FOTO DOCENTE

NOME DEL GRUPPO DI RICERCA:

Group of Prof. Claudia De Lorenzo

claudia.delorenzo@unina.it

Università degli Studi di Napoli "Federico II"

THESIS DAY

DOVE SI TROVA IL LABORATORIO: CEINGE

LINEE DI RICERCA e principali metodologie utilizzate :

Generation and Characterization of novel human antibodies and their multi-specific derivatives for anti-tumor therapies By Phage Display technology

DATA DI INIZIO DISPONIBILITA' PER LA POSITION: MARCH 2025

Lab PI: Elia Di Schiavi

Name of Research group

C. elegans Neurogenetics Lab

elia.dischiavi@ibbr.cnr.it

Università degli Studi di Napoli "Federico II"

THESIS DAY

Where is your lab:

IBBR, Area della Ricerca CNR NA1, Via P. Castellino 111, 80131, Naples

Main Research topics and Methods Utilized :

The objective of the project is the use of the nematode Caenorhabditis elegans as a model system for understanding the onset of neurodegenerative diseases such as ALS and SMA, and for their treatment.

Techniques of molecular biology (PCR, qPCR), manipulation of small model organisms (genetic crosses, behavioral assays), microscopy (analysis of neuronal morphology in living animals), pharmacological treatments.

Starting Date:

immediately

Picture

Name of Research group

Massimiliano Caiazzo

massimiliano.caiazzo@unina.it

Università degli Studi di Napoli
"Federico II"

THESIS DAY

Where is your lab:

Biological tower 7th floor/corpi bassi sud

Main Research topics and Methods Utilized :

Topics: RNA therapeutics for neurodegenerative diseases.
Methods: Cell reprogramming, lipid nanoparticles, stem cells

Starting Date:

February/March 2025

Picture

Name of Research group

Unit of Pharmacology
Dept of Neuroscience
Head: Prof. Maurizio Taglialatela

maurizio.taglialatela@unina.it

Università degli Studi di Napoli "Federico II"

THESIS DAY

Where is your lab:

Department of Neuroscience
Via Pansini, 5 (XV-XVII Floor-Biological Tower)

Main Research topics and Methods Utilized :

THE MAIN RESEARCH TOPICS ARE:

- Functional characterization of variants in ion channels causing epilesy in humans (Proff. Maurizio Taglialatela and Francesco Miceli)
- Identification of novel drugs for treatment of hyperexcitability disorders such as epilespy and pain (Proff. Maurizio Taglialatela and Francesco Miceli)
- Role of the ion channels in the blood-brain barrier (BBB) in neurovascular diseases (Prof. Vincenzo Barrese)
- Stroke and neonatal hypoxia (Prof. Giuseppe Pignataro and Ornella Cuomo)
- Alzheimer's disease (Proff. Carmela Matrone and Anna Pannaccione)
- Parkinson's disease and mitochondrial disfunction (Proff. Antonella Scorziello and Rossana Sirabella)
- Motorneuron disease and epigenetics (Prof. Luigi Formisano)
- Multiple sclerosis and glial pathophysiology (Prof. Francesca Boscia)

METHODS UTILIZED:

Electrophysiology, cellular biology (mammalian cells, induced pluripotent stem cells), molecular biology (cloning, mutagenesis), animal models of neurological diseases

Starting Date:

January 2025

Picture

Name of Research group

Translation research group in neurology

marcello.moccia@unina.it

Università degli Studi di Napoli "Federico II"

THESIS DAY

Where is your lab:

Policlinico (buildings 4, 11G and 17)
CEINGE

Main Research topics and Methods Utilized :

- Advanced laboratory methods for diagnosis and follow-up of neurodegenerative and neuroinflammatory disease of the central nervous system (Prof Daniela Terracciano, building 4)
- Flow citometry for monitoring treatment response in neuroinflammatory disease of the central nervous system (Dott Giulia Scalia, CEINGE)
- Muscle biopsy and advanced diagnostics of miopathies (Prof Lucia Ruggiero, building 11G)
- Multiple Sclerosis Unit and Clinical trial unit (Prof Vincenzo Brescia Morra, building 17)

Starting Date:

Nov 2024 (pending administrative requirements)

