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## Tuesday, September 20

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09.00-11.00 **Registration**

11.00-11.30 **Opening & Welcome (Aula Magna)**

**Eugenio Gaudio** ( Rettore, Sapienza University of Rome)

**Felice Cervone** (FISV President)

Commemoration of Paolo Bianco by Giulio Cossu and Guido Tarone by Ruggero Pardi

11.30-12.30 **Plenary Lecture (Aula Magna)**

Chair: Felice Cervone (FISV President)

**Gerry Melino** (Rome and Leicester, UK)

The P53 Family in cancer biology

12.30-14.00 **Free time for lunch**

14.00-15.00 **Plenary Lecture (Aula Magna)**

Chair: Rodolfo Negri (Rome)

**Ernesto Di Mauro** (Viterbo)

On the spontaneous generation of ribozymes and of Life

15.00-17.00 **Plenary Symposium (Aula Magna)**

**Cancer Stem Cells**

Chairs: Gennaro Ciliberto (Naples), Ruggero Pardi (Milan)

**Dominique Bonnet** (London, UK)

Remodelling the Hematopoietic Stem Cell Niche by Acute Myeloid Leukemic Cells

**Riccardo Fodde** (Rotterdam, Netherlands)

Intestinal Stem Cells in Homeostasis, Inflammation and Cancer: a Matter of Niche

**Pier Paolo Di Fiore** (Milan)

The Numb:p53 axis connect asymmetric cell division and tumor suppression in mammary stem cells

**Stefano Piccolo** (Padua)

YAP/TAZ in stem cell and tissue regeneration

17.00-17.30 **Coffee break**

17.30-19.30 **Plenary Symposium (Aula Magna)**

**CRISPR/CAS: from a prokaryotic immune system to a powerful tool for biomedical and agricultural research**

Chairs: Bianca Colonna (Rome), Michele Morgante (Udine)

**Rotem Sorek** (Rehovot, Israel)

The immune system of bacteria: CRISPR and beyond

**Wolfgang Wurst** (Neuherberg, Germany)

CRISPR/Cas9 Technology: Universal Tool for Functional Genome Annotation

**Holger Puchta** (Karlsruhe, Germany)

Double-strand break induced genome engineering in plants

19.30-21.00 **Round Table (Montalenti Hall)**

**The odd couple: Biology and Physics working together**

Chair: Silvia Bencivelli (RadioRaiTre, Rome)

**Giulio Giorello** (Milan)

**Riccardo Cortese** (Okairòs, Rome)

**Massimiliano Viale** (Rome)

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## Wednesday, September 21

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09.00-10.00 **Plenary Lecture** (Aula Magna)

Chair: Isabella Saggio (Rome)

**Roland Foisner** (Vienna)

Nuclear architecture and chromatin dynamics

10.00-10.30 **Coffee break**

10.30-12.30 **Plenary Symposium** (Aula Magna)

**Oxygen Sensing and Redox Signalling: common themes of aerobic life**

Chairs: Pierdomenico Perata (Pisa), Giulia De Lorenzo (Rome)

**Peter J. Ratcliffe** (Oxford, UK)

Sensing oxygen levels in animal cells by HIF hydroxylases

**Francesco Licausi** (Pisa)

When plants face oxygen limitations

**Stéphane D. Lemaire** (Paris, France)

Proteomics unravel an intricate redox network of 1000 proteins regulated by thioredoxin, glutathione and nitric oxide

**Paolo Trost** (Bologna)

How ROS-mediated glutathionylation may induce amyloid-like aggregation of plant glycolytic GAPDH

12.30-12.45 **UNIMED SCIENTIFICA - Short Talk** (Aula Magna)

**Giulio Caracciolo** (Rome)

Transfection efficiency boost in hard-to-transfect cells by MENS reagents

12.45-14.30 **Posters viewing (Session I) and free time for lunch**

14.30-17.30 **Short talks by participants (Session I)**

**(IMPORTANT NOTE: The short talk *Environmental and Molecular Mutagenesis* has been merged with the short talk *DNA replication, Repair and Recombination*)**

