



CORTONA PROCARIOTI

17-19 June 2026

Centro Convegni Sant'Agostino



Wednesday 17 June

11:30 Welcome – Organizing committee

11:45 MICROBIAL GENETICS Chairs: Marco Fondi- Loredana Baccigalupi

Martina Cristoferi	Resistance to colistin in <i>Pseudomonas aeruginosa</i> biofilms is modulated by the <i>arn</i> operon and pH
Michele Giovannini	Does transcription-replication interaction impact cellular metabolism?
Davide Sposato	The <i>Pseudomonas aeruginosa</i> DedA protein PA4011 functions as a C55- PP phosphatase via a PAP2-like domain
Lodovico Sterzi	Large-scale analysis of genetic diversity in <i>Patescibacteria</i> across environments
Davide Sorze	Investigating the role of the protein LysX2 of <i>Mycobacterium tuberculosis</i>

13:00 Lunch and poster session

15:00 LECTURE - Dr. Giuseppina Mariano
Modularity of Zorya defense systems during phage inhibition

15:45 MICROBIAL INFECTIONS AND VIRULENCE Chairs: Francesco Imperi – Arianna Tavanti

Alessandro Fusco	Pisa4: a potential candidate for <i>Mycobacterium tuberculosis</i> treatment
Alessandra Guiducci	DksA–(p)ppGpp interplay is a key determinant of <i>Pseudomonas aeruginosa</i> extracellular and intracellular infection
Rebecca Martedì	Targeting de novo L-cysteine biosynthesis (DeNoCB) in <i>Pseudomonas aeruginosa</i> for novel antimicrobial strategies
Claudia Ridolfi	Drug repurposing to inhibit <i>Pseudomonas aeruginosa</i> adaptation to the cystic fibrosis lung environment
Tommaso Tacchetti	Two AraC/XylS-family transcription factors contribute to virulence and oxidative stress tolerance in <i>Acinetobacter baumannii</i> AB5075
Gabriele Capriglia	Rhizosphere microbiome engineering and root exudate metabolites have the potential to enhance the bioremediation of petroleum hydrocarbons

17:15 Poster session & welcome reception
20:00

Thursday 18 June

09:00 LECTURE – Prof. Miguel Gueimonde
Bifidobacterium: From Tissier's *Bacillus bifidus* to infant nutrigenomics

09:45 HOST- MICROBIOME INTERACTIONS Chairs: Christian Milani – Giovanni Bacci

Margherita Finazzi	Fructooligosaccharide-driven metabolism of a probiotic consortium modulates hepatocyte lipid accumulation in an in vitro microbiota-liver interaction model
Davide Piazza	How are microbiomes transmitted across animals? An integrative approach to quantify the ecological factors driving microbiome transfer using guppies.
Francesca Vaccaro	Talking roots: a genotype-specific interactive dialogue between endophytic bacteria and wild and domesticated rice revealed by multi-omics

