

Day 1

Monday, 2 October 2023

09:30– 09:40 Angela Chambery Opening of the PhDays 2023

9:40 – 13:00 Session

Human Genetic, Gene Regulation and Computational Biology

Chairs: Bruna De Felice, Sandro Banfi, Francesca Fusco, Sabrina Carrella, Fernando Gianfrancesco, Andrea Riccio, Teresa Esposito, Vincenzo Nigro, Elvira de Leonibus, Flavia Cerrato, Denis Dupuy, Elia Di Schiavi, Laura Pignata, Giuseppe Manco

Concetta Montanino 9:40-9:55

Non-coding RNAs as versatile regulators in Neurodegenerative Diseases (NDDs). A focus on MCI (Mild Cognitive Impairment) and MS (Multiple Sclerosis).

Tutor: Bruna De Felice

Emilia D'Angelo 9:55-10:05

Multi-locus imprinting disturbances in patients affected by Beckwith-Wiedemann Syndrome

Tutor: Flavia Cerrato

Angela Pagano 10:05-10:15

Investigating the molecular mechanisms underlying the Silver-Russell syndrome

Tutor: Flavia Cerrato

Abu Saadat 10:15-10:35

Genome-wide studies for the molecular characterization of isolated Wilms tumor

Tutor: Andrea Riccio

Sharon Russo 10:35-10:55

ZNF687: a new player in skeletal growth

Tutor: Fernando Gianfrancesco

Martina Di Guida 10:55-11:15

AAV-mediated microRNAs modulation as gene-independent strategy in inherited retinal Dystrophies

Tutor: Sandro Banfi, Sabrina Carrella

Sarah Iffat Rahman 11:15-11:25

Creation of novel allelic frequency database to optimise the diagnosis of rare genetic disorders

Tutor: Vincenzo Nigro

11:25 – 11:40 Coffee Break

Pasquale Di Letto 11:40- 11:50

TUDP: diagnosis for undiagnosed

Tutor: Vincenzo Nigro

Sara Savaheli 11:50-12:05

Elucidation of the link between RNA maturation and neurodegeneration by a cell-specific transcriptomic analysis in *C. elegans*

Tutor: Denis Dupuy, Andrea Riccio, Elia Di Schiavi

Lucia Argenziano 12:05-12:20

The role of the maternal-effect gene Padi6 in mouse female fertility, embryogenesis, and epigenetic reprogramming

Tutor: Andrea Riccio

Cristina Somma 12:20-12:30

Pharmacological stimulation of autophagy to rescue proteinopathy and cognitive decline in mucopolysaccharidosis-IIIa

Tutor: Elvira de Leonibus

Ezia Spinosa * 12:30-12:45

The silent autoimmunity is a new aspect of phenotypic variability in Incontinentia Pigmenti

Tutor: Francesca Fusco

Maria Marone 12:45-13:00

Microbial and human lactonases for the control of virulence factors in pathogenic bacteria

Tutor: Giuseppe Manco

13:00 – 14:00 Lunch Break

14:00 – 16:55 Session

Molecular Cell Biology

Chairs: Alessandra Pescatore, Alberto Luini, Alessandra Santillo, Nicoletta Potenza, Giovanna Marchese, Antonia Lanni, Lucia Rocco, Seetharam Parashuraman, Maria Maddalena Di Fiore, Pieter De Lange, Alessandro Usiello

Seyedehnegr Parizadeh * 14:00- 14:20

Investigation of cargo-specific autoregulatory and export systems in secretory pathway in mammalian cells

Tutor: Alberto Luini

Antonietta Esposito 14:20- 14:35

Identify molecular pathway regulating cell proliferation through glycosphingolipids biosynthesis

Tutor: Seetharaman Parashuraman

Anna Truda 14:35-14:45

Liquid biopsy in precision oncology: an innovative workflow for the study of circulating nucleic acid