**PSI.1 – Montalenti Hall**

14.30-16.00 **Environmental Microbiology and Biotechnology**

Chairs: Daniela Uccelletti, Michele Maria Bianchi, Annamaria Bevivino

**Andrea Franzetti** (Milan)

Light promotes the growth of heterotrophic bacteria and pollutant biodegradation on glacier surface

**Alessandro Giuffrè** (Rome)

How bacteria can respire O<sub>2</sub> in sulfide-rich environments: a new role for *bd*-type terminal oxidases

**Nicoletta La Rocca** (Padua)

Photosynthesis on extrasolar planets: state of art and preliminary results of a pioneering experiment

**Rachele Isticato** (Naples)

Localization of a red fluorescence protein adsorbed on wild type and mutant spores of *Bacillus subtilis*

**Francesco Restivo** (Parma)

*In vitro* evaluation of the activity of thiosemicarbazone derivatives against mycotoxigenic fungi affecting cereals

**Elisa Scioscia** (Benevento)

Antimicrobial activity of unifloral honeys extracts from Campania against pathogenic bacteria and fungi

16.00-17.30 **Genetics of Microorganisms**

Chairs: Alessandra Polissi, Gianni Prosseda

**Federica Briani** (*Milan*)

Temperature-dependent regulation of the *lpxT* gene in *Escherichia coli* and *Pseudomonas aeruginosa*

**Giulia Giallonardi** (*Rome*)

Alkyl-quinolone-dependent quorum sensing controls prophage activation, autolysis and antibiotic resistance in *Pseudomonas aeruginosa* biofilm

**Sarah Hijazi** (*Rome*)

Gallium-protoporphyrin IX uptake pathways in *Pseudomonas aeruginosa* and growth inhibition by cytochromes targeting

**Beatrice Silvia Orena** (*Pavia*)

Multitargeting antitubercular compounds: a new precious tool in multidrug resistance age

**Anna Maria Puglia** (*Palermo*)

The small protein SCO2038 modulates tryptophan biosynthesis and morpho-physiological differentiation in *Streptomyces coelicolor*

**PSI.2 – Giacomini Hall**14.30-16.00 **Genomics, Proteomics and Systems Biology**

Chairs: Lilia Alberghina, Diego Di Bernardo

**Emanuele Bosi** (*Florence*)

Comparative genome-scale modelling of *Staphylococcus aureus* strains identifies strain-specific metabolic capabilities linked to pathogenicity

**Alexey Kolodkin** (*Belvaux, Luxembourg*)

Dynamic networks dealing with oxidative stress: from design principles to personalised therapies for Parkinson's disease

**Marco Montini** (*Florence*)

Using CRISPR/Cas9 to determine the order of specific events in a cellular system

**Marco Vanoni** (*Milan*)

Multi-level modeling of Metabolism, Growth and Cycle in *Saccharomyces cerevisiae*

**Domenico Raimondo** (*Rome*)

Computational design of short linear D-tripeptides as binding moieties for protein pockets

16.00-17.30 **Transcription Mechanisms and Networks**

Chairs: Paolo Vincenzo Pedone, Giorgio Dieci

**Flavia Bernardi** (*Rome*)

Inhibition of Hedgehog-dependent tumors and cancer stem cells by a newly identified naturally occurring chemotype

**Leonardo Gatticchi** (*Perugia*)

Intracellular trafficking of labelled BODIPY-FF-MAS reveals nuclear lipid droplets localization

**Ilaria Baglivo** (*Caserta*)

A new DNA target site for transcription factors from *M. luti*

**Susanna Ambrosio** (*Naples*)

LSD1 mediates MYCN control of epithelial-mesenchymal transition through silencing of metastatic suppressor NDRG1 gene

**Annapina Russo** (*Naples*)

5-FU targets rpL3 to induce mitochondrial apoptosis via cystathionine-b-synthase in colon cancer cells lacking p53

