

# European Format for Curriculum Vitae

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## Personal Information

Name: Angelica Lembo

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Nationality: Italian

Date of Birth: 09 March 1996

## Work Experience / Research Activities

•01/11/2024 -01/11/2027

### PhD Student

Department of Veterinary Medical Sciences (DIMEVET), University of Bologna, Italy

**Supervisor:** Prof. Giulia Andreani, Prof. Gloria Isani

Research project focused on the biochemical characterization of dairy by-products (whey and second cheese whey) collected from five small-scale dairies within a circular economy framework. Subsequently, the project investigates the cultivation and biochemical characterization of microalgae for biotechnological applications, using these by-products as sustainable substrates for microalgal growth and aiming at the production of high-value protein biomass for animal feed.

### Main activities include:

- Extraction and characterization of soluble proteins and bioactive compounds from microalgal biomass;

- Investigation of iron speciation in iron-enriched Nostoc and its association with soluble protein fractions;

- Valorization of protein-rich microalgal biomass for nutraceutical and animal feed applications.

### Laboratory techniques:

Protein quantification assays (Lowry, BCA);  
SDS-PAGE electrophoresis;  
Size Exclusion Chromatography (SEC);  
Microwave digestion (Ethos UP);  
High-resolution continuum source atomic absorption spectrometry (AAS, ContrAA).

• **17/11/2025 – 01/07/2026**

**Research Collaboration – Visiting Research Period**

Department of Industrial Engineering (DII), University of Padua, Italy

**Supervisor:** Prof. Eleonora Sforza

Research activities carried out within the framework of the PhD project, focused on the cultivation of *Galdieria sulphuraria* using dairy by-products (whey and second cheese whey) as growth media.

**Main activities:**

Microalgae cultivation in flat-panel photobioreactors under sterile conditions (continuous systems) in heterotrophic and mixotrophic conditions; Analytical techniques for microalgal biomass characterization (Lowry BCA, SDS-PAGE, SEC, Microwave digestion, AAS);

• **01/11/2024 – 1/11/2027**

Teaching Assistant, UNIBO

**Supervisors:** Prof. Giulia Andreani, Prof. Gloria Isani.

**Institution:** Department of Veterinary Medical Sciences (DIMEVET).

**Main tasks and responsibilities:** Assistance in laboratory activities and support during laboratory practical for Biotechnology and Veterinary Medicine courses, as part of the students' academic curriculum, with the aim of strengthening scientific knowledge and the application of analytical techniques.

• **01/10/2022 – 15/02/2024**

Internship Italian Institute for Environmental Protection and Research (ISPRA)

**Supervisors:** Prof. Nadia Mucci, Dr. Edoardo Velli, Prof. Gloria Isani.

**Position held:** Thesis Student.

**Main tasks and responsibilities:**

DNA extraction and amplification;  
Fragment analysis, Sanger sequencing;  
Statistical data processing;  
Conservation-related genetic analysis.

## Education and Training (Academic and Professional Qualifications)

### • 2021 – 2024

Master's Degree in Animal Biotechnologies (LM-9)

University of Bologna

**Final grade:** 110/110 cum laude

**Main fields of study:** Molecular biology, biochemistry, genetics, immunology, microbiology, pathology and bioinformatics.

**Thesis topic:** Genetic characterization as a tool for conservation of the Egyptian vulture (*Neophron percnopterus*).

### • 2018-2021

BSc in Animal Production and Wildlife Management (L-38)

University of Turin

**Qualification obtained:** Bachelor's degree in animal production.

**Main fields of study:** Animal biology, physiology, nutrition, genetics, animal production and husbandry, ecology and wildlife management.

**Thesis topic:** Prevention of iron overload (hemosiderosis) in captive white rhinoceroses (*Ceratotherium simum*).

## Technical Skills

### • Analytical Techniques

Protein quantification assays (BCA, Lowry, Bradford); SDS–PAGE electrophoresis; Western blotting; size exclusion chromatography (SEC); microwave-assisted digestion; atomic absorption spectrometry (AAS) for trace element quantification (Fe, Zn) in biological matrices; DNA extraction, amplification (PCR) and sequencing.

### • Bioprocessing (basic experience, ongoing development)

Microalgae cultivation in flat-panel photobioreactors under sterile conditions (continuous systems), in heterotrophic and mixotrophic conditions; monitoring of nutrient uptake and substrate consumption during cultivation.