Tutor: Nicoletta Potenza, Giovanna Marchese

Carmela Casale * 14:45- 15:00

GADD45 β influences the RIPK3-dependent regulation of NF- κ B

Tutor: Alessandra Pescatore

Debora Latino 15:00-15:15

D-Aspartate attenuates cadmium-induced mitochondrial dysregulation in rat testis

Tutor: Maria Maddalena Di Fiore

Ilenia De Leo 15:15-15:30

RNA regulatory networks governed by miR-125a in hepatocarcinoma cells

Tutor: Nicoletta Potenza

Maria Carannante 15:30-15:45

Polystyrene microplastics's toxicity: in vitro study on human spermatozoa

Tutor: Lucia Rocco

Giulia Grillo 15:45-15:55

Microplastics impair the functionality of Sertoli cells by inducing mitochondrial damage

Tutor: Alessandra Santillo

Nunzia Magnacca 15:55-16:10

miR-18a-5p/SREBP1/PERK axis affects ER stress and autophagy in the early stages of Metabolic dysfunction-Associated Fatty Liver Disease (MAFLD)

Tutor: Antonia Lanni

Nagendra Sai Kumar Achanta 16:10-16:25

Paraoxonase2: Post-Translational Modifications and Protein-Protein Interactions

Tutor: Manco Giuseppe

Mariagrazia Di Gennaro 16:25-16:35

Unravelling the role of the TGN export machinery for basolateral proteins in Amyloid Precursor Protein (APP) transport and processing

Tutor: Alberto Luini

Raffaella di Vito 16:35-16:45

Central glutamatergic dysfunction in spinal muscular atrophy

Tutor: Alessandro Usiello

Isar Yahyavi 16:45-16:55

DAspartate metabolism in autism spectrum disorder

Tutor: Alessandro Usiello

PhD Programme in Molecular Life Sciences

Day 2

Tuesday, 3 October 2023

09:30 – 17:00 Session

Structure and Functions of Biomolecules

Chairs: Angela Chambery, Antimo Di Maro, Annamaria Sandomenico, Antonio Fiorentino, Milena Petriccione, Anna Messere, Paolo Vincenzo Pedone, Monica Scognamiglio, Luigi Russo, Emilia Pedone, Ilaria Baglivo, Menotti Ruvo

Angela Clemente 9:30-9:50

Isolation, Characterization and Biological Action of Type-1 Ribosome-Inactivating Proteins from Seeds of Atriplex hortensis L
Tutor: Antimo Di Maro

Angela Oliver * 9:50-10:05

Structural and functional characterization of the recombinant FVII of coagulation
Tutor: Annamaria Sandomenico, Menotti Ruvo

Anna Magri * 10:05-10:20

Development and application of new edible active formulations to preserve beneficial biomolecules and reduce fruit losses
Tutor: Antonio Fiorentino, Milena Petriccione

Alessandra Del Bene 10:20-10:40

Organic molecules with biological applications: ATP and GTP nucleopeptide binders and antimicrobial peptides
Tutor: Anna Messere

Joyce Rodriguez 10:40-11:00

Role of Allelopathy in the Success of Selected Invasive Plant Species in the Mediterranean Basin and Possible Applications.
Tutor: Monica Scognamiglio

Chidoh Kootole 11:00-11:15

Plant specialized metabolites for treatment of Leukemia
Tutor: Monica Scognamiglio

Hafiza Zumra Fatima 11:15-11:30

Isolation, Characterization and Biological Action of an atypical Ribotoxin-like protein from fruiting bodies of Armillaria mellea
Tutor: Antimo Di Maro

11:30– 11:45 Coffee Break

Clementina Acconcia 11:45-12:05

The activation mechanism of the Melatonin MT1 receptor
Tutor: Luigi Russo

Domenico Sgambati 12:05-12:15

Study of eukaryotic and prokaryotic zinc-finger proteins
Tutor: Paolo Vincenzo Pedone

Domenico Romano 12:15-12:25

Specialized metabolites from natural sources as lead compounds to fight against emerging diseases
Tutor: Antonio Fiorentino

Martina Slapakova 12:25-12:40

MucR from *S. meliloti*: new insight into its DNA targets and its ability to oligomerize
Tutor: Paolo Vincenzo Pedone

Rita Russo * 12:40-12:55

Insights into the identification of novel galectin inhibitors
Tutor: Emilia Pedone