**Stefano Amente** (*Naples*)

High-resolution genome profiles of 8-oxodeoxyguanine, gH2AX and NBS1 reveals their co-association at transcribed long genes

**PSI.3 – Blue Hall 2**

14.30-16.00 **Chromosome Biology, Cell Division and Cell Cycle**

Chairs: Matteo Barberis, Patrizia Lavia

**Deborah Pajalunga** (*Rome*)

A dysregulated dNTP pool hinders DNA replication in cell cycle-reactivated terminally differentiated cells

**Marco De Vitis** (*Rome*)

Alternative lengthening of telomere (ALT) implicated in telomere length modulation induced by x-rays in human primary fibroblasts

**Giusj Monia Pugliese** (*Rome*)

CK2 phosphorylation of MUS81 regulates its activation for proper resolution of dna intermediates in mitosis

**Veronica Ferrucci** (*Naples*)

Microcephaly with neurodevelopmental impairment shows microtubule assembly defects with h-prune mutations during mitosis

**Elena Paccosi** (*Viterbo*)

CSA and CSB proteins localize to the midbody during cytokinesis and regulate abscission through PRC1 degradation

16.00-17.30 **DNA replication, Repair and Recombination**

Chairs: Marco Muzi Falconi, Antonio Antoccia

**Ennio Proserpi** (*Pavia*)

DNA repair defects in Rubinstein-Taybi syndrome caused by low acetylation levels of base excision repair factors

**Cinzia Caggiano** (*Rome*)

Balancing DNA double strand break repair pathway choice as trigger for testicular germ cell tumors acquired-resistance to cisplatin

**Francesco Cucco** (*Pisa*)

Separase prevents genome instability by controlling fork replication speed

**Eva Malacaria** (*Rome*)

Inaccurate GEN1 DSBs formation promote genome instability in FA-P cells

**Francesca Ripanti** (*Rome*)

Measuring oxidized DNA and RNA precursors by Micro-Raman spectroscopy

**Elisa Coluzzi** (*Rome*)

Effects of oxidative stress on telomere structure and telomeric epigenetic modifications

**PSI.4 – Blue Hall 3**

14.30-16.00 **Epigenetics and Epigenetic Therapies**

Chairs: Carlo Presutti, Michele Milella

**Andrea Iannello** (*Orbassano, TO*)

Genomic regulatory regions role in Th17 and Treg cells balance during pregnancy of multiple sclerosis patients

**Alice Mazzagatti** (*Pavia*)

The epigenetic landscape of equid centromeres: a cytogenetic approach

**Alberto Passi** (*Varese*)

Epigenetic control of hyaluronan synthases

**Simone Pippa** (*Rome*)

Use of JARID histone demethylases inhibitors to enlighten the biological role of these enzymes in yeast and mammalian cells with focus on transcriptional regulation

**Angela Sparago** (*Caserta*)

Unraveling the role of NAP1L1 into the chromatin of mammals

16.00-17.30 **Non-coding RNA**

Chairs: Alessandro Fatica, Francesco Fazi

**Cecilia Battistelli** (*Rome*)

The lncRNA HOTAIR links the repressor Snail to epigenetic modifications of specific genomic sites in Epithelial-to-Mesenchymal Transition

**Pietro Laneve** (*Rome*)

Linc-NeD125 establishes a ceRNA network in Group 4 Medulloblastoma

**Mariangela Morlando** (*Rome*)

Newly identified long non-coding RNAs promote proliferation and differentiation of murine myoblasts

**Paola Infante** (*Rome*)

Serum miRNAs as novel biomarkers in spinal muscle atrophy

**PSI.5 – Blue Hall 4**14.30-16.00 **Oncogenes and Tumor Suppressors**

Chairs: Silvia Soddu, Giulia Piaggio

**Manuela Caputo** (*Viterbo*)

CSB ablation induced apoptosis is mediated by increased endoplasmic reticulum stress response

**Francesca Bufalieri** (*Rome*)

ERAP1 is a novel drug target in the oncogenic Hedgehog signaling pathway

**Andrea Camperi** (*Turin*)

Role of STAT3 in the cross-talk between cancer associated fibroblasts and cancer cells