	Riccardo Nodari	Phylogenetically stratified GWAS reveals insights into <i>Escherichia coli</i> specific virulence factors in adults and neonates
10:40	Presentation CONSORZIO ITALBIOTEC	
11:00	Presentation Company BIOLOG	
11:15	Coffee break	
11:45	ENVIRONMENTAL MICROBIOLOGY Chairs: Massimiliano Marvasi - Elena Tamburini	
	Marianna Costa	Warming mediterranean waters and viral emergence: dissecting <i>Betanodavirus</i> outbreaks through reverse genetics
	Mattia Esposito	Elemental mobilization from a Martian Regolith Simulant by <i>Parageobacillus thermantarcticus</i> M1T
	Elisa Ghitti	Petroleum hydrocarbon (PHC)-induced stress causes a shift in sunflower root exudation chemistry, potentially affecting recruitment and rhizocompetence of PHC- degrading bacteria
	Marta Nerini	Environmental reservoirs and microbial interactions of mycobacteria in bovine tuberculosis-affected farms
	Elena Peresani	Exploring marine microbial adaptive strategies in an atmospheric simulation chamber: implications for biogeochemical C cycle along the ocean-atmosphere continuum
	Silvia Rosa	Resistance gene profiles in rock glacier-influenced alpine catchments: links to metal gradients and hydrogeochemistry
13:15	Lunch and poster session	
15:00	APPLIED MICROBIOLOGY (I) Chairs: Rachele Isticato – Giordano Rampioni	
	Dario Belmonte	Integrating GC-MS and customized MOX gas sensors for VOC-based discrimination of bacteria: towards applications in sustainable agriculture and food safety
	Maya Petricciuolo	Unravelling antimicrobial resistance spread within populations trough integrated metagenomic and culturomic analyses of wastewaters.
	Ida De Chiara	<i>Lactococcus lactis</i> postbiotics on human glioblastoma cell lines: in vitro evaluation of antitumor activity.
	Ivelina Ivaylova Dzhambazova	From transcriptomic profiling to engineering target selection in <i>Haloferax mediterranei</i> for PHBV and bacterioruberin production
	Maria Chiara Gentile	Synthesis and characterization of postbiotics from <i>Bacillus</i> spp.: study of functional properties and applications
16:10	Coffee break	
16:40	APPLIED MICROBIOLOGY (II) Chairs: Livia Leoni – Leonardo Mancabelli	
	Marilisa Gialisco	Model microbial communities for biocellulose production: dynamics, labour division and functionalities
	Gianmaria Oliva	Salt-enhanced IAA production in <i>Vreelandella titanicae</i> : a stress-responsive for sustainable agriculture in saline soils
	João Vitor Rocha Reis	Evaluation of the anti-tubercular activity of <i>Kielmeyera membranacea</i> constituents
	Ylenia Zanchetta	Modulation of glycolysis and homolactic fermentation of <i>Streptococcus thermophilus</i> energetically discharged cells: dissecting the role of transcription and post-translational modifications
	Chiara Belaef	Display of an influenza virus multi-epitope on <i>B. subtilis</i> spores
17:50	PRIZE GIUSEPPINA CATTANI 2026	

18:15 **SIMGBM MEMBERS' MEETING**

20:30 **SOCIAL DINNER**

Friday 19 June

09:00	PhD DAY (I) Chair: Elena Perrin & Emanuela Frangipani	
	Alessandra Filieri	<i>Photobacterium halotolerans</i> : genomic analysis and fermentative production of Polyhydroxyalkanoates (PHAs)
	Silvia Petraro	Microbial BioRemediation Database: a comprehensive database of genes involved in microbial bioremediation processes
	Sara Bolognini	How genetic background influence phage resistance trade-offs in three different <i>Pseudomonas aeruginosa</i> clinical isolates
	Stacy Julisa Carrasco Aliaga	The <i>Pseudomonas aeruginosa sirB2</i> gene is a fitness determinant of anaerobic growth and its inactivation affects virulence and rugose small colony variant
	Marina De Stefano	The <i>yhbB</i> gene contributes to the structural organization of the <i>Bacillus subtilis</i> spore coat in a temperature-dependent manner
11:15	Coffee break	
11:45	PhD DAY (II) Chair: Andrea Quagliarello & Roberta Proveddi	
	Kubra Kocak	Host-Microbiota crosstalk in ovarian cancer
	Giulia Cattabriga	Involvement of dura mater tissue in rodent models of Pneumococcal meningitis
	Jimena Nieto Noblecia	Elucidating key steps of <i>Pseudomonas aeruginosa</i> infection by DEV lytic phage for phage therapy.
	Eleonora Chines	From colistin persistence to resistance in carbapenem resistant <i>Acinetobacter</i>
	Enrica Campagnaro	Decoding Drug Efficacy and Host-Pathogen Interactions in Tuberculosis Using a Standardized In Vitro Granuloma-Like Structures Model
	Riccardo Grimoldi	Linking air and leaves: disentangling the main drivers of microbial assembly and exchange in the urban phyllosphere
13:15	Lunch and poster session	
14:45	PhD DAY (III) Chair: L. Baccigalupi & Anella Saggese	
	Erika Bruno	Potential role of treated wastewater and heavy rainfall events on environmental spreading of AMR into the Lambro River (Lombardy Region, Italy)
	Paola Conti	Broad-spectrum analysis of beta-lactam resistant <i>Granulicatella adiacens</i> : from Penicillin-Binding Proteins mutational and antibiotic affinity profile to cell morphology and peptidoglycan composition
	Eleonora Metta	Prokaryotic diversity and ecosystem functioning in hypersaline environments: a metagenomic study of the Cagliari salterns
	Alessio Massimi	Microbiome structure and dynamics in novel fixed-bed biofilm systems for medium chain fatty acids production from organic waste
	Melinda Mandaresu	Characterization of microbial communities and functional diversity associated to native plant species <i>Pistacia lentiscus</i> L. and <i>Helichrysum microphyllum</i> subsp. <i>tyrrhenicum</i> in abandoned mining areas

