



## CAMILLA BARBERO MAZZUCCA

Date of birth: January 10<sup>th</sup> 1996

Via G.B. Della Bianca 5,

Borgosesia (VC)

3464005699

Camilla.barbero@uniupo.it

camilla.barberomazzucca@biologo.onb.it

### EDUCATION AND TRAINING

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- 2021-to date: **Ph.D. Student in Food, Health and Longevity** in the laboratory of Immunomics (Prof. Annalisa Chiocchetti).

Project title: *Are extracellular vesicles at the intersection between Food, Unhealthy Lifestyles, Microbiota and Autoimmune Diseases?* Supervisor: Prof. Annalisa Chiocchetti

*The objective of my research project is studying the relationship between diet and autoimmune diseases (AD) by I) creating, validating and administrating dietary questionnaires; II) evaluating the protective/harmful effect of single foods on the risk of Rheumatoid Arthritis onset; III) performing laboratory analysis on biological samples from AD patients. These activities are part of the MINDFUL (Microvesicles: Intersection between autoimmune Diseases, Food and Unhealthy Lifestyles) project, coordinated by Professor Annalisa Chiocchetti.*

University of Eastern Piedmont, Novara, CAAD (Translational Research Centre on Autoimmune and Allergic Diseases).

- July 2020: **Master of Science in Food, Health and Environment** (110/110 cum laude and mention of honor).

Title of the thesis: *"Microvesicles at the intersection between Autoimmune Diseases, Food and Unhealthy Lifestyles: setting the nutrition part of the study"*. Supervisor: Prof. Annalisa Chiocchetti

University of Eastern Piedmont, Novara.

- 2019-2020: Master thesis internship at **CAAD** (Translational Research Centre on Autoimmune and Allergic Diseases), **Laboratory of Immunology** (Prof. Annalisa Chiocchetti).

*My research was focused on the design of a tool to investigate the eating habits of patients with autoimmune disease which is a task of the MINDFUL (Microvesicles: Intersection between autoimmune Diseases, Food and Unhealthy Lifestyles) project, coordinated by Professor Annalisa Chiocchetti. To reach this aim, I worked both independently and in contact with experts in the field, by attending nutritional interviews at the Ospedale Maggiore della Carità (Novara), to acquire knowledge of the field.*

*Moreover, during my training in the laboratory of Immunology, I also acquired flow cytometric skills for analysis of extracellular vesicles and immune phenotype from fresh blood.*

University of Eastern Piedmont, Novara.

- 2018-2019/2019-2020 Institutional task in University of Eastern Piedmont: participation to the Quality Management and Review group.
- July 2018. **Bachelor's degree in Biotechnology** (110/110);

Title of the thesis: "*Evaluation of the interaction between B7h and osteopontin by pull-down method*". Supervisor: Prof. Annalisa Chiocchetti

University of Eastern Piedmont, Novara.

- 2017-2018: Bachelor thesis internship at the **Laboratory of Immunology** (Prof. Umberto Dianzani/Prof. Annalisa Chiocchetti).

*My research focused on studying in vitro the binding of osteopontin to its novel receptor ICOS ligand (ICOSL) by performing pull down assay and migration assay.*

University of Eastern Piedmont, Novara.

## PUBLICATIONS

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- Mazzucca C.B., Scotti L., Cappellano G., Barone-Adesi F., Chiocchetti A. *Nutrition and rheumatoid arthritis onset: a prospective analysis using the UK biobank*. Under revision, submitted to Nutrients to section: Nutritional Immunology.
- Mazzucca CB, Raineri D, Cappellano G, Chiocchetti A. How to Tackle the Relationship between Autoimmune Diseases and Diet: Well Begun Is Half-Done. *Nutrients*. 2021;13(11):3956. doi:10.3390/nu13113956
- Cappellano G, Vecchio D, Magistrelli L, et al. The Yin-Yang of osteopontin in nervous system diseases: damage versus repair. *Neural Regen Res*. 2021;16(6):1131-1137. doi:10.4103/1673-5374.300328

## METHODOLOGICAL SKILLS

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- Nutritional interviews for research purposes; creation of nutrition assessment tools.
- Cytofluorimetric analysis of microvesicles and immunophenotype on fresh blood (sample preparation, acquisition and analysis); activation induced markers (AIM) test; isolation of peripheral blood mononucleated cells; storing of samples for biobank creation; ELISA; PCR; real time PCR; reverse PCR; DNA sequencing (Sanger, Illumina); DNA/RNA extraction; immunofluorescence; protein extraction from lysates; Western Blot; Pulldown assay; cell culture. Basic knowledge of sorting.