**Simone Di Giacomo** (*Bologna*)

MYC-mediated cell competition as an evolutionary trait of cancer

**Fabiana Ferrara** (*Rome*)

Human lung adenocarcinoma cell cultures derived from malignant pleural effusions as model system to predict patients chemosensitivity

**PSI.6 – Blue Hall 1**14.30-16.00 **Plant Metabolism and Environmental Stress**

Chairs: Concetta De Pinto, Maurizio Badiani

**Olivia Demurtas** (*Rome*)

Crocin biosynthesis in saffron stigmas: a tale of three compartments

**Michela Zottini** (*Padua*)

The mitochondrial nucleoid associated WHIRLY2 affects morphology and dynamics of mitochondria

**Francesca Sparla** (*Bologna*)

$\beta$ -amylase-1-dependent starch degradation in mesophyll cells releases carbon skeletons required for the production of proline

**Francesca Secchi** (*Grugliasco, TO*)

Acidification of xylem sap pH observed in woody plants provides apoplastic environment for facilitating recovery from water stress

**Namrata Mancuso** (*Rome*)

Comparative analysis of the role of the different *Arabidopsis* polyamine oxidases in plant defense responses to environmental stresses

16.00-17.30 **Plant Nutrition**

Chairs: Irene Murgia, Stefania Astolfi

**Gianpiero Vigani** (*Milan*)

Keynote Lecture: Plant adaptation mechanism to Fe deficiency: the role of metabolism

**Laura Zanin** (*Udine*)

The urease inhibitor N-(N-butyl) thiophosphoric triamide (NBPT) affects urea acquisition and metabolism in maize seedlings

**Silvia Perotto** (*Turin*)

Fungal and plant gene expression in the *Tulasnella calospora* - *Serapias vomeracea* association provides cues on the N pathways in orchid mycorrhiza

**Davide Segà** (Verona)

FePO<sub>4</sub> nanoparticles ad fertilizers: synthesis and evaluation of their effect on plants

**Eleonora Cominelli** (Milan)

Isolation and characterization of a new *low phytic acid* mutant in the common bean *PvMRP1* gene and study of *PvMRPs* promoters in two different plant systems

17.30-18.00 **Coffee break**

18.00-20.00 **Societies' time**

**AGI** (Giacomini Hall)

18:00 Premio Premio AGI "Ferruccio Ritossa" 2016 e presentazione del lavoro premiato

18:20 Premio Dottorato AGI/Zanichelli 2016 e presentazione del lavoro premiato

18:40 Assemblea dei Soci AGI

**SIB** (Hall A, Building CUO10)

Assemblea dei Soci

Consegna Premio SIB

Consegna Premio Heritage

Votazioni per il parziale rinnovo del CD

**SIBV** (Blue Hall 2)

Premio Assunta Baccarini Melandri

Assemblea dei Soci

**SIMA** (Blue Hall 3)

Assemblea dei Soci

**SIMGBM** (Montalenti Hall)

Premi 2016:

• Franco Tatò

• Mario Campa

• NAICONS

Assemblea dei soci

21.00 **Social dinner**

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## Thursday, September 22

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9.00-11.00 **Plenary Symposium** (Aula Magna)

**Systems Biology: from Genetic Networks to Organismal Functions**

Chairs: Duccio Cavalieri (Florence), Matteo Barberis (Amsterdam, Netherlands)

**Brenda Andrews** (Toronto, Canada)

From phenotypes to pathways: global exploration of cellular networks and pathways using systematic yeast genetics and cell biology

**Jens Nielsen** (Göteborg, Sweden)

Systems Biology of Yeast Metabolism

**Diego Di Bernardo** (Naples)

Robustness and evolvability of gene networks, role of miRNAs and protein stability in rewiring gene expression

**Matteo Barberis** (Amsterdam, Netherlands)

The Multiplex Phase Interlocker– A novel and robust molecular design synchronizing transcriptional regulation of cell cycle dynamics