• **Instrumentation:** Microplate reader (e.g., Varioskan) for protein quantification assays (BCA, Lowry, Bradford); Vertical gel electrophoresis systems for SDS–PAGE electrophoresis; Western blot transfer systems; Size exclusion chromatography columns (e.g., Sephadex G-75) for SEC protein fractionation; Microwave digestion system (e.g., ETHOS-UP) for microwave-assisted digestion; Atomic absorption spectrometer (e.g., ContrAA 300) for trace element analysis;

• **Software and Data Analysis Skills:** Excellent knowledge of Microsoft Office (Word, Excel, PowerPoint, Outlook).

Proficient in statistical, data and image analysis software: R, ImageLab, Colony, HybridLab, GeneAlex, GENEMAPPER, FSTAT, GENETIX.

## Personal Competencies

• Aerial silks (aerial acrobatics), practiced for several years, including public performances and coordination of group routines;

• Horse riding with experience in horse care and management.

- Mountain hiking and outdoor activities.
- Private tutoring (one-to-one teaching support).
- Adaptability and problem-solving skills in laboratory settings.
- General health and safety training (Legislative Decree 81/2008).
- Driving licence: Category B.

## Languages

Italian: Mother tongue

English: B2 level

Spanish: B1 level

## Scientific Publications

- Rudelli, C.; Isani, G.; Fabbri, M.; **Lembo, A.**; Santoro, M.; Andreani, G. Metal Concentrations (Mg, Fe, Zn, Cu, Cd, Pb) in the Plasma and Cell Concentrates of *Chelonia mydas* and *Lepidochelys olivacea* from Costa Rica. *Animals* **2026**, *16*, 621.  
<https://doi.org/10.3390/ani16040621>
- Teklehaymanot, B.G.; Bolcato, M.; Isani, G.; **Lembo, A.**; Ogundipe, T.G.; Ballotta, G.; Dondi, F.; Gentile, A.; Fasoli, S. Electrophoretic Profile of Urinary Proteins in Goats During the Peripartum Period. *Animals* **2026**, *16*, 322.  
<https://doi.org/10.3390/ani16020322>
- Dalmonte, T., Rudelli, C., Alberoni, D., **Lembo, A.**, Gifuni, I., Andreani, G., Castellari, M., & Isani, G. (2025). Characterization and Valorization of the Microalgal Co-Product Spirugrass<sup>®</sup>: Protein Profile, Iron Speciation, and Potential Use as a Supplement for Honeybees. *Marine drugs*, *23*(11), 443.  
<https://doi.org/10.3390/md23110443>

## Conference Contributions

- Poster Presentation **AISAM Congress**, Cremona, Italy (2026): Iron speciation and cytosolic proteome of *Nostoc* sp. in response to nitrogen availability.  
Authors: **Angelica Lembo**, Veronica Lucato, Gloria Isani, Giulia Andreani, Eleonora Sforza.
- Poster Presentation **79th SISVET Congress**, Bologna, Italy (2026): Biochemical characterization of dairy by-products (whey and scotta) for microalgal cultivation.  
Authors: **Angelica Lembo**, Gloria Isani, Thomas Dalmonte, Alessandra De Cesare, Giulia Andreani.
- Poster Presentation **XXXIV National Congress of Phytotherapy and XVI SYRP Conference**, Pisa, Italy (2026): Characterization of protein extracts from *Nostoc* sp. and *Galdieria*

*sulphuraria* obtained using natural deep eutectic solvents (DES) for sustainable nutraceutical applications.

Authors: **Angelica Lembo**, Gloria Isani, Leonardo Pattaro, Veronica Lucato, Eleonora Sforza, Giulia Andreani.

- Poster presentation **78th SISVET Congress**, Giardini Naxos, Italy (2025): Biochemical use of *Arthrospira platensis* as a nutritional supplement in honeybees.

Authors: Cecilia Rudelli, **Angelica Lembo**, Giulia Andreani, Thomas Dalmonte, Daniele Alberoni, Gloria Isani.

- Poster presentation **77th SISVET Congress**, Parma, Italy (2024): Biochemical characterization of a by-product from *Arthrospira platensis* extraction and its possible use as feed supplement

Authors: Thomas Dalmonte, Massimo Castellari, Imma Gifuni, **Angelica Lembo**, Giulia Andreani, Gloria Isani.

- Oral presentation **Final Conference LIFE Egyptian Vulture Project**, Matera (2023)

Genetic characterization: a tool for species conservation

Authors: Edoardo Velli, **Angelica Lembo**, Guido Ceccolini, Anna Cenerini, Nadia Mucci, Alessandro Andreotti.