## FURTHER ACTIVITIES, CERTIFICATIONS and DISSEMINATION

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- 30 November 2021: data exhibition to the annual report of the MINDFUL project coordinated by Prof. Annalisa Chiocchetti.
- 30 June 2021: participation in the scientific competition "Science Slam" (CAAD, Novara)

- 6-19-26 April 2021: attendance to the course "Introduction to multicolor cytometry" (ISCCA School & BD) (Zoom meeting).
- 29 March 2021: dissemination activity at the Fumagalli Institute in Castelnuovo. Lecture: discovering the Microbiota (Google Meet).
- 15 March-26 April 2021: attendance the Science Communication Course (Zoom meeting).
- 25 February 2021: attendance to the scientific conference of UK biobank: "Enabling COVID-19 Research"; "Democratising Access at UK Biobank's Scientific Conference" (Google Meet).
- 5 February 2021: participation in the kick-off meeting of the FLAMIN-GO Project (CAAD Novara).
- December 2020: dissemination activity at the scientific marathon "Free Ahmadreza Djalali" (Google Meet). Topic: Nutritional immunology.
- 17 November 2020: attendance to the Nanosight practical use course (CAAD, Novara)
- 5-6 November 2020: attendance to the Becton Dickinson (BD) training course for the cytofluorimetric facility FACS Symphony (CAAD, Novara)
- November 2020: qualification as grade A biologist. Registration number: AA\_091664 (University of Eastern Piedmont, Alessandria).
- July 2020: achievement of 24 CFU in anthropo-psycho-pedagogical field and educational technologists for the access to the state examination for teaching (University of Turin).
- July-October 2019: participation to the School of Excellence UPO, obtaining the first place in the admissions rankings (University of Eastern Piedmont, Novara).
- March 8-May 31, 2019: attendance to the 10th edition of the High Education on Food Legislation course (CAFLA), (University of Eastern Piedmont, Alessandria).
- November 10, 2018: participation to the IRCAD day (CAAD, Novara).
- January 2016: participation to the Safety Training Course in Chemical and Biological Labs (University of Eastern Piedmont, Novara ).

## LANGUAGES

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- English: fluent in both writing and speech. During the Master of Science, I had the opportunity to follow lessons, perform oral and written exams, interact with teachers, write and discuss the thesis in English language.
- French: basic knowledge

## SKILLS

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- Ability to interact with patients (even in pediatric age) acquired during performing nutritional interviews in the hospital.
- Ethical Committee documentation drafting for research projects.
- Tutoring activity to master and bachelor students.
- Data exposition in meetings, thesis writing, presentation, discussion in foreign language

(English).

- Use of online database and surveys managing tools (REDCap).
- Use of the most common bioinformatics browsers (Ensembl, UCSC, BLAST, Nutrigenome DB).
- Use Office package and familiarity with commonly used software.
- Use of social networks (Facebook, Instagram, LinkedIn); administration of an Instagram page about nutrition and research.

## MORE INFORMATION

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**Soft Skills** acquired during Ph.D and Master of Science through the participation to additional courses:

- The course in "Science communication" was critical to learn how to communicate scientific results in an effective way for non-scientists; the course ended with a practical experience of science dissemination in which I had to compete with other scientists explaining my research activity in an attractive and intuitive way: the Science Slam (March-June 2021).
- In the "Communication Skills and Social Media" course I learned how to create a website to promote a company and how to use social networks to spread innovative ideas (November- January 2020)
- The "Innovation Management in life sciences" course has provided me with the basis for project management and intellectual property protection, with specific application to the field of medical research (March- June 2019).

I authorize the processing of my personal data under DLG 196/2003 and GDPR 679/2016

*Emilio Barberis Zucca*