



PhD Programme in Molecular Life Sciences

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-III A
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 Maddelana Di Fiore, Pieter De Lange, Alessandro Usiello

Syedehnegar 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

* These students participate in remote



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, Iaria 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 Kootlole 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 Ebuloluwa, Ayinde 15:40-15:50

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

Valentina Verdoliva 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

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