Vikram Pratap Singh 12:55-13:15

Innovative mass spectrometry-based proximity labeling method for unraveling the Macrophage migration inhibition factor (MIF) interactome
Tutor: Angela Chambery

Maryam Kamarehei 13:15-13:25

Novel therapeutic tools preventing the neurotoxic A β /PrPC interaction
Tutor: Luigi Russo

Nataliia Ventserova 13:25-13:35

Understanding the conformational dynamics of the early stages of Human Prion Amyloid Fibril formation using Chemical Exchange Saturation Transfer
Tutor: Roberto Fattorusso

13:35 – 14:20 Lunch Break

Chairs: Elvira De Leonibus, Brigida D'Abrosca, Carla Isernia, Stefania De Luca, Nunzianna Doti, Silvia Onesti, Giuseppina De Simone, Simona Maria Monti, Rita Berisio, Alessia Ruggiero

Brunella Mongiardi * 14:20-14:30

Identification of sex-specific therapeutic strategies in aging and dementia
Tutor: Elvira De Leonibus

Giovanni Barra 14:30-14:45

Biocompatible polymers for human health
Tutor: Rita Berisio, Alessia Ruggiero

Eliza Kramarska 14:45-15:05

Structural characterization of novel vaccine antigens
Tutor: Rita Berisio

Francesca Guzzo * 15:05-15:25

Natural products in drugs discovery: extraction methods, NMR characterization and evaluation of their potential antimicrobial properties.
Tutor: Brigida D'Abrosca

Martina Dragone * 15:25-15:40

Characterization of protein molecular interactions with metal ions or cyclodextrins by NMR, CD and UV spectroscopies
Tutor: Carla Isernia

Mercy Ebunoluwa, Ayinde 15:40-15:50

Antibacterial and Antiviral Activities of Selected Nigerian Plants Against Clinically Important Human Pathogens
Tutor: Brigida D'Abrosca

Valentina Verdone 15:50-16:10

Microwave-assisted solid-state procedure to covalently conjugate Hyaluronic acid to Curcumin: validation of a green synthetic protocol to prepare a biocompatible material
Tutor: Stefania De Luca

Vincenzo Massimiliano Vivenzio 16:10-16:25

Identification and characterization of novel γ -Carbonic Anhydrases in Pseudomonas aeruginosa
Tutor: Giuseppina De Simone, Simona Maria Monti

Mehwish Kanwal 16:25-16:40

Purification, structural and functional characterization of FV zymogen from plasma fraction concentrates
Tutor: Nunzianna Doti

Manil Kanade * 16:40-17:00

Structural and biochemical studies of RTEL1, a FeS helicase
Tutor: Silvia Onesti

* These students participate in remote

Day 3

Wednesday, 4 October 2023

09:30 – 11:00 Session

Structure and Functions of Biomolecules

Chairs: Assunta Borzacchiello, Roberto Fattorusso, Gaetano Malgieri, Francesca Pisani

Antonello Prodomo 9:30-9:45

Single-molecule biophysical study of the FANCJ DNA helicase

Tutor: Francesca Maria Pisani

Mohammad Mahtab 9:45-10:05

Elucidating the role of DDX11, the Warsaw breakage syndrome DNA helicase, at the DNA replication fork.

Tutor: Francesca M. Pisani

Ivan Mercurio * 10:05-10:15

Development of a technological platform for the identification of modulators of the PED-PLD1 interaction

Tutor: Roberto Fattorusso

Marco Barretta 10:15-10:25

Microfluidic methods for the design of high-performance nanoparticles as drug delivery systems

Tutor: Assunta Borzacchiello

Getasew Shitaye Ayalew 10:25-10:40

Unmasking Viral RNA: targeting viral RNA capping machinery to tackle COVID-19 and future CoV emergencies

Tutor: Gaetano Malgieri

Eunice Wairimu Maina 10:40-10:50

Characterization of fniii domain of axl protein by NMR

Tutor: Gaetano Malgieri

Awet Ghebretinsae Tewelde 10:50-11:00

Structural and functional studies of proteins involved in neurodegenerative diseases