11.00-11.30 **Coffee break**

11.30-13.30 **Parallel Symposia****1. The (recent) evolution of human evolution (Montalenti Hall)**

Chairs: Giovanni Destro Bisol (Rome), Luigi Capasso (Chieti)

**Andrea Manica**, (Cambridge, UK)

The role of climate in shaping human genetic variation

**Guido Barbujani** (Ferrara)

Human evolutionary genomics: Out of Africa and beyond

**Claudio Tuniz** (Trieste)

Methodological and conceptual advancements in human evolution studies

**Antonio Rosas González** (Madrid, Spain)Recent discoveries and classic models: Neandertals and *Outs of Africa***2. From Reverse- to Structural-Vaccinology and beyond. Current challenges against infectious diseases (Aula Magna)**

Chairs: Martino Bolognesi (Milan), Guido Grandi (Trento)

**Steve Michell** (Devon, UK)New vaccines against *Clostridium difficile* based on surface proteins**Giorgio Colombo** (Milan)

Antigen and epitope design: what can computational biology tell us?

**Louise Gourlay** (Milan)

A structural vaccinology approach to melioidosis vaccine component development

**Guido Grandi** (Trento)

Vaccinology: the art of putting together the right ingredients

**3. Nitrogen: Nutritious and Noxious (Blue Hall 1)**

Chairs: Francesca Sparvoli (Milan), Roberto Pinton (Udine)

**Christoph Müller** (Giessen, Germany)

Understanding the nitrogen cycle in a changing world

**Zeno Varanini** (Verona)

The regulation of nitrogen uptake by plants in the context of root-soil relationships: which form and which control?

**Steven Spoel** (Edinburgh, UK)

Signalling with nitrogen: reversible S-nitrosothiol protein modifications

**Roberto Tuberosa** (Bologna)

Leveraging the root QTLome to enhance nitrogen-use efficiency in cereals

13.30-13.45 **MERCK - Short Talk (Aula Magna)****Silvia Di Meglio** (Milan)

Genome Editing with CRISPR Technology

13.45-15.30 **Posters viewing (Session II) and free time for lunch**15.30-18.30 **Short talks by participants (Session II)****PSII.1 – Blue Hall 2**15.30-17.00 **Cellular Stress, Apoptosis and Autophagy**

Chairs: Gerry Melino, Roberto Amendola

**Federico Bianchi** (Turin)

Citron Kinase deficiency leads to p53-dependent microcephaly and DNA damage accumulation independently of its cytokinetic function

**Sara Beji** (Rome)

The nucleolar protein Nucleophosmin is rapidly secreted by human cardiac stromal cells in response to genotoxic stress: implications in miRNA mediated cell/cell communication

**Cristina Mazzoni** (*Rome*)

RNA oxidation and ageing in mRNA degradation mutants of *S. cerevisiae*

**Annapina Russo** (*Naples*)

rpL3 mediates the cell response to nucleolar stress induced by Act D in p53 null cancer cells

**Marialuisa Piccolo** (*Naples*)

*In vitro* bioactivity of ruthenium-based multifunctional nucleolipidic liposomes: new promising agents for cancer therapy

17.00-18.30 **Protein Synthesis, Degradation and Homeostasis**

Chairs: Antonio Feliciello, Marzia Perluigi

**Loredano Pollegioni** (*Varese*)

Schizophrenia susceptibility genes: on the characterization of two variants of human pLG72

**Vittorio Bellotti** (*Pavia*)

A novel mechano-enzymatic cleavage mechanism underlies transthyretin amyloidogenesis

**Giulia Tedeschi** (*Milan*)

The double life of a disordered protein between solubility and aggregation propensity

**Antonio Feliciello** (*Naples*)

Integration of cAMP and the ubiquitin system at primary cilium

**PSII.2 – Blue Hall 3**

15.30-17.00 **Development, Differentiation and Aging**

Chairs: Giorgio Camilloni, Graziella Messina

**Chiara Gabellini** (*Pisa*)

Modeling human intellectual disability and autism: role of the chromatin regulator setd5 during zebrafish brain development

