

# Dr Aylin Sahin (BSc, MSc, PhD)

Lecturer and researcher in Sustainable Food Systems

ORCID: 0000-0002-1138-6063

URL for web site: [linkedin.com/in/aylin-sahin-a2090a117](https://www.linkedin.com/in/aylin-sahin-a2090a117)

Email: [aylin.sahin@ucc.ie](mailto:aylin.sahin@ucc.ie)

Publications	53
Citations	837
H-index	18

*Source: Scopus*

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## SUMMARY

Lecturer and research in Sustainable Food Systems involved in sustainability-focused research in the past twelve years in different research institutions and universities (TU Munich Germany, Fraunhofer IVV Germany, MIT India, and UCC Ireland). Graduated from top universities (TU Munich ranked 15<sup>th</sup> in European Research; UCC ranked 33<sup>rd</sup> in European Research). Leading a research team of 7 PhD students, 1 MSc student by research, 1 postdoctoral researcher, and 3 ERASMUS students. A principal investigator of 1 EU-funded project, 2 industry funded project, and 4 national funded projects, and in the Centre for Sustainable Fermentation and Bioprocessing Systems for Food and the Bioeconomy (SUSFERM). Acted as a guest editor for two special issue and as an invited speaker, keynote speaker and chairperson at international conferences.

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## CURRENT EMPLOYMENT

Since 2022 Lecturer in Sustainable Food Systems, School of Food and Nutritional Sciences, University College Cork, Ireland.

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## PREVIOUS APPOINTMENTS

2021 Senior Postdoctoral Researcher, School of Food and Nutritional Sciences, University College Cork; Ireland

2019 – 21: Postdoctoral Researcher, School of Food and Nutritional Sciences, University College Cork; Ireland

April to September 2015: Research Assistant, School of Food and Nutritional Sciences, University College Cork; Ireland

July to September 2013: Internship at Department of Atomic and Molecular Physics, Manipal Institute of Technology; India

2012 – 13: Research assistant at Fraunhofer Institute for Process Engineering and Packaging, Freising; Germany

March to August 2012: Research project at the Department of Food Processing and Dairy Technology, TU Munich, Freising; Germany

August to December 2011: Internship at Fraunhofer Institute for Process Engineering and Packaging, Freising; Germany

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## **EDUCATION**

September 2021 (AY2020/21): Diploma in Teaching and Learning for Higher Education, University College Cork; Ireland (part-time)

September 2020 (AY2019/20): Certificate in Teaching and Learning for Higher Education, University College Cork; Ireland (part-time)

September 2019 (2015 – 19): Ph.D. Food Science and Technology, University College Cork; Ireland

Thesis: “Sugar reduction in sweet bakery products: Sourdough technology as a novel technological approach to overcome quality loss”.

*Funded by Department of Agriculture, Food and Marine (Grant: 14/F/802).*

2012 – 14: MSc Pharmaceutical Bioprocess Engineering, TU Munich; Germany

Thesis title: “Influence of mechanical stress and swelling time on the texture properties of gluten-free bread during dough formation” at Fraunhofer Institute for Process Engineering and Packaging IVV in Freising, Germany (supervisor: Dr Florian Wild).

2008 – 12: BSc Bioprocess Engineering, TU Munich; Germany

Final year project: “Analysis of phenolic compounds in beer using HPLC” at Research Center Weißenstephan for Brewing and Food Quality (supervisor: Dr Mehmet Coelhan).

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## **PEER RECOGNITION**

### **AWARDS AND PRIZES**

2023	Runners-up ‘The great Agri-Food debate’ – Academic coordinator and supervisor.
2019	Best Research Article in Food Science, Internal paper competition, School of Food and Nutritional Science, University College Cork, Ireland.

### **INVITED SPEAKER AT INTERNATIONAL CONFERENCES (selected)**

2023	Invited speaker at the 2023 AOAC Annual Meeting and Expo, Colorado, USA.
2021	Chairperson at the 16th ICC Cereal and Bread Congress, New Zealand.
2021	Invited speaker at the 16th ICC Cereal and Bread Congress, New Zealand.
2020	Webinar on gluten free research in collaboration with Brabender GmbH & Co KG.
2020	Invited keynote speaker at Cereal & Grains 20, online.
2019	Invited speaker at Forum Sourdough IV, Minden, Germany (2019) on sugar reduction.
2018	Invited speaker at Food conference on fermentation, Wädenswil, Switzerland.

### **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

Since 2021	Member, International Association for Cereal Science and Technology (ICC).
Since 2019	Member, Cereals & Grains Association (AACCI).
Since 2019	Member, Institute of Food Science and Technology (IFST).

## EDITING and REVIEWING ACTIVITIES

- 2023 Invited expert as guest editor of the Special Issue ‘Functional Characterization of Lactic Acid Bacteria Isolated From Fermented Foods and Beverages’ in *Fermentation*.
- 2023 Invited expert as guest editor of the Special Issue ‘New Advances in Dietary Fibers and Their Role in Metabolic, Digestive, and Immune Health’ in *Frontiers Nutrition*.
- 2020 Invited co-guest editor Special Issue ‘Protein2Food: Pioneering plant protein for future generation’, Journal of the Science of Food and Agriculture.
- Since 2019 Review panel member, International Journal of Food Microbiology.
- Since 2019 Review panel member, Lebensmittel-Wissenschaft & Technologie (LWT).

## OTHER CONTRIBUTIONS TO THE RESEARCH COMMUNITY

### ORGANISATION OF SCIENTIFIC MEETINGS

- 2020 Part of the Organising committee of Kick-Off meeting SMARTPROTEIN project (Horizon 2020), Cork, Ireland.
- 2018 Part of the Organising committee ‘7<sup>th</sup> International Symposium on Sourdough’, Cork, Ireland.
- 2017 Support of Organising committee ‘4<sup>th</sup> International Symposium on Gluten-Free Cereal Products and Beverages’, Cork, Ireland.

### INSTITUTIONAL RESPONSIBILITIES

- Since 2023 Academic director of short course: Introduction to the Science of Confectionery Processing and Manufacture Training Workshop.
- Since 2022 Member of School Research Committee; Academic representative, University College Cork, Ireland.
- 2018 – 2019 Member of School Research Committee; Postgraduate representative Food Science, University College Cork, Ireland.
- 2015 – 2019 Postgraduate representative of Cereal Science group at postgraduate fairs, University College Cork, Ireland.

### TEACHING ACTIVITIES

- Since 2022 Lecturer – Sustainable Food Systems, University College Cork, Ireland.  
*Main teaching modules: Sustainable food systems; Soybean science; Science and technology of food products; Food toxicology; Carbohydrate chemistry; Food structure; Food reformulation and design; Emerging issues in nutrition; Public health nutrition.*
- 2017 – 2021 Guest lecturer – Cereal Science and Technology as part of Diploma in Speciality Food Production, University College Cork, Ireland.
- 2016 – 2019 Lecturer/Demonstrator – Microscopy and cereal processing, University College Cork, Ireland.

### MAJOR COLLABORATIONS

Being part of two EU-funded consortia (Smart Protein and Giant Leaps) enabled me to extend my international network with **more than 50 industry partners, 10 research institutions, and 30 universities.**

## RESEARCHERS

Prof. Emanuele Zannini (Sapienza University Rome, Italy): Microbiological safety assessment of modified ingredients during bioprocessing.

Prof. Elke Arendt (University College Cork, Ireland & APC Microbiome Ireland): Plant protein extraction, fractionation and purification techniques, and food applications.

Dr Andre Brodkorb (Teagasc Moorepark, Ireland): Investigation of alternative proteins on gastrointestinal tract and the set-up of the *in vitro* digestion model INFOGEST 2.0; supervision of PhD student on the gastrointestinal impact of alternative protein ingredients.

Dr Linda Giblin (Teagasc Moorepark, Ireland): Impact of food structure, composition and processing on gut health and digestibility.

Dr Eimear Gallagher (Teagasc Ashtown, Ireland): Effect of plant proteins on satiety; focus on legumes (fava bean and lentil) and pseudocereals (quinoa).

## INDUSTRY

EverGrain® by AB InBev (St. Louis, USA): Upcycling of brewing by-products and application in food to increase the nutritional value; Focus on isolated brewers' spent grain protein – fractionation, characterisation.

Anheuser Busch InBev (Leuven, Belgium): Fermentation technology for the production of novel beverages (alcohol-free beer, water kefir).

BioBrew (New York, USA): The application of precision fermentation to produce proteins.

Solar Foods (Lappeenranta, Finland): Characterisation and application of Solein® – a single cell protein ingredient produced by fermentation.

BarthHaas® (Nuernberg, Germany): Interactions of proteins with polyphenols.

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## RESEARCH FUNDING

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role</i>
Giant Leaps	EU HORIZON- RIA	11.9 million Euro (420,000 Euro for UCC)	01.09.2022- 31.08.2026	Lead of tasks allocated to UCC: functionalisation of alternative protein ingredients
Upcycling of side streams from the brewing industry	Industry	160,000 Euro	01.04.2023- 31.03.2024	Co-PI
Gluten-free innovation for novel, sustainable food systems: From farm gate to	Department of Agriculture, Food and Marine, Ireland	997,373 Euro (186,550 Euro for UCC)	01.12.2023- 30.11.2027	Co-PI

consumer plate				
Sarcopenia in the post-menopausal women-sustainable Protein Solutions	Department of Agriculture, Food and Marine	1,012,948.60 Euro (213,200 Euro for UCC)	01.01.2024-31.12.2027	PI Part of management team, lead of 1 work package and supervision of 1 PhD student
Upcycling of vegetable waste during farming	UNIGREEN Ireland and Department of Agriculture, Food and Marine	75,000 Euro	01.04.2024 – 31.03.2027	Coordinator
Uncovering Alternative Protein Potential via Fermentation Technology	Department of Agriculture, Food and Marine	959,036.20 Euro (263,800 Euro for UCC)	01.04.2024 – 31.03.2028	PI
Unrevealing the impact of hop compounds on mouthfeel	BarthHaas UK Limited	28,600 Euro	01.04.2024 – 31.03.2027	PI and supervisor of PhD student  (this grant only includes PhD student fees and minor consumables; PhD student is employee of the company)

## SUBMITTED RESEARCH GRANT APPLICATIONS

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role of the PI</i>
Sustain-a-Bite	Horizon Europe CL6	<i>Submitted</i>	48 months	Partner in 1 work package and supervisor of 1 PhD student and 1 postdoctoral researcher.
Taste4Food	Horizon Europe CL6	<i>Submitted</i>	48 months	Lead of 1 work package and supervision of 1 PhD student