

# Curriculum vitae: Deborah Maria Racca

## ● ABOUT ME

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I am a young PhD student involved in Blue biorefinery.  
I work in the blue biorefinery sector for a green and sustainable valorisation of aquatic and marine biomass, creating new added value.  
"Green is the new black!".

## ● EDUCATION AND TRAINING

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01/2022 – CURRENT Foggia, Italy  
**RESEARCH DOCTORATE (PH.D) IN "NEUROSCIENCE AND EDUCATION-CURRICULUM GREEN", XXXVII CYCLE.** University of Foggia, Foggia (Italy).

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- Analytical techniques: spectrophotometer, high performance liquid chromatography-mass spectrometry (HPLC-MS), gas chromatography (GC), plasma emission spectroscopy (ICP OES), analyzer elementary CHN-S, Attenuated Total Reflectance Infrared Spectrophotometry (FTIR ATR).
- Bibliographic search;
- Biomass characterization analysis;
- Biorefinery processes;
- Activity or sector : Scientific Research.

**Field of study** Green chemistry, biorefinery and aquaculture. |

**Thesis** "Blue Biorefinery for sustainable and green marine blue biomass valorisation." (CHEM-06)

01/10/2024 – 04/10/2024 Napoli, Italy  
**INTERNATIONAL SUMMER SCHOOL OF BLUE BIOTECHNOLOGY (ISSBB).** Stazione Zoologica Anton Dohrn

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Deepening of methodologies for the discovery and development of bioactive products from marine organisms.  
Acquisition of skills in:  
Bioprospecting: Identification and isolation of bioactive compounds from marine sources; Environmental biotechnology: Bioremediation and valorization of marine waste;  
Bioinformatics: Use of bioinformatics tools for genomic analysis and discovery of new compounds; Circular economy: Application of circular economy principles to marine biotechnology;  
Technology transfer: Understanding of technology transfer processes from the laboratory to industry.

**Field of study** blue biotechnology, bioprospecting, sustainability

12/09/2023 – 16/09/2023 Tunisi, Tunisia  
**TRAINING COURSE ON SEAWEED CULTIVATION AND BIOTECHNOLOGY.** TAHALEB project- safe seaweed coalition

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Core Competencies:  
-Marine Biology and Ecology: Understanding of marine ecosystems, seaweed taxonomy, and ecological interactions.  
-Seaweed Cultivation: Knowledge of various seaweed cultivation techniques, including open sea, pond, and tank systems.  
-Biotechnology: Familiarity with bioprocessing techniques for extracting valuable compounds from seaweeds, such as phycocolloids, pigments, and biofuels.  
-Environmental Science: Awareness of environmental impacts and sustainable practices in seaweed cultivation.  
-Business and Entrepreneurship: Understanding of business planning, market analysis, and the development of seaweed-based products.

15/01/2023 – 18/01/2023 Foggia, Italy

## **ADVANCED BLUEBIO TRAINING COURSE: "BLUE BIO-REFINERY TECHNOLOGIES: FROM RESEARCH TO THE INDUSTRY WITH APPLICATIONS ON PRODUCTS AND BIOMATERIAL FROM ALGAL BIOMASS AND SIDESTREAMS OF FISHERIES AND AQUACULTURE".**

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This course intends to fill the gaps in the training of professional figures who can facilitate the advancement of bluebiotech towards the market, with particular attention to biorefinery technologies applied to the valorisation of algal biomass and by-products/biowaste deriving from fishing and aquaculture activities.

<https://openbadges.bestr.it/public/assertions/ePDEmQGSSoK1X5ntMDpOZg>

**Field of study** Blue biorefinery

11/2021 – 04/2022 Bari, Italy

## **SHORT MASTER IN "MODELS AND METHODS OF INDUSTRIAL TRANSITION".** Politecnico di Bari, Bari.

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Training course made up of 11 training modules, for a total of 102 hours (4 credits), to which add 18 hours of visits to industrial realities and a final internship of 50 hours.

The course provided methods, analysis tools and models aimed at promoting understanding and manage, efficiently and effectively, industrial transition phenomena such as, e.g example, the digital, environmental, or energy transition.

**Field of study** Industrial transition.

09/2018 – 04/2021 foggia, Italy

## **MASTER'S DEGREE IN FOOD SCIENCE AND TECHNOLOGY.** University of Foggia, Foggia (Italy).

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-Knowledge of bibliographic search activity. and analysis of acquired data.

**Field of study** Food Science and Technology. | **Final grade** 110/110 cum laude |

**Thesis** "Weed control tests with natural products on *Matricaria chamomilla* L."

09/2014 – 12/2017 Foggia, Italy

## **BACHELOR'S DEGREE IN FOOD SCIENCE AND TECHNOLOGY** University of Foggia, Foggia (Italy).

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- occupational techniques (making of standard breads, fancy breads, cakes and pastries)

Internship in "preparation of functional foods", focused on the production of a drink fermented with *Lactobacillus acidophilus* and added with GlutenFriendly flour. -

at the "New Gluten World" (Corato) and at the predictive microbiology laboratory of the University of Foggia;

Execution of the basic protocols for the revitalization of a probiotic strain, monitoring of the shelf-life and execution of the ELISA test.