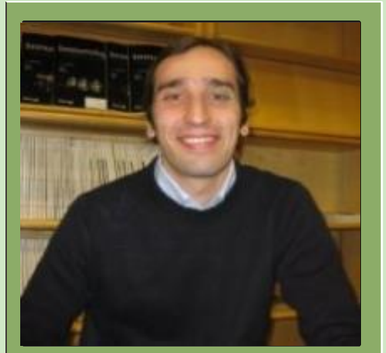


FOTO DOCENTE

NOME DEL GRUPPO DI RICERCA:

Laboratorio di Biologia Cellulare ed Applicata

Prof. Maurizio Renna

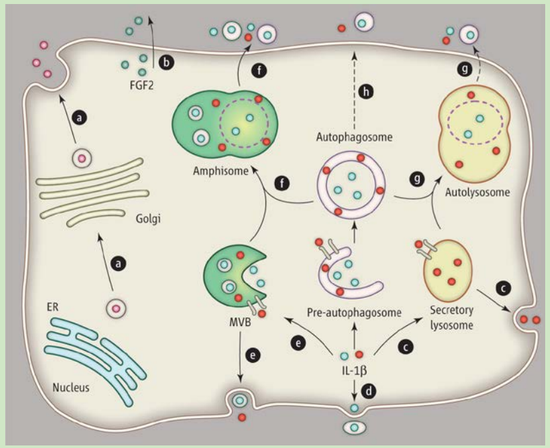
Università degli Studi di Napoli
"Federico II"

THESIS DAY

DOVE SI TROVA IL LABORATORIO :

Il Policlinico, Building 19, Corpi Bassi Sud (I Floor)
E-mail: **maurizio.renna@unina.it**
Office: **081/7463623**
Lab: **081/7463626**

LINEE DI RICERCA e principali metodologie utilizzate :



MAIN RESEARCH TOPICS: ***- Mechanisms regulating autophagosome biogenesis; - Analysis of the dynamics of transport in the early secretory pathway; - Role of autophagy in neurodegenerative diseases; - Role of autophagy in cell growth control and unconventional secretion - Pharmacological modulation of autophagy***

METHODOLOGIES: Molecular Biology and Biochemistry: PCR-based methods, molecular cloning, DNA mutagenesis, Quantitative RT-PCR, reporter assays, Enzymatic activity and reporter assays. SDS-PAGE, W. blot analysis, metabolic labelling, immunoprecipitation (IP/co-IP), biotinylation Assays, GST/pull-down and GFP-TRAP assays.
Cell Biology: eukaryotic cell cultures; transient and stable transfection of DNA into eukaryotic cells; RNA-interference methodologies; CRISPR/CAS9-based knock-out methodologies. Immunofluorescence, confocal microscopy and live imaging analysis; cellular fractionation by gradient density and differential ultracentrifugation. Isolation of exosomes; isolation and purification of lysosomes. Protein complementation (PCA) and proximity ligation (PLA) assays; analysis of autophagosome- and proteasome-dependent protein turn-over; intracellular protein transport and secretion, endocytosis and lysosomal degradation; cell viability and apoptosis; FACS analysis.

DATA DI INIZIO DISPONIBILITA' PER LA POSITION: **January/March 2025 (1/2 positions currently available)**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NOME DEL GRUPPO DI RICERCA:

DNA Replication LAB

Università degli Studi di Napoli "Federico II"

THESIS DAY

DOVE SI TROVA IL LABORATORIO: CNR – Via Pietro Castellino, 111

LINEE DI RICERCA e principali metodologie utilizzate :

Study of extremophilic replication enzymes, in order to realize a diagnostic device designed for the identification of pathogens directly from biological fluids.
Methodologies : PCR, Gel electrophoresis, Protein purification, FPLC, enzymatic assays, Band-shift, bacterial growth, spectrophotometric analysis.

Studio di enzimi della replicazione da estremofili, per la realizzazione di dispositivi diagnostici progettati per l'identificazione di organismi patogeni direttamente da liquidi biologici.
Metodologie utilizzate: PCR, Gel elettroforesi, Purificazione di proteine, FPLC, saggi enzimatici, Band-shift, crescita batterica, analisi spettrofotometrica.

