Giannouli, R. K. Richardson and E. R. Morris (2007). “Melt in mouth” gels from mixtures of Xanthan and Konjac Glucomannan under acidic conditions: a rheological and calorimetric study of the mechanism of synergistic gelation. *Carbohydrated Polymer*, Volume 69, Issue 4, Pages 713-724.
14. Agoub A. Agoub, Persephoni Giannouli, Edwin R. Morris (2009). Gelation of high methoxy pectin by acidification with d-glucono- $\delta$ -lactone (GDL) at room temperature. *Carbohydrate Polymers*, Volume 75, Issue 2, Pages 269-281.
15. Jonathan P. Doyle, Persephoni Giannouli, Brian Rudolph, Edwin R. Morris (2010) Preparation, authentication, rheology and conformation of theta carrageenan. *Carbohydrate Polymers*, Volume 80, Issue 3, Pages 648-654.
16. E Botsoglou, P Vareltzis, P Giannouli, A Govaris (2012) Effect Of Modified Atmosphere Packaging on Halvas Farsalon Quality During Refrigerated Storage, *Italian Journal of Food Science* 24 (2), 173
17. AC Karkanis, E Vellios, F Grigoriou, T Gkrimpizis, P Giannouli (2018) Evaluation of efficacy and compatibility of herbicides with fungicides in durum wheat (*Triticum durum* Desf.) under different environmental conditions: Effects on grain yield and gluten content. *Not Bot Horti Agrobo* 46 (2), 601-607.
18. Kougiagka, E., Apostologamvrou, C., Hatzioannou, M., & Giannouli, P. (2022). Quality characteristics and microstructure of boiled snail fillet meat. *Journal of Food Processing and Preservation*, 46, e17079. <https://doi.org/10.1111/jfpp.17079>
19. Kougiagka E, Apostologamvrou C, Hatzioannou M., Giannouli P. (2022) Quality Factors of Commercial Snail Fillets as Affected by Species. *Food Technol Biotechnol*. 2022 Sep;60(3):330-337. doi: 10.17113/ftb.60.03.22.7403.
20. Bari, Anastasia, and Giannouli Persephoni (2022). "Evaluation of Biodegradable Gelatin and Gelatin–Rice Starch Coatings to Fresh Cut Zucchini Slices" *Horticulturae* 8, no. 11: 1031. <https://doi.org/10.3390/horticulturae8111031>
21. Bari, Anastasia, and Giannouli Persephoni. (2023). "Gelatin and Gelatin/Rice Starch Coatings Affect Differently Fresh-Cut Potatoes and Colocasia Slices" *Processes* 11, no. 8: 2383. <https://doi.org/10.3390/pr11082383>
22. Evangelia Kourouniotou, Nikoleta Karagianni, Anastasia Bari, Aikaterini Diseri, Marianthi Hatzioannou, Persephoni Giannouli (2023) "Effects of Guarana Aqua Extracts on Fermentation Kinetics and Quality Properties of Set-Type Yogurts" *Journal of Food Processing and Preservation*, vol 2023, Article ID, 4504541, 10 pages, 2023 <https://doi.org/10.1155/2023/4504541>
23. Christina Befani, Persephoni Giannouli, Anastasia Bari, Chrysoula Apostologamvrou, Chryssanthi Antoniadou, Panagiotis Liakos and Dimitris Vafidis (2023) *Holothuria tubulosa* extract represses proliferation and HIF- $\alpha$  activity by inhibiting Erk1/2 phosphorylation in liver cancer cell line under hypoxia, *Food Biochemistry*, 2024, 9278021, 10 pages, 2024.
24. Katerina Sylivridou, Anastasia Bari, Theodora Georgopoulou, Christina Baxevanou, Persephoni Giannouli (2023) "Aqua extracts of lyophilized sea buckthorn affect fermentation kinetics and quality properties of yogurt" *Applied Sciences*. 2024; 14(17):7634. <https://doi.org/10.3390/app14177634>.