

18th PhD meeting

TECSBI

20
26

22-24 SETTEMBRE

OSTELLO MONTEBARRO



SCUOLA DI DOTTORATO
BICOCCA



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ORGANIZING COMMITTEE:

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Spandri Giorgia
Finazzi Margherita
Chelazzi Maria Rita
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Colombo Beatrice
Borka Gergo
Misitano Francesca
Bellusci Francesco
Lapi Francesco
Moretti Luca
Dramis Martina
Frigerio Verga Mirko
Perotti Susanna
Cervellera Stefano

Converging Technologies for Biomolecular Systems (TeCSBI)

18th PhD Meeting - 22/24 September 2026
Località Eremo di Monte Barro, via Balassi,
Galbiate (LC)

PROGRAM

Tuesday 22

10.00-11.30 Arrival at the facility and room assignments

11.30-11.40 **Opening, Prof. Granucci**

11.40-11.50 **Acknowledgments, Legambiente**

11.50-12.50 **KS1 Prof. Luca De Gioia
UNIMIB**

Perceptual Reality and Scientific Epistemology: An Evolutionary Perspective on Cognitive Biases, Misconceptions, and the "Fitness" Contribution of Scientific Knowledge

12.50-14.00 Lunch Break

14.00-14.20 **s1. Lapi Francesco**

Characterizing Cellular Metabolism via Flux Enrichment Scores: A Versatile Framework for Bulk, Single-Cell, and Spatial Transcriptomics

14.20-14.40 **s2. Banfi Andrea**

Mirror-Image Peptide Nanoparticles Improve Nucleic Acid Protection, Intracellular Delivery, and Innate Immune Activation

14.40-15.00 **s3. Moretti Luca**

Spectroscopic approaches for the identification of biomolecular signatures of ageing and age-related processes

15.00-15.20 **s4. Dhekane Radhika ***

A milli-fluidic 3D co-culture system for characterizing microenvironment driven therapy resistance mechanisms in esophageal adenocarcinoma

15.20-15.40 **s5. Molteni Linda**

NMR spectroscopy as a red thread in the study of biomolecular interactions: from bacterial recognition to amyloid aggregation

15.40-16.00 Coffee Break

16.00 Social activity

* To attend these sessions, participants are required to sign a confidentiality agreement to ensure that all research presented remains protected and is not shared without authorization

Wednesday 23

9.50-10.10 **s6. Colombo Beatrice**

Wild bees in the Anthropocene: eco-evolutionary trajectories

10.10-10.30 **s7. Vincenti Francesca**

Decoding HSC identity: a single cell multiomics approach to dissect Hematopoietic Stem Cell heterogeneity

10.30-10.50 **s8. Cozzi Stefano**

Microbial adhesion promotes Piezo1 activation to initiate innate immunity

10.50-11.50 Coffee Break + Poster session 1

11.50-12.10 **s9. Vulcano Edvige**

Modelling a TARDBP-ALS Family in iPSC-Derived Neural Stem Cells Uncovers Proliferative and Metabolic Defects

12.10-13.00 **KS2 Signori Lorenzo**

Zambon Spa

Life After the PhD: There Is No Standard Protocol. How curiosity, adaptability, and a few wrong turns shaped my career path.

13.00-14.40 Lunch Break

14.40-15.00 **s10. Dramis Martina ***

Enzyme-mediated tuning of cellulose surface reactivity for innovative compounding purposes

15.00-15.20 **s11. Perotti Susanna**

Exploring the Postbiotic Potential of Zygosaccharomyces bailii KAV1 isolated from Kombucha

15.20-15.40 **s12. Chelazzi Maria Rita**

A DIAPH1-SOWAHC-CFL1 Axis Regulates Macropinocytosis and Chemoresistance in Cervical Cancer

15.40-16.00 **s13. Moukham Hind ***

A natural compound counteracts metabolic associated fatty liver disease by stimulating lipolysis and lipophagy and promoting β -oxidation

16.00-17.00 Coffee Break + Poster session 2

17.00-17.20 **s14. Favaretto Lidia ***

From roots to roofs: Evaluating Nature-based Solutions integrating Ecosystem Services and life-cycle thinking

17.20-17.40 **s15. Finazzi Margherita**

Fructooligosaccharide-driven probiotic metabolism reduces hepatocyte lipid accumulation in an in vitro human gut microbiota model

17.40-18.00 **s16. Pizzelli Beatrice**

Do strain diversity and/or dietary context determine the pathogenic potential of Collinsella aerofaciens in metabolic inflammation?

Thursday 24

9.50-10.10 **s17. Corallo Flavio**
Stn1 supports Mec1 function in protecting stalled replication forks from degradation

10.10-10.30 **s18. Armani Alice**
Microbial dynamics between people and the built environment

10.30-10.50 **s19. Angelini Fabio**
The Gut Microbiota as a Biological Interface Between Dietary Interventions and Host Health

10.50-11.50 Coffee Break + Poster session 3

11.50-12.10 **s20. Misitano Francesca**
Effects of Combined Istaroxime and Levosimendan Treatment on Ca²⁺ Handling and Contractility in Mouse Cardiac Preparations

12.10-12.30 **s21. Bellusci Francesco ***
Synthetic biology applied to the biomanufacturing of plant natural products of pharmaceutical interest

12.30-12.50 **s22. Frigerio Verga Mirko**
*Exploiting yeast surface display for whole cell biocatalysis in *Komagataella phaffii**

12.50-14.30 Lunch Break

14.30-15.20 **KS3 Silvia Raimondo e Graziella Pupillo**

Radio Bicocca, Cose dette Mare
Cose dette Mare va in Montagna

15.20-15.40 **s23. Cervellera Stefano**
Safety assessment of perovskite nanoparticles within a Safe and Sustainable by Design approach

15.40-16.00 **s24. Borka Gergő**
Enhanced prediction of drug-induced gastrointestinal toxicity in a human gut-on-chip

16.00-16.20 **s25. Taglietti Lorenzo ***
Unraveling the Potential of L-Ido-Configured Glycomimetics as Versatile Glycosidase Modulators

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Poster session 1

p1. Galassini Andrea A. R.
Creating pollinator-friendly habitat through an interactive decision-support app

p2. Feliciano Brett Vega *
Towards a Dynamic Blood-Brain Barrier-on-Chip Model for Studying Tumor Cell Interaction and Barrier Maturation

p3. Benedetti Daniele
Development and optimization of functional nanomaterials for physical modulation of cell aging processes

Poster session 2

p4. Brambilla Giulia
Pollinator decline in a changing world: characterizing the pollination ecosystem services and the solutions for habitat enhancement

p5. Fontana Ilaria
A novel role for Sox2 in differentiated thalamic neurons: defining thalamic identity and visual system connectivity

p6. Turati Matteo
Exploring Mitochondrial Metabolic Specialization through Computational Modeling

Poster session 3

p7. Fossati Mattia
Molecular Dynamics Investigation for O₂ Diffusion Mechanism in the Protective CbA5H Hydrogenase

p8. Zaccaria Riccardo
hiPSCs-derived cardiomyocytes treated with Angiotensin II to recapitulate heart failure in vitro

p9. Castelli Sara
Exploring the role of histone H3 methylation in response to DNA double strand breaks

p10. Spandri Giorgia
Identification of natural antiaggregant bioactive compounds in Lamiaceae family: an interdisciplinary approach to target protein-misfolding diseases