**Field of study** Food Science and Technology | **Final grade** 108/110 |

**Thesis** "Production of a fermented drink with *Lactobacillus achidophilus* ed added with GlutenFriendly flour."

09/2019 – 02/2021 Huesca, Spain

## **ERASMUS - "ERASMUS+" STUDY PROGRAM.** University of Zaragoza- Escuela Politecnica Superior. Huesca (Spagna).

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### ● **WORK EXPERIENCE**

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06/2021 – 01/2022 Foggia, Italy

## **SCIENTIFIC LABORATORY TECHNICIAN** STAR FACILITY CENTRE- UNIVERSITÀ DEGLI STUDI DI FOGGIA

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Laboratory specialized in the preparation and characterization of biomass for processes biorefinery, in research and innovation based on green chemistry.

### ● **CONFERENCES AND SEMINARS**

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12/10/2022 – 13/10/2022 Grenaa, Denmark.

## **"11th Nordic seaweed conference" - Alge Center Danmark.**

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Nordic Seaweed conference wants to exchange knowledge and ambitious ideas between scientists, existing companies and upcoming entrepreneurs. Networking is an important part of the conference. New collaborations are started, exiting projects developed and new business partners found during the conference.

**Link** <https://algecenterdanmark.com/nordic-seaweed-conference/>

## ● CONGRESS CONTRIBUTION

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21/11/2023 – 24/11/2023

**"Blue-biorefinery of Mediterranean seaweed *Gracilaria gracilis*".- Deborah Racca, Mauro Marone, Francesco Contillo, Paolo Marasco, Matteo Francavilla.**

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European Congress of Marine Biotechnology, Malaga, Oral Presentation.

27/10/2023 – 28/10/2023

**"Mediterranean seaweed biorefinery for valuable compounds".- Deborah Racca, Mauro Marone, Francesco Contillo, Paolo Marasco, Matteo Francavilla.**

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Riunione Scientifica Annuale Gruppo di Algologia, Società Botanica Italiana, Napoli. Oral Presentation.

17/10/2023 – 18/10/2023

**"Processi di bioraffineria applicati a macroalghe mediterranee per la produzione di composti di valore commerciale".-Deborah Racca, Mauro Marone, Francesco Contillo, Paolo Marasco, Matteo Francavilla.**

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Convegno di "Re-think circular economy". - Tondo, Taranto. Oral Presentation.

13/10/2023 – 14/10/2023

**"Molluschicoltura Multitrofica Sostenibile-Gargano (Mol.Mul.SOS-Gargano)".- M. Francavilla, P. Marasco, D. Racca, M. Marone, F. Contillo, G. Pazienza, D.P. Debernardis, G.Normanno.**

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X Convegno Nazionale SIRAM (Società Italiana di Ricerca Applicata alla Molluschicoltura), Cagliari. Poster Presentation.

05/06/2023 – 09/06/2023

**"Biphasic green solvents system for a fast "one-pot" simultaneous extraction at room temperature of valuable compounds from tomato biowaste".- F.Contillo, M. Marone, P. Marasco, D. Racca, M Caroprese, M. Francavilla.**

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31st European Biomass Conference and Exhibition, Bologna. Poster Presentation.

15/02/2023 – 16/02/2023

**"Bioraffineria blu: valorizzazione sostenibile e <<green>> di macroalghe rosse prodotte in sistemi di acquacolturaa multitrofica integrata (IMTA)".**

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Deborah Racca, Paolo Marasco, Mauro Marone, Francesco Contillo, Antonio Carnevale, Gianfranco Pazienza, Giovanni Normanno, Matteo Francavilla.

6° edizione Aquafarm, fiera di Pordenone. Poster Presentation.

15/02/2023 – 16/02/2023

**"Molluschicoltura Multitrofica Sostenibile nel Gargano".- Paolo Marasco, Deborah Racca, Gianfranco Pazienza, Matteo Francavilla, Giovanni Normanno.**

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6° edizione Aquafarm, fiera di Pordenone. Poster Presentation.

05/09/2022 – 08/09/2022

**"Valorisation of invasive blue crab (*Callinectes sapidus*) through a blue biorefinery approach".- Deborah Racca, Mauro Marone, Francesco Contillo, Paolo Marasco, Tommaso Scirocco, Antonietta Specchiulli, Lucrezia Cilenti, Matteo Francavilla (2022).**

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ECSA 59. Using the best scientific knowledge for the sustainable management of estuaries and coastal seas.

12/10/2022 – 13/10/2022

**"Blue-biorefinery of seaweed *Gracilaria gracilis*: from nutrients reuse to bio-based products".- Deborah Racca, Mauro Marone, Francesco Contillo, Paolo Marasco, Massimo Monteleone, Giovanni Normanno, Matteo Francavilla (2022).**

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● **LANGUAGE SKILLS**

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Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	B1	B1	B1	B1	B1
<b>SPANISH</b>	B1	B1	B1	B1	B1

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

Foggia, 17/11/2024