16:00

PRIZES

SIMGBM 2026

Best PhD thesis in General Microbiology **winner to be announced**
Best paper in General microbiology **winner to be announced**

GENPROBIO 2026

Best paper or PhD Thesis on Microbiota studies **winner to be announced**

FRANCO TATÒ 2026

Best PhD thesis in microbial Biotechnologies **winner to be announced**

"LANFRANCO MASOTTI" 2026

Best PhD thesis in microbial Biotechnologies **winner to be announced**

BIOLOG 2026

Best oral presentation **winner to be announced**

BEST POSTER PRIZES Gianfranco Galizzi

Gianfranco Galizzi - prize 1 **winner to be announced**
Gianfranco Galizzi - prize 2 **winner to be announced**

BEST POSTER PRIZES American Society for Microbiology (ASM)

ASM - prize 1 **winner to be announced**
ASM - prize 2 **winner to be announced**

Posters 17 - 19 June

1	Roberta Pecora	Isolation and proteomic analysis of extracellular vesicles from <i>Lactobacillus spp</i>
2	Giusy Castagliuolo	Development of a hybrid scaffold functionalized with antimicrobial peptides.
3	Aurora Botti	Biofilm characterization and eDNA analysis in <i>Pseudomonas aeruginosa</i>
4	Chiara Bazzano	Microbial communities in tree exudates and their role in saproxylic hoverfly conservation
5	Iacopo Passeri	MErlin - Methylation-driven Expression & Regulation Linkage in Interacting Nuclear-domains
6	Daniele Clerici	Role of the stringent response in <i>Pseudomonas aeruginosa</i> intracellular survival in healthy and cystic fibrosis macrophages
7	Saverio Castelli	Managing spoilage potential of acetic acid bacteria in the beverage industry: facing complexity through an integrated approach
8	Giovanni Serratore	Role of anticancer drugs on the emergence of antimicrobial resistance in bacterial pathogens
9	Marta Beccarini	Antibiotic tolerance in <i>Staphylococcus aureus</i> bacteremia: role of follow-up blood cultures and combination therapy
10	Francesca Coscione	Epigenomics and transcriptomics highlight genotypic-by-environment signatures in bacteria adaptation
11	Antonio Maria Ferriero	Role of the diadenosine tetraphosphate Ap ₄ A in the control of <i>Pseudomonas aeruginosa</i> virulence
12	Carola Turella	Two COG0523 metallochaperones sustain full <i>Pseudomonas aeruginosa</i> virulence under zinc limitation
13	Clara Bonaiti	Beyond the host: target enrichment suggests environmental resilience of “Candidatus Saccharimonadia” in the human oral cavity
14	Milena Della Gala	Insights into the glycopeptidolipid gene cluster in <i>Mycobacterium smegmatis</i>
15	Tania Alonso-Vasquez	Stochasticity in multi-layered Quorum Sensing systems
16	Agnese Carnevali	Wastewater-based assessment of antibiotic resistance: insights from a two year-long study in central Italy
17	Chiara Morandi	Sustainable production of bacterial cellulose by <i>Komagataibacter xylinus</i> on agri-food wastes
18	Biancamaria Petrucci	Bioactive liposomes for host-directed modulation against <i>Mycobacterium abscessus</i> : a microfluidic formulation approach
19	Mattia Salvadori	From transcriptomics to multi-step polyethylene biodegradation by <i>Rhodococcus opacus</i> R7
20	Stefano Chiesa	Rhizosphere bacteria at work: integrating cultivable traits and shotgun metagenomics across temporal dynamics
21	Tabata Gaggero	Identification and physiological characterization of bacterial strains isolated from an industrial heavy metal-contaminated soil: implications for assisted phytoremediation
22	Luca Erriquez	Evolution of protein effectors in the vector-borne pathogen <i>Rickettsia</i> and their role in host interactions
23	Francesca Cottino	Discovery of new antimicrobial resistance associated genomic features via machine learning on bacterial whole-genome sequencing data
24	Melissa Berni	<i>Salmonella</i> Enteritidis generates a subpopulation lacking the Wzy-polymerase of the O-antigen to increase cytosolic replication in intestinal epithelial cells and virulence in mice.
25	Pierluigi Gabriele Di Matteo	Biotechnological valorization of bilge water for the production of polyhydroxyalkanoates and biosurfactants
26	Alessandra Giardina	Dissecting the impact of sub-inhibitory antibiotic concentrations on Panton-Valentine Leucocidin producing <i>S. aureus</i> : a multi-level study on pediatric isolates
27	Giorgio De Tommasis	SPORE-DEFENSE: A spore-based platform for innovative control of mosquito-borne infectious diseases
28	Rosa Anna Nastro	Microbial communities in soil-Microbial Fuel Cells (s-MFCs) in presence and absence of pollutants
29	Alice Vaudi	Analysis of RcsBC Two-Component system network and its implications for virulence in <i>Shigella</i>

