# ELEONORA ALFINITO
*MEDICAL BIOTECHNOLOGIST NEUROSCIENTIST*

## PROFESSIONAL COMPETENCE

-Identification of new genetic markers 'Single Nucleotides Polymorphisms' (SNPs), using exome sequencing for the characterization of the efficacy of drugs and nutraceuticals .

-Experience in cancer research and immunomodulation in tissue microenvironment.

-Advanced knowledge of the neurobiology of the immature neurons in the cerebral cortex of adult mammals and on the neuroanatomy - Advanced theoretical histological techniques by using optical and confocal microscopy

-Istereotaxic surgery, behavioral tests

-Confocal microscopy analysis -Image analysis through bioinformatics programmes -Advanced immunohistochemical techniques and subsequent analysis with confocal microscopy - Histological techniques ranging from perfusion and brain dissection in rodents to processing of human cerebral cortex biopsies - Fine microstructure of the olfactory cortex of rodents and parietal neocortex of humans -Image analysis techniques to quantify results from microscopical analysis -Advanced use of Office355 -R programming for data science -Fiji and Prism programmes

## TRANSVERSAL SKILLS

-Team work and networking;

-Data mining;

-Interpersonal communication;

-Problem solving;

-Academic presentation.

## LANGUAGE

Italian: Native Language
English: Advanced (C1)
Spanish: Good knowledge
French: Basic knowledge

## INSTRUCTION

**Bachelor Degree - Medical Biotechnology** University of Naples: Federico II from 10/2019 to 05/2022 (100/110)

**Master Degree - Biotechnology for Neuroscience** University of Turin from 10/2022 to 10/2024 (95/110)

**Summer School Experiences :**
- New York - Pace university
- London - Imperial College of London
- Stratford Upon-Evon College

## WORKS EXPERIENCES

**CLINICAL RESEARCH AND DEVELOPMENT – Elysium CellBioIta I am involved in clinical research and development for the nutraceutical company Elysium CellBioIta, working within the laboratories at CEINGE – Advanced Biotechnology, Naples. My work focuses on the design and validation of scientific protocols, with particular emphasis on innovation in the nutraceutical and biomedical fields.**

### RESEARCHER AT SAN RAFFAELE HOSPITAL
Milan,Italy:
working on the project: Molecular mechanisms regulating perineural invasion in pancreatic cancer. The collaboration consisted in the execution of in vitro and in vivo analysis to investigate The perineural invasion in pancreatic adenocarcinoma

### INTERSHIP ERASMUS+ - University Juame I
**Catellon de la Plana, Spain;**
Coordinator of the laboratory : professor Esther Castillo Gomez.
The study is involved in optogenetic and pharmacogenetic experimentsin transgenic micefocused on the modulation of pathological aggression and altered socio-affectivebehaviours.
from 10/2021 to 12/2021

### INTERSHIP - Institute of Neuroscience Cavaliere Ottolenghi
**Turin, Italy;** coordinator of Laboratory: Ilaria Bertocchi the study involve studies on X Fragile Syndrome, Chetogenic diet for infantile epilepsy;Studies on PNN; it involves behavioural tests, immunoistochemistry assays, PCR and other specific techniques from 12/2022 - 05/2024

### INTERSHIP ERASMUS+ - University of Valencia
**Valencia, Spain;** Coordinator of Laboratory: Juan Nacher. The project involve the understanding of how aversive experiences and major depression influence the structure, the connectivity and the physiology of interneurons, particularly in some regions that have been less explored by previous studies. We will focus on different types of interneurons, specially those expressing parvalbumin (PV+), in regions such as the reticular thalamic nucleus, the striatum or the habenula, among others. We evaluated the impact of these aversive experiences on the input received by these interneurons and on the efferences that they stablish on excitatory neurons. Then, by means of studying impact of the manipulation of two critical players in the development and plasticity of interneurons and particularly of PV+ cells, the polysialylated form of the neural cell adhesion molecule (PSA-NCAM) and perineuronal nets (PNNs), we seek to understand how they shape and maintain cortical inhibitory networks. from 10/2023 to 12/2023

## PERSONAL INFORMATION

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Address:
Fiscal code:

28/08/2025