**Catherine Labbaye** (*Rome*)

miR-143/ $\beta$ -DB/synapsin I, new players in Early Stages of Neural Differentiation

**Mattia la Torre** (*Rome*)

AKTIP (Ft1), a protein that interacts with lamins, is required for telomere maintenance and mouse development

**Duccio Cavalieri** (*Sesto Fiorentino, FI*)

The human fungal mycobiome composition reflects age, gender, immune function and diet

**Valentina Mularoni** (*Rome*)

Regulation of human testicular steroidogenesis during aging

17.00-18.30 **Cells, iPS, Cancer Stem Cells**

Chairs: Caterina Missero, Alessandro Rosa

**Alessia Noto** (*Rome*)

Stearoyl-CoA-Desaturase (SCD1) regulates lung cancer stemness via stabilization and nuclear localization of YAP/TAZ

**Ilio Vitale** (*Rome*)

CHK1 as a target to kill colorectal cancer stem cells

**Bruna Corradetti** (*Ancona*)

Biomimetic coatings to improve MSC homing toward the site of inflammation

**Riccardo De Santis** (*Rome*)

Induced Pluripotent Stem Cells (iPSCs) as a disease model system to identify altered pathways in Amyotrophic Lateral Sclerosis

**Eris Bidollari** (*Rome*)

Induced Pluripotent Stem Cells (iPSC) as a model of Huntington disease



**PSII.3 – Montalenti Hall****15.30-17.00 Metabolism and its Regulation in Health and Diseases**

Chairs: Mauro Magnani, Francesco Paolo Mancini

**Simona Barbato** (*Bologna*)

Modulation of bioenergetics by the F1F0-ATPase inhibitor protein in cancer cells

**Sara Biagiotti** (*Urbino*)

Dexamethasone effects in Ataxia Telangiectasia cell metabolism

**Chiara Damiani** (*Milan*)

Unraveling the design principles of cancer metabolic rewiring with constraint-based modeling

**Alessio Paone** (*Rome*)

Toll like receptors: linking inflammation to carcinogenesis

**Matteo Audano** (*Milan*)

Zc3h10 controls mitochondriogenesis and differentiation in skeletal muscle

**Alberto Zullo** (*Benevento*)

DNA methylation of sirtuin genes in nutrient-deprived cultured cells

**17.00-18.30 Nutrition Biochemistry**

Chairs: Silvana Hrelia, Francesco Bonomi

**Emanuela Leoncini** (*Rimini*)

Evaluation of the potential protective effect on vascular endothelium exerted by the peptide nsLTP2 identified in wheat

**Emma De Fabiani** (*Milan*)Strawberry tannins exhibit anti-inflammatory activities *in vitro* by inhibiting the NF- $\kappa$ B pathway and by other mechanisms**Paola Coccetti** (*Milan*)

Methionine metabolism imbalance in AMPK-deficient yeast models

**Alberto Barbiroli** (*Milan*)

Polystyrene nanoparticles to mimic a complex matrix: functional and structural features of a hypoglycaemic lupin protein

**Laura De Gara** (*Rome*)

Protective effect of inulin on LPS-induced intestinal smooth muscle impairment: a redox and proteomic approach

**PSII.4 – Giacomini Hall****15.30-17.00 Human Genetics and Genomic Diversity**

Chairs: Davide Pettener, Antonio Torroni

**Vincenza Battaglia** (*Pavia*)

The worldwide spread of the tiger mosquito as revealed by mitogenome diversity

**Andrea Brunelli** (*Ferrara*)

Who likes to travel alone? Grammars and genes in the history of Old World migrations

**Nicole Grandi** (*Monterosso, CA*)

HERV-W presence and evolution within the primates lineage: characterization of the group in non-human primates and identification of highly related elements in New World Monkeys

**Viola Grugni** (*Pavia*)

The phylogeny of Y-chromosome haplogroup Q-L54: new insights on the first peopling of South America

**Ugo Perego** (*Pavia*)

Reconstructing the autosomal profile of Joseph Smith Jr, founder of Mormonism: a paternity application

**Marco Sazzini** (*Bologna*)

Evolutionary medicine insights from the depiction of the Italian genomic landscape

17.00-18.30 **Evolution**

Chairs: Guido Barbujani, Claudio Tuniz

**Marco Barucca** (*Ancona*)

Evolution of vitellogenin gene family in basal sarcopterygians

**Giorgio Binelli** (*Varese*)

Tropical rainforests that persisted: histories from the Quaternary in the Guiana shield

**Cristina Giuliani** (*Bologna*)

DNA methylation diversity in human populations

**René Marsano** (*Bari*)

The role of promoter in horizontal transposon transfer: the case of Bari transposons

**Francesca Tassi** (*Ferrara*)

Complete mitochondrial sequences from Mesolithic Sardinians suggest genetic discontinuity within the island

**PSII.5 – Blue Hall 4**

15.30-17.00 **Neurobiology**

Chairs: Andrea Mele, Francesco Lacquaniti, Arianna Rinaldi

**Marzia Perluigi** (*Rome*)

Crosstalk between insulin and mTOR signaling in Down syndrome and Alzheimer disease

**Roberta Piovesana** (*Rome*)

Effects mediated by M2 muscarinic receptors activation in Schwann-like cells induced from adipose mesenchymal stem cells: implication in nerve regeneration

**Alessandra Maria Adelaide Chiotto** (*Turin*)

Neuronal cell autonomous defects in a mouse model of Down Syndrome: contribution of TTC3 gene

**Pamela Cappelletti** (*Varese*)

Amino acid substitutions in D-amino acid oxidase related to human pathologies

**Lionella Palego** (*Pisa*)

Peripheral biomarkers of oxidative stress in depressed elderly patients

17.00-18.30 **Cell Communication, Cell Adhesion and Membrane Trafficking**

Chairs: Fulvio Della Ragione, Mauro Maccarrone

**Andrea Magrì** (*Catania*)

Does SOD1 mediate the cellular communication between mitochondria and nucleus in stress condition?

**Simona Reina** (*Catania*)

Cysteine mutagenesis in VDAC3 reveals a functional role of these residues in the intracellular communication

**Lorenzo Depau** (*Siena*)

Tetra-branched peptide theranostics: preclinical development for cancer targeting

**Debora Bencivenga and Fulvio Della Ragione** (*Naples*)

Biochemical and functional characterization of cancer-associated p27Kip1 mutants

**Mauro Maccarrone** (*Rome*)

S-Palmitoylation modulates type 1 cannabinoid receptor localization, trafficking and biological activity

**PSII.6 – Blue Hall 1**

15.30-17.00 **Immunology and Host-Pathogen Interaction**

Chairs: Anna Teresa Palamara, Aldo Venuti

**Giovanni Bacci** (*Sesto Fiorentino, FI*)

Shotgun metagenomic analysis of sputum samples from cystic fibrosis patients revealed distinct metabolic modules and antibiotic resistance genes along with severe lung disease

**Carlotta De Filippo** (*Florence*)

Alteration of gut microbiota profiles in juvenile idiopathic arthritis. Associations with HLA-B27 status and disease activity

**Angela Arciello** (*Naples*)

Novel human antimicrobial peptides from ApoB are endowed with promising anti-inflammatory properties

**Alessandra di Masi** (*Rome*)

Human serum albumin acts as a self-defense protein towards *Clostridium difficile* infection

**Moira Giovannoni** (*Rome*)

Identification and analysis of candidate genes involved in the oligogalacturonide-induced responses in *Arabidopsis thaliana*

17.00-18.30 **Plant Development and Disease**

Chairs: Alma Balestrazzi, Franco Faoro

**Ilaria Fraudentali** (*Rome*)

The apoplastic copper amine oxidase AtCuAO $\beta$  plays a role in stomatal closure induced by wounding, jasmonate or Microbe Associated Molecular Patterns (MAMPS)

