

- 14:30 Pushing on the boundaries: the SNAP-tag technology at high temperatures by the exploitation of engineered variants of thermostable archeal OGTs**
Prof. Giuseppe Perugino (*University of Napoli "Federico II"*)
- 14:50 Integrating structural biology and biophysics approaches to study multifunctional collagen enzymes**
Prof. Federico Forneris (*University of Pavia*)
- 15:10 Challenges and advances in omics data integration in constraint-based modelling of metabolism**
Dr. Bruno Giovanni Galuzzi (*University of Milano-Bicocca*)
- 15:20 Cryo-EM-based structural investigation of Mycobacterium tuberculosis Nucleotide Excision Repair pathway.**
Dr. Marianna Genta (*University of Piemonte Orientale*)
- 15:30 Exploiting plasmonic biosensors for point of care detection of inflammatory and prooxidant biomarkers**
Dr. Debora Bencivenga (*University of Campania "L. Vanvitelli"*)
- 15:40 Back to the future and poster prize**
Chairs: Prof. Paolo V. Pedone (*President of the National University Council*);
Prof. Raffaele Porta (*University of Napoli "Federico II"*)
- Prof. Lilia Alberghina (*University of Milano-Bicocca*)
Prof. Mario De Rosa (*University of Campania "L. Vanvitelli"*)
Prof. Mauro Magnani (*University of Urbino*)
- 16:10 Closing meeting**
Prof. Chiara Schiraldi (*Coordinator of SIB- Biotechnology group*)
Prof. Gabriella Tedeschi (*Coordinator of SIB- Protein group*)
Prof. Marco Vanoni (*Coordinator of SIB -Computational and System Biology group*)
Dr. Giulia Babbi (*Junior representative of SIB Computational and system biology group*)
Dr. Mariarita Brancaccio (*Junior representative of SIB Biotechnology group*)
Dr. Riccardo Miggiano (*Junior representative of SIB Protein Group*)

Thanks to:



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LOCAL SUPPORTING TEAM:

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18 - 19 MAY
2023

BIOPROSYS JOINT MEETING

From basic understanding of cell networks to their modulation
and engineering for health and industrial applications

ORGANIZING AND SCIENTIFIC COMMITTEE

Prof. Chiara Schiraldi, *University of Campania "L. Vanvitelli"*
Prof. Gabriella Tedeschi, *University of Milano*
Prof. Marco Vanoni, *University of Milano-Bicocca*
Dr. Giulia Babbi, *University of Bologna*
Dr. Mariarita Brancaccio, *University of Napoli "Federico II"*
Dr. Riccardo Miggiano, *University of Piemonte Orientale*



THURSDAY 18 MAY

- 13:00 **Registration**
- 14:00 **Opening**
Prof. Gianfranco Nicoletti (*Rector of the University of Campania "L. Vanvitelli"*)
- Prof. Chiara Schiraldi
Prof. Gabriella Tedeschi
Prof. Marco Vanoni
- 14:15 **MAIN LECTURE**
Prof. Luis Serrano (*Director, Center for Genomic Regulation Barcelona*)
- I SESSION**
Proteins and molecules driven cell networks
Chairs: Prof. Gianfranco Gilardi (*University of Torino*);
Dr. Elisa Maffioli (*University of Milano*)
- 14:55 **CAID 2: lessons from the second critical assessment of protein intrinsic disorder prediction**
Prof. Silvio Tosatto (*University of Padova*)
- 15:25 **Towards an evolutionary driven universal therapy against (intracellular) pathogens**
Prof. Loris Rizzello (*University of Milano*)
- 15:45 **A window into secretome biology in health and disease**
Prof. Angela Chambery (*University of Campania "L. Vanvitelli"*)
- 16:05 **Multi-omic analyses pinpoint distinct metabolic pathways during differentiation of hiPSC-derived astrocytes**
Prof. Paola Coccetti (*University of Milano-Bicocca*)
- 16:15 **FPR2 stimulation induces metabolic reprogramming of CaLu-6 cells in a NOX-dependent manner**
Dr. Tiziana Pecchillo Cimmino (*University of Napoli "Federico II"*)
- 16:25 **Spatially resolved RAS interacting proteins using MS-Imaging approach enable to decipher RAS mutational status**
Dr. Isabella Piga (*University of Milano-Bicocca*)
- 16:35 Coffee break
- II SESSION**
Key enzymes in regulation and design of cell function
Chairs: Prof. Francesca Cutruzzola (*University of Roma Sapienza*);
Dr. Massimiliano Gasparrini (*Marche Polytechnic University*)
- 17:00 **Hyaluronan synthase regulation between epigenetics and covalent modification**
Prof. Alberto Passi (*University of Insubria*)
- 17:30 **De novo biosynthesis of L-serine in the human brain: from pathway regulation to serine deficiency disorders**
Prof. Barbara Campanini (*University of Parma*)
- 17:50 **ACE2 nuclear function impact on human lung epithelial cells**
Prof. Chiara Giacomelli (*University of Pisa*)
- 18:10 **Role of allostery and oligomerization in tuning one-component systems controlling bacterial biofilm maintenance**
Prof. Serena Rinaldo (*University of Roma Sapienza*)
- 18:20 **Effect of lemon peel polyphenol extract on enzymes Involved in tumor cell invasiveness and Neurodegeneration**
Prof. Rosaria Arcone (*Parthenope University*)
- 18:30 **Remodeling of the proteome in glioblastoma cells as an effect of the CDBA on the eukaryotic translation complex**
Dr. Maria Laura Bellone (*University of Salerno*)
- 18:40 Welcome cocktail and poster session

FRIDAY 19 MAY

- III SESSION**
Exploiting biological functions for biotechnology (and beyond)
Chairs: Prof. Marco Moracci (*University of Naples "Federico II"*)
Dr. Alberto Alfano (*University of Campania "L. Vanvitelli"*)
- 09:00 **Guiding stars to the field of dreams: novel metabolically engineered pathways for sustainable lignin valorization**
Prof. Loredano Pollegioni (*University of Insubria*)
- 09:30 **Metabolic engineering of yeast through the manipulation of transporters**
Prof. Gennaro Agrimi (*University of Bari*)
- 09:50 **Engineering biosynthetic pathways to produce chondroitin for biotechnological applications**
Dr. Donatella Cimini (*University of Campania "L. Vanvitelli"*)
- 10:10 **Biotechnological applications of a bacterial flavin monooxygenase: from indigoids to drug metabolites**
Prof. Sheila Sadeghi (*University of Torino*)
- 10:20 **Development of tumor targeted nanotracer for fluorescence-guided image surgery of cancer: the case of Ferritin Nanocages**
Dr. Marta Sevieri (*University of Milano*)
- 10:30 **Red blood cells loaded with ornithine aminotransferase as cell-mediated therapy for gyrate atrophy of the choroid and retina**
Dr. Gioena Pampalone (*University of Perugia*)
- 10:40 Coffee break and poster
- IV SESSION**
Advanced biological models for "bio-health"
Chairs: Prof. Rosario Amendola (*University of Napoli "Federico II"*)
Dr. Gennaro Sanità (*National Research Council, ISASI*)
- 11:20 **Dissecting the role of calcium related signalling in osteoblasts: a lesson from Osteogenesis Imperfecta**
Prof. Antonella Forlino (*University of Pavia*)
- 11:50 **Modeling Mucopolysaccharidosis lysosomal disease: from therapeutic strategies, through system biology, to cell networks**
Prof. Luigi Pavone (*University of Napoli "Federico II"*)
- 12:10 **Integration of multi-omic and functional analyses to dissect the metabolic and physiological rearrangements in bladder cancer cells transitioning from adherent to spheroid cultures**
Dr. Elena Sacco (*University of Milano - Bicocca*)
- 12:30 **Serum lipid profiling of glycogen storage disease type Ia patients**
Dr. Marianna Caterino (*University of Napoli "Federico II"*)
- 12:40 **Response to microplastic exposure: an exploration into the sea urchin immune cell proteome**
Dr. Simona Nonnis (*University of Milano*)
- 12:50 **Sustainable biopolymers for 3D printed scaffold useful for in vitro models and tissue regeneration**
Dr. Celeste Di Meo (*University of Campania "L. Vanvitelli"*)
- 13:00 Light Lunch
- V SESSION**
New tools to study molecules, structures, interactions and network properties
Chairs: Prof. Fabrizio Dal Piaz (*University of Salerno*)
Dr. Antonio Chavez (*University of Milano*)
- 14:00 **Protein language models for predicting protein-protein interactions**
Prof. Rita Casadio (*University of Bologna*)