DATA DI INIZIO DISPONIBILITA' PER LA POSITION: November 2024

Name of Research group

Bone diseases and tumors laboratory

fernando.gianfrancesco@igb.cnr.it

Università degli Studi di Napoli
"Federico II"

THESIS DAY

Where is your lab:

Institute of Genetics and Biophysics (IGB-CNR), National Research Council of Italy, via Pietro Castellino 111, Naples, Italy

Main Research topics and Methods Utilized :

Molecular and cellular mechanisms of bone diseases and tumors (e.g., osteosarcoma) studied through exome sequencing, RNA sequencing, proteomics, metabolomics, single-cell RNA sequencing, genome editing, mouse modeling, flow cytometry.

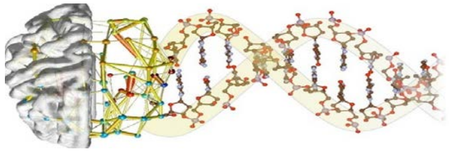
Starting Date:

November 2024

MIANO LAB

Human Molecular Neurogenetics

mariag.miano@igb.cnr.it



Università degli Studi di Napoli
"Federico II"

THESIS DAY

Where is your lab:

Institute of Genetics and Biophysics «Adriano Buzzati-Traverso»
Consiglio Nazionale delle Ricerche - CNR
Via Pietro Castellino 111, Napoli

Main Research topics and Methods Utilized :

Topics:
-Neurodevelopmental disorders/X-linked diseases (cortical malformations, epilepsy, Intellecutal disability, autism spectrum disorders);
-Functional validation of gene variants/Convergent disease-related pathways;
-Brain development and corticogenesis
-Drug-discovery (epi-drugs, long-non coding RNAs);

Methods:
- Patient-derived cells (lymphoblastoid cell line, fibroblasts, iPSCs);
- Murine and cellular disease models;
- Omics strategies (scRNAseq, proteomics);
- Murine brain dissection and primary cultures;
- Immunohistochemistry, molecular and cellular biology;
- *in vivo* and *in vitro* treatments.

Starting Date:

December 2024/January 2025

Picture

Name of Research group

Dr. De Falco

Università degli Studi di Napoli
"Federico II"

THESIS DAY

Where is your lab:

Institute for Endocrinology and Experimental Oncology (IEOS) – National Council of Research (CNR) – ''Corpi Bassi Sud'' building in front of the Biological Tower, inside the II Policlinico – Lab.11 – valentina.defalco@cnr.it

Main Research topics and Methods Utilized :

Molecular mechanisms of cancer and development of resistance to conventional anticancer therapies. Role of the ERK pathway in resistance mechanisms: the serine-threonine kinase p90RSK as a novel therapeutic target.
Ongoing Projects: 1) p90RSK and p53 regulation in MDM2-amplified tumors. 2) p90RSK and the control of p53 oncogenic mutants in anaplastic thyroid carcinomas. 3) Development of small molecule p90RSK inhibitors through artificial intelligence tools as a novel combined approach in triple-negative breast cancer therapy.
Keywords: signal transduction, target therapies, resistance to therapies, development of kinase inhibitors, apoptosis.
Methods: Immunoblot; Immunofluorescence; Immunoprecipitation / Pull-down; ChIP; Flow cytometry; Immunohistochemistry; Kinase assays; Phosphatase assays; Migration/Invasion assays; ELISA and multiplex ELISA.

Starting Date:

From December 2024

Dr. Paola Mirra

CNR researcher

p.mirra@ieos.cnr.it
paolamirra06@gmail.com

Università degli Studi di Napoli "Federico II"

Where is your lab:

IEOS-CNR
Ed. 19 in Sergio Pansini street, n. 5

Main Research topics and Methods Utilized :

Metabolic diseases and their complications are the main topics. Specifically, a new project, focused on the obesity-induced trained innate immunity and based on the use of cellular and molecular biology techniques, is just being started.

Starting Date:

From the end of November 2024,
one position as an undergraduate student is available.
The duration of the research internship/master thesis is 18 months.

Laboratorio di Endocrinologia

Prof. Domenico Salvatore
domenico.salvatore@unina.it

Università degli Studi di Napoli
"Federico II"

THESIS DAY

Where is your lab:

Edificio 3, piastra C – Via Pansini 5- Tel 081-7463780

Main Research topics and Methods Utilized :

Molecular Endocrinology: thyroid hormone action, cellular biology, molecular biology, mouse models of tyroid cancer.

Starting Date:

01-Gen-2025