**Damiano Lironi** (*Rome*)

Role of lysin motif-containing receptor-like Kinase2 in *Arabidopsis* immunity

**Giovanni Mele** (*Monterotondo, RM*)

Meristem activity is controlled via extensive regulation of brassinosteroid pathway by class 1 homeobox transcription factors family

**Maurizio Trovato** (*Rome*)

Proline modulates root meristem size and root growth in *Arabidopsis*

**Ilaria Verrascina** (*Rome*)

Homeostasis of oligogalacturonides and their activity as Damage-Associated Molecular Patterns (DAMPs)

**Matthias Weiland** (*Bonn, Germany*)

The glutamate receptor AtGLR3.7 as a regulator of growth and development in *Arabidopsis thaliana*

18.30-19.30 **Plenary Lecture** (*Aula Magna*)

Chair: Tomas Morosinotto (Padua)

**Anna Moroni** (Milan)

Plant photoreceptors as a tool in neuroscience

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## Friday, September 23

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9.00-11.00 **Parallel Symposia****1. Shaping the Cancer Genome: from pathways to mutational signatures** (*Aula Magna*)

Chairs: Margherita Bignami (Rome), Silvo Conticello (Firenze)

**Ludmil Alexandrov** (Los Alamos, NM, USA)

Signatures of mutational processes in human cancer

**Angela Gallo** (Rome)

RNA Editing dynamically rewrites the cancer code

**Pietro Pichierri** (Rome)

Pathological replication fork recovery mechanisms and signature of genome instability in human cell

**Svend Petersen-Mahrt** (Milan)

Targeted genomic lesions - to ignore, to repair, to repair badly, or to mutate. Understanding DNA deaminase induced lesions and DNA repair choice

**2. Unfolding truth: making sense of intrinsically disordered proteins** (*Giacomini Hall*)

Chairs: Luigi Martelli (Bologna), Andrea Mozzarelli (Parma)

**Peter Tompa** (Brussel, Belgium)

The tripartite degron model: the role of structural disorder in protein quality control

**Sonia Longhi** (Marseille, France)

Protein complementation and kinetics illuminate mechanisms of partner recognition by IDPs

**Stefano Gianni** (Rome)

Understanding the mechanisms of folding and binding of intrinsically disordered proteins

**Silvio Tosatto** (Padua)

Cataloguing and annotating flavours of intrinsic disorder in proteins with MobiDB

**3. Plant adaptation and phenotypic plasticity to climate change (Montalenti Hall)**

Chairs: Mario Pezzotti (Verona), Andrea Schubert (Turin)

**Christophe Maurel** (Montpellier, France)

Plant aquaporins as targets and players of cell signalling

**Andrea Nardini** (Trieste)

Climate change and forest decline: the physiology of tree mortality

**Maarten Koornneef** (Wageningen, Netherlands)

Exploring natural variation in *Arabidopsis*

**Silvia Dal Santo** (Verona)

Dissecting GxE interactions in grapevine through a transcriptomic approach

11.00-11.30 **Coffee break**

11.30-13.30 **Plenary Symposium (Aula Magna)**

**New roles and molecular pathophysiology of mitochondria**

Chairs: Paolo Sarti (Roma), Vito De Pinto (Catania)

**Andrea Rasola** (Padua)

Shutting your TRAP to kill tumors? The oncogenic role of the mitochondrial chaperone TRAP1

**Lorenzo Galluzzi** (Paris, France)

Mitochondrial control of stress responses and danger signalling

**Vito De Pinto** (Catania)

Mitochondrial VDAC isoforms: a bridge (and a target) between an oxidative and a reducing compartment

**Isabella Panfoli** (Genoa)

Pathophysiology of the extra-mitochondrial oxidative phosphorylation

13.30-15.00 **Free time for lunch**

15.00-16.00 **The EMBO Keynote Lecture (Aula Magna)**

Chair: Gennaro Ciliberto (Naples)

**Titia Sixma** (Amsterdam, Netherlands)

Trapping transient states in DNA mismatch repair

**Congress Closure**