Tutor: Roberto Fattorusso

11:00 – 16:55 Session

Cancer biology, Immunology, Microbiology, Drug design

Chairs: Luigi Buonaguro, Salvatore Di Maro, Generoso Luca Colucci, Donatella Cimini, Valerio Costa, Bruno D'Agostino, Elia Di Schiavi, Lidia Muscariello, Carmen Gianfrani, Sandro Cosconati, Ivana D'Angelo, Paola Italiani, Diana Boraschi

Tinghao Liu * 11:00-11:10

The innate immune memory of mast cells

Tutor: Diana Boraschi

Wenjie Yang * 11:10-11:20

The innate memory molecular mechanism of monocytes and macrophages

Tutor: Diana Boraschi

Wenli Shi * 11:20-11:30

Anti-tumor mechanism of natural mushroom polypeptide Gymnopeptide A

Tutor: Paola Italiani

Saba Sadiq * 11:30-11:45

L.rhamnosus IMC501: Production of Biomass, EPS and Lactic Acid from simplified semi defined media and renewable waste resources

Tutor: Donatella Cimini

The Phuc Ngyen* 12:00-12:15

Monocytic fluorescent NF κ B GFP U937 cell response to endotoxins

Tutor: Paola Italiani

Muhammad Waqas 12:15-12:25

A machine learning approach using tool development for receptor-based virtual screening

Tutor: Sandro Cosconati

Pouria Savadi Someeh * 12:25-12:40

Overcoming the Infected Lung Barriers: Surface-Engineered PLGA Nanoparticles with Poly (vinyl alcohol) for Inhalation Delivery of Antimicrobial Peptide

Tutor: Ivana D'Angelo

Ida De Chiara 12:40-12:55

Insight into the probiotic potential of *Lactococcus lactis* strains isolated from natural whey starter cultures.

Tutor: Lidia Muscariello

Iolanda Camerino 12:55-13:05

Vasculogenic Mimicry in Glioblastoma: mechanisms and novel compounds

Tutor: Generoso Luca Colucci D'Amato

Vincenzo Mazzarella 13:05-13:15

design and synthesis of anticancer peptides functionalizing gold surface of photonic biochips: towards a new potential detection strategy of cxcr4-overexpressing circulating tumor cells

Tutor: Salvatore Di Maro

Milena Della Gala 13:15-13:25

Insight into the glycopeptidolipids gene cluster in *Mycobacterium smegmatis*

Tutor: Lidia Muscariello

13:25 – 14:25 Lunch Break

Beatrice Cavalluzzo 14:25-14:40

Novel molecular targets for Hepatocellular Carcinoma

Tutor: Luigi Buonaguro

Antonia D'Aniello 14:40-15:00

Small Peptides for Pharmaceutical Purposes:

Cationic lipopeptides for fighting antimicrobial resistance.

Potent and Selective CXCR4 Macrolactam peptide antagonists for anticancer intervention

Tutor: Salvatore Di Maro

Davida Mirra 15:00-15:10

PD-L1 expression profile and mitochondrial activity in patients with COPD and lung cancer: what is the role of pollutants?

Tutor: Bruno D'Agostino

Caterina Perfetto 115:10-15:30

Metabolic rewiring in thyroid carcinomas induced by BRAF gene mutations

Tutor: Valerio Costa

Federica La Rocca * 15:30-15:50

Identification of neuroprotective natural compounds for the development of nutraceuticals and drugs: screening of epi-drugs in *C. elegans* to identify novel pharmacological therapies for CHARGE syndrome.

Tutor: Elia Di Schiavi

Giorgio Fortunato 15:50-16:10

Dissecting the role of rare variants in Parkinson's disease pathogenesis through the generation of different cellular disease models

Tutor: Teresa Esposito

Giuseppe Ciccone 16:10-16:20

Targeting NSCLC cell-CAF interplay with newly selected aptamers

Tutor: Silvia Catuogno

Ilaria Mottola 16:20-16:35

IL4 down-regulates the gluten-induced inflammation in the gut mucosa of celiac patients

Tutor: Carmen Gianfrani

Renata Esposito * 16:35- 16:55

Similar programmed death ligand 1 (PD-L1) expression profile in mild chronic obstructive pulmonary disease (COPD) and non-small cell lung cancer (NSCLC)

Tutor: Bruno D'Agostino

* These students participate in remote