



MARIA GIULIA BONOMINI



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I am a highly motivated, multi-disciplinary professional with strong organizational skills and an eye for detail. A quick thinker and learner, I excel in problem solving and thrive in dynamic environments.

WORK EXPERIENCE

POSTDOCTORAL FELLOW – UNIVERSITÀ DI PARMA

03/2025 – Current

Parma, Italy

- Research title: "**Novel Food and Safety Assessment**. How science can support the transition towards more sustainable dietary choices", part of the project "The Future of Food, the Food of the Future. Novel Food, Innovation, Sustainability and Legal Issues".
- Supervisor: Professor Chiara Dall'Asta
- Topics and skills: Novel foods, food safety, sustainability, strategies for effective scientific communication. Drafting of summaries of EFSA scientific opinions for the Europass office in Brussels (EU delegation for Emilia-Romagna region), technical-scientific organization of webinars, liaison with relevant international institutions, support for the organization of any technical-scientific events at the regional liaison office in Brussels, in-depth knowledge of EFSA system and role of the institutions, risk assessment process and risk communication. Writing of academic book chapters and papers.

PHD CANDIDATE – UNIVERSITÀ DI PARMA

01/2022 – 12/2024

Parma, Italy

- Research title: "**Insects as alternative protein source in animal feed**"
- Supervisors: Professor Stefano Sforza, professor Augusta Caligiani
- Topics and skills: Characterization, *in vitro* digestibility, and bioactivity of insect proteins, effect of insect-enriched diets on animal products. Proficient in protein analysis by HP-SEC, UPLC-ESI/MS, GC/MS, HRMS, UV spectrophotometer, SDS-PAGE, immunoblotting assays. Managed daily lab operations and safety compliance; performed instrument calibration, troubleshoot, and maintenance; executed complex sample preparation and extraction protocols; led cross-functional projects; validated analytical methods and drafted SOPs; maintained rigorous lab notebooks and digital databases; mentored bachelor's and master's student during their internships and thesis writing.

TUTOR FOR INCOMING STUDENTS – UNIVERSITÀ DI PARMA

01/2022 – 12/2024

Parma, Italy

Guidance and assistance for students coming from Italian or foreign universities

VISITING PHD CANDIDATE – NUTRITION SCIENCES N.V.

10/2022 – 04/2023

Ghent, Belgium

- Research title: "**Antibacterial and prebiotic potential of insects and of their isolated fractions**"
- Supervisors: Geert Bruggeman, Stefanie Verstringe
- Topics and skills: Extraction and characterization of insect fractions, microbiological tests for the determination of the antibacterial activity and prebiotic activity of whole insects and of their fractions with *Escherichia coli*, *Streptococcus suis*, *Limosilactobacillus reuteri*.

RESEARCH FELLOW – UNIVERSITÀ DI PARMA

10/2021 – 12/2021

Parma, Italy

- Research title: "**Study of proteins and their modifications induced by heat treatment and processing in commercial infant formulas**"
- Supervisor: Professor Stefano Sforza
- Topics and skills: Determination of the degree of hydrolysis of proteins by OPA assay, determination of the degree of glycation of whey proteins and caseins by UPLC/MS analysis, determination of degree of soluble protein aggregates by size exclusion chromatography, assessment of enantiomeric purity of proteins by GC/MS analysis.

RESEARCH INTERN – UNIVERSITÀ DI PARMA

04/2021 – 10/2021

Parma, Italy

- Research title: "Study of the potential allergenic risk associated with the consumption of legumes and legume by-products"
- Supervisors: Professor Tullia Tedeschi, Professor Stefano Sforza
- Topics and skills: Characterization of the protein fraction of legume by-products, enzymatic extraction of proteins from legume matrices, test of the immunoreactivity of the isolated protein fractions by immunoassays with sera from patients allergic to different legume matrices.

RESEARCH INTERN – UNIVERSITÀ DI BOLOGNA

03/2019 – 06/2019

Bologna, Italy

- Research title: "Study of lipid oxidation of different oils (hemp, sunflower, and olive oil)"
- Supervisor: Professor Tullia Gallina Toschi
- Topics and skills: Measurement of peroxide value, free fatty acids, oxidative stability index, and coefficient of extinction in the UV of the oils, GC characterization of cold-pressed hemp oil

EDUCATION AND TRAINING**DOCTOR OF PHILOSOPHY, PhD – FOOD SCIENCE, FOOD CHEMISTRY UNIT**

01/2022 – 12/2024

Università di Parma, Italy

Thesis: "Insects as alternative protein source in animal feed"

Final grade: Cum laude

MASTER OF SCIENCE, MSc – FOOD SAFETY AND FOOD RISK MANAGEMENT

09/2019 – 10/2021

Università di Parma, Italy

Thesis: "Characterization and allergenicity assessment of protein hydrolysates from legume by-products"

Final grade: 110/110 cum laude

BACHELOR OF SCIENCE, BSc – AGRICULTURAL AND ENVIRONMENTAL SCIENCE

09/2016 – 07/2019

Università di Bologna, Italy

Thesis: "Evaluation of the oxidative stability of cold-pressed hemp oil (*Cannabis sativa* L.)"

