CURRICULUM VITAE

Alessia Labate
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Sex: Female | Date of birth: 28/04/1999 | Nationality: Italian

EDUCATION

19/03/2024 Master Degree in Medical Biotechnology, Class LM-9, Department of Medical Sciences, University of Turin, Italy.
Thesis: “Diacylglycerol kinase alpha promotes ubiquitination and cell surface downregulation of Chimeric Antigen Receptor”, supervisor Prof. Andrea Graziani, section of Cellular and Molecular Biology.
Grade: 110/110 cum laude

12/07/2021 Bachelor Degree in Biotechnology, Class L-2, Department of Life Sciences and Biotechnology, University of Ferrara (Italy)
Thesis: "Study of the molecular determinants influencing Readthrough-based therapy” supervisor Prof. Mirko Pinotti, section of Biochemistry and Molecular Biology.
Grade: 107/110

09/2013 – 07/2018 Scientific High School Alessandro Volta, Reggio Calabria (Italy).
Diploma 100/100

AWARDS AND RECOGNITIONS

Novembrer 2024 Francesca Martini Award 2024 for an experimental thesis in oncohematology, awarded by NAnA ETS.

PREVIOUS RESEARCH AND PROFESSIONAL POSITION(S) / PARTICIPATION TO RESEARCH GROUPS / FELLOWSHIP(S)

1/11/24 – TODAY: PhD Student in the National Interest PhD Program (DIN) in Life Course Research, Biomedical Curriculum. DM 630 PNRR Scholarship co-financed by IRCCS San Raffaele Hospital. Experimental work conducted at the Department of Molecular Biotechnology and Health Sciences at the University of Turin (DBMSS).
01/04/2024 – 30/10/2024: Research fellow at the Department of Molecular Biology and Health Sciences at the Molecular Biotechnology Center, Turin, Italy, working on a project titled: "Role of DGKA in the regulation of the T cell receptor."

15/11/2021 - 19/03/2024 Internship at Department of Molecular Biology and Health Sciences at Molecular Biotechnology Center, Turin, Italy.

- *Research Area:* Study of the molecular mechanisms involved in regulating the signaling strength of the T cell antigen receptor (TCR) in human primary lymphocyte cultures and immortalised cell lines. Specifically, the research involves the investigation of the mechanisms of TCR trafficking between the cytoplasm and the cell surface, and how the presence or absence of DGKa impacts the fitness of T cells and their effector functions. Simultaneously, I examined the role of DGKa in chimeric antigen receptor (CAR) trafficking following antigen stimulation in order to propose a mechanistic hypothesis for why DGKa is involved in CAR trafficking.

During this period, I have acquired several skills:

1. **Cellular biology:**
    - Isolation of human primary lymphocytes from Buffy Coats of healthy donors and maintenance in primary human cell lines as well as immortalised tumour cell lines (293T, K562, Jurkat);
    - Transient cell transfection through nucleofection (Amaxa II and Amaxa 4D, Lonza) and lipofection.
    - Studying receptors trafficking (internalisation, recycling, degradation, ubiquitination) and signalling transduction;
2. **Biochemical techniques**: Evaluation of protein expression
    - Western blotting;
    - Immunoprecipitation;
3. **Molecular biology techniques**:
    - Cloning
    - Transformation of competent bacteria,
    - Use of restriction enzymes,
    - Primer design,
    - Reverse Transcriptase-PCR e Real-Time qPCR;
    - DNA and RNA extraction,
    - CRISPR-Cas9 protocols for knocking out gene;
    - Lentiviral transduction
    - Primary CAR-T cells production and genome editing
4. **Flow cytometry and cell sorting**.
5. **Software:**
    - Data analysis software for laboratory-generated data: GraphPad, ImageLab, FACSCelesta Software, FlowJo, SDS Real-Time PCR 7900 Software;
    - Proficiency in Microsoft Office suite (Word, Excel, PowerPoint).

April-May-June 2021 Internship for the thesis at Department of Biochemistry and Molecular Biology, Ferrara, Italy.
In this period have been acquired and developed the following knowledge / activities:

1. Literature analysis on topics related to genetic disease correction approaches, including protein engineering approaches for the production of molecules for therapeutic purposes.
2. Bibliographic research on a specific topic
3. Critical analysis and discussion of experimental data with multimedia presentation support
4. Practical activity for the construction of recombinant plasmids, with the acquisition of skills on basic biology techniques molecular (PCR, agarose and polyacrylamide gel electrophoresis, cloning, enzyme restriction by endonuclease, transformation of competent bacteria, plasmid DNA extraction, RNA extraction, cultured eukaryotic cells in adhesion and transfection by lipofection).

01/03/2017 -30/04/2017 Work-related learning experience, in High School, in Stem Cells laboratories “Riuniti” and “M.Morelli” Hospital Reggio Calabria,Italy

PRESENTATION OF POSTER, GIVEN SPEECHES AT CONFERENCES AND SEMINARS

"*Diacylglycerol Kinase alpha (DGKα) couples antigen-induced T cell activation to the negative feedback mechanism leading to TCR and CAR ubiquitination and lysosomal degradation"*
Valeria Malacarne, Sabrina Mula, Giulia Rossino, **Alessia Labate**, Elia Angelino, Beatrice Greco, Monica Casucci, Andrea Graziani.| Gene expression & signaling in the immune system | April 16- April 20, 2024 | Cold Spring Harbor Laboratory, New York (USA).

"Diacylglycerol Kinase alpha promotes ubiquitination and cell surface downregulation of chimeric antigen recetor." V. Malacarne, S. Mula, G. Rossino, **A. Labate**, E. Angelino, B. Greco, M. Casucci, A. Graziani | Lymphocyte antigen receptor signaling Workshop | 01 – 05 June 2024 | Certosa di Pontignano, Siena, Italy.

LANGUAGE SKILLS

Language	**Understanding**		**Speaking**	**Writing**
	Listening	**Reading**	B2	B2
INGLESE	B2	B2		
Native Language				
ITALIANO				

29/07/2016 Cambridge PET certification.

SOFT SKILLS

Good capability of relationship with colleagues, to work in a team and in problem solving.

Organisational/managerial skills: I am capable of working independently, efficiently organizing tasks, prioritizing them to achieve goals promptly and effectively.