30	Beatrice Tontini	Growth and PHA accumulation dynamics of <i>Thauera carbonophians</i> Sel9, a newly identified bacterial species
31	Alessandra Dodi	Detecting plasmids in <i>Klebsiella pneumoniae</i> membrane vesicles with a sequencing approach
32	Sara Mennella	Gut bacterial metabolites amplify chemotherapy efficacy in colorectal cancer through synergistic mechanisms
33	Gaia Vertillo Aluisio	Monoclonal vs surgery treatment in chronic rhinosinusitis with nasal polyps affects microbiome composition
34	Stefany Castaldi	Rhizosphere <i>Bacillus</i> mitigate copper stress and sustain plant–pollinator networks
35	Lorenzo Alessandrelli	Rubicon modulates the microbicidal activity of human macrophages against <i>Pseudomonas aeruginosa</i>
36	Ahmed El Goutbi	Phage–host co-evolution: investigation on phage resistance and its impact on therapeutic strategies
37	Francesca Guidi	Identification of novel drug targets in persistent <i>Mycobacterium abscessus</i> in cystic fibrosis
38	Federica Mastrolembò Barnà	HSV-1 proteins shape cGAS–STING pathway activation in infected epithelial cells
39	Alice Casata	Phage-derived depolymerases against carbapenem-resistant <i>Klebsiella pneumoniae</i>
40	Lorenzo Colombini	Genome analysis of a vancomycin-resistant <i>Enterococcus faecium</i> bloodstream isolate reveals a functional <i>vanA</i> gene cluster split across two plasmids
41	Aldo d’Alessandro	Microbiome responses to extreme isolation: a multi-site human study during submarine patrol
42	Matilda Bellini	Rules of attraction: strain-specific Volatile Organic Compound profiles mediate the ecological interactions between <i>S. cerevisiae</i> and social insects
43	Rosaria Sciortino	Haloarchaeal diversity and bioactive potential in the <i>Trapani salterns</i> : a culture-dependent and metagenomic approach
44	Juliette Yunès	Analysis of RcsB response regulator in pathogenic <i>E. coli</i>
45	Anastasia Tandecki	<i>Bacillus subtilis</i> spores as live platforms to deliver antimicrobials targeting pathogens at epidemic/pandemic risk
46	Sara Angelone	Bet-hedging strategies in hypermucoviