

PROGRAM

DAY 1:

8.30 - 9.00 Registration

9.00 – 9.30: *Welcome from the Directors*

Session 1: Targeting Infectious Diseases from vector to host

Chairs: Alberta Pinnola (DBB), Maria Vittoria Mancini (DBB)

9.30 – 9.50 INV1: **Mariangela Bonizzoni**, DBB | Mosquito vectors in the Anthropocene: understanding their biology to reduce arbovirus transmission

9.50 - 10.05 SA1: **Deborah Recchia**, DBB| Investigation of the mechanism of action of the novel drug candidate VOMG against *Mycobacterium abscessus* and other microbial pathogens

10.05 - 10.20 SA2: **Riccardo Piccinno**, DBB| Spiroplasma impact on the male reproductive biology of tsetse flies

10.20 - 10.35 SA3: **Davide Sassera**, DBB| Nuclear and mitochondrial population genomics of the hard tick *Ixodes ricinus*

10.40– 12.00 *Coffee Break + sponsor exhibition + **Poster Session 1** (presenting even numbers)*

Session 2: Structural and Molecular Approaches in Drug Discovery

Chairs: Mariagrazia Battaglia (DMM), Francesca Magnani (DBB)

12.00 – 12.20 INV2: **Andrea Mattevi**, DBB | Molecular mechanisms and drug design

12.20 - 12.35 SA4: **Sristi Raj Rai**, DBB| The Tale of GLT25D/COLGALT family enzymes during collagen biosynthesis

12.35 – 12.50 SA5: **Cristina Arrigoni**, DMM | Structural insights of TASK-3 potassium channel reveal molecular mechanism in disease

13.00 – 15.00 *Lunch Break free time and poster view*

15.00 - 15.30 **Keynote 1:**

Giorgio Scita, IFOM | Molecular Control of Tissue Fluidification Links Epithelial Mechanics to Anti-Tumor Immunity

Chair: Marco Foiani, CNR

Session 3: Intracellular signalling in Malignancies

Chairs: Valentina Bonaldi (DBB), Giulia Colombo (DBB)

15.30 – 15.50 INV3: **Konstantinos Lefkimmiatis**, DMM | Compartmentalized Signalling in Cell Physiology and Disease

15.50 - 16.05 SA6: **Chiara Barzan**, CNR | A novel regulatory circuit required for tumor angiogenesis and cancer growth

16.05 - 16.20 SA7: **Filippo Conca**, DMM | Regulation and Functional Implications of Nuclear PKA/Phosphatase Equilibrium

16.20 - 16.35 SA8: **Laura Zannini**, CNR | Exploring the nucleolar function of TSPY-Like 2

16.40– 17.20 *Coffee Break + sponsor exhibition*

Session 4: Cellular Stress, DNA Damage & Genome Stability

Chairs: Francesca Esposito (CNR), Elisabetta Moroni (DBB)

- 17.20 – 17.40 INV4: **Fabrizio d’Adda di Fagagna**, CNR | Telomere biology in health and diseases
- 17.40 - 17.55 SA9: **Nadia Tagliaferri**, CNR | From Repeat Expansion to DNA Repair Defect: Unraveling the Molecular Basis of CANVAS
- 17.55 - 18.10 SA10: **Luca Zardoni**, CNR | Mechanisms of RNA:DNA hybrid-driven DNA damage
- 18.10 - 18.25 SA11: **Gaia Veniali**, CNR | Exploring the role of skin tumor microenvironment in 3D NER-deficient models

DAY 2:

Session 5: Disease Models and Mechanisms for Precision Therapies

Chairs: Maira Rossi (DMM), Elisa Bellan Menegussi (DMM)

- 9.00 – 9.20 INV5: **Antonella Forlino**, DMM | Bone diseases: from basic science to therapeutic approaches
- 9.20 – 9.35 SA12: **Francesca Rossella Calleda**, DMM | Extracellular matrix-targeting oligonucleotide reverses marrow fibrosis
- 9.35 – 9.50 SA13: **Andrea Fantinato**, DBB | Cytoplasmic dynamics within the first 24 hours post-insemination predict human blastocyst development and enable embryo prioritization for intrauterine embryo transfer
- 9.50 - 10.05 SA14: **Mariia Zadorozhna**, DMM | Targeting Cryptic Splicing Variants in SDCCAG8, CEP290, and ABCA4: A Translational Workflow from Diagnosis to ASO-Based Therapy

10.10– 11.45 *Coffee Break + sponsor exhibition + **Poster Session 2** (presenting odd numbers)*

Session 6: Advances in Genetics, Bioinformatics and Bioengineering

Chairs: Alessandro Raveane (DBB), Greta Bellinzona (DBB)

- 11.45 – 12.05 INV6: **Alessandro Achilli**, DBB | Current trends in archaeogenomics and museomics: integrating genomic data into population history and cultural heritage
- 12.05 - 12.20 SA15: **Moises Di Sante**, DMM | Calipers: a method for cell cycle-aware live imaging in phenotyping and regeneration studies
- 12.20 - 12.35 SA16: **Giorgia Faravelli**, DBB | SMILE: An Intra-body Neural Communication Framework for Facial Nerve Lesion Recovery through Biocompatible Transmission Technologies
- 12.35 – 12.50 SA17: **Concetta Mazzotta**, DMM | Functional and In Silico Assessment of CC2D2A Missense Variants in Joubert Syndrome

13.00 – 14.30 *Lunch Break free time and poster view*

Session 7: Molecular Mechanisms of Disease

Chairs: Alessandro Mapelli (DBB), Valentina Serpieri (DMM)

- 14.30 –14.50 INV7: **Donata Orioli**, CNR | NER-defective disorders, from patients to molecular mechanisms
- 14.50 - 15.05 SA18: **Francesca Brevi**, CNR | Proteostasis perturbation and the integrated stress response contribute to trichothiodystrophy
- 15.05 - 15.20 SA19: **Adelaide Riccardi**, CNR | Targeting a Deubiquitinating Enzyme Attenuates DNA Damage Accumulation in Cellular Models of Amyotrophic Lateral Sclerosis
- 15.20 - 15.35 SA21: **Monica Giannotta**, DBB | Dual role of brain endothelial Gpr126 in blood-brain barrier development and ischemic stroke
- 15.35 – 15.50 SA21: **Giorgia Zadra**, CNR | Uncovering systemic-tumor metabolic crosstalk in prostate cancer microenvironment remodeling to inform combination therapies

16.00 – 16.30 *Coffee Break + sponsor exhibition*

16.30 – 17.00: **Keynote 2, Buzzati-Traverso lecture:**

Marino Zerial (HT) | Role of forces in membrane dynamics and liver tissue morphogenesis

Chair: Federico Forneris, DBB

Session 8: Hematopoiesis in health and pathology

Chairs: Francesco Ascione (DBB), Ilaria Maria Morella (DBB)

16.50 – 17.10 INV8: **Alessandra Balduini, DMM** | From Bone Marrow to Blood: Reconstructing the Hematopoietic Niche

17.10 - 17.25 SA22: **Giovanni Covicich, DBB** | Nuclear IFITM3 is a co-factor of DNA repair through Non- Homologous End-Joining in healthy and malignant haematopoiesis

17.25 - 17.40 SA23: **Martina Sarchi, DMM** | Genomic analysis of preleukemic clones identifies new drivers of myeloid neoplasms

17.40 – 17.55 SA24: **Sebastien Jaillon, DMM** | Characterization of IL-18-responsive DNT $\alpha\beta$ T cells: A distinct innate-like subset with antitumoral functions

18.00 – 18.20 Best Poster and Selected Abstract Prize Award

18.20 – 18.30 Closing Remarks

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