Final grade: 110/110 cum laude

LANGUAGE SKILLS

	Listening	Reading	Spoken production	Spoken interaction	Writing
ITALIAN	Mother tongue	Mother tongue	Mother tongue	Mother tongue	Mother tongue
ENGLISH	C1	C1	C1	C1	C1
SPANISH	C1	C1	C1	C1	C1
FRENCH	B2	B2	B1	B1	B2
DUTCH	B1	B1	B1	B1	B1

SOFT SKILLS

Time management | Organizational skills | Attention to detail | Leadership | Critical thinking | Resilience | Stress management | Problem solving | Collaboration | Written communication | Oral communication | Microsoft Office package

CONFERENCES, SEMINARS, SUMMER SCHOOLS

11th International Symposium on Recent Advances in Food Analysis (RAFA)

05/11/2024 – 08/11/2024

Prague, Czech Republic

Poster communication (1): "Black soldier fly (*Hermetia illucens* L.) whole and fractionated larvae: *in vitro* protein digestibility and effect of lipid and chitin removal"

Poster communication (2): "Characterization of eggs from hens fed insect-enriched diets"

28th Workshop on the Developments in the Italian PhD Research on Food Science, Technology, Biotechnology

18/09/2024 – 20/09/2024

Catania, Italy

Oral communication: "Insects as alternative protein source in animal feed"

INSECTA 2023 International Conference

13/09/2023 – 14/09/2023

Magdeburg, Germany

Oral communication: "Antibacterial and prebiotic potential and in-depth characterization of *Hermetia illucens* L. larvae and of their isolated protein, lipid, and chitin fractions"

EFSA's 2024 Parma Summer School

23/09/2024 – 25/09/2024

Online

Topics: artificial intelligence and EU regulatory framework, food safety, food risk assessment, sustainability in the food system, social and behavioral sciences

Food Authenticity PhD Excellence Academy

25/09/2023 – 27/09/2023

Parma, Italy

Topics: food fraud and authenticity, authentication methods, advanced chemical and chemometric approaches for fighting food fraud

26th School of Mass Spectrometry of the Italian Chemical Society (SCI)

14/03/2022 – 18/03/2022

Siena, Italy

Topics: principles of ionization (EI, CI), GC/MS, Fast GC, GCxGC, ESI, HPLC/MS, MALDI, ambient MS, analyzers (ToF, Orbitrap), HRMS, tandem MS

PUBLICATIONS

Kiwifruit waste valorisation: Chemical characterisation of by-products and enzymatic production of seed protein hydrolysates

Luca Fontechiari, Francesca Accardo, Francesca Bonzanini, Maria Giulia Bonomini, Augusta Caligiani, Veronica Lolli, Tullia Tedeschi

2026, *Food Chemistry Advances*. DOI: <https://doi.org/10.1016/j.focha.2026.101249>

Characterization of eggs from laying hens fed insect-enriched diets

Maria Giulia Bonomini, Katia D'Ambra, Giovanna Minelli, Domenico Pietro Lo Fiego, Giulia Leni, Veronica Lolli, Augusta Caligiani

2026, *Food Chemistry*. DOI: <https://doi.org/10.1016/j.foodchem.2026.148387>

The quiet side of EU novel foods: How ‘ordinary’ innovations are overshadowed by extreme cases

Maria Giulia Bonomini, Chiara Dall’Asta

2025, *Trends in Food Science & Technology*. DOI: <https://doi.org/10.1016/j.tifs.2025.105490>

Black soldier fly (*Hermetia illucens* L.) whole and fractionated larvae: *In vitro* protein digestibility and effect of lipid and chitin removal

Maria Giulia Bonomini, Barbara Prandi, Augusta Caligiani

2024, *Food Research International*. DOI: <https://doi.org/10.1016/j.foodres.2024.115102>

Characterisation, antibacterial activity, and prebiotic potential of dried *Hermetia illucens* L. larvae and of their fractions

Maria Giulia Bonomini, Stefanie Verstringe, Geert Bruggeman, Robin Vandercruyssen, Hannes Carmans, Augusta Caligiani

2024, *Food Research International*. DOI: <https://doi.org/10.1163/23524588-00001152>

Effectiveness of enzymatic hydrolysis for reducing the allergenic potential of legume by-products

Luisa Calcinai, Maria Giulia Bonomini, Giulia Leni, Andrea Faccini, Ilaria Puxeddu, Daiana Giannini, Fiorella Petrelli, Barbara Prandi, Stefano Sforza, Tullia Tedeschi

2022, *Scientific Reports*. DOI: <https://doi.org/10.1038/s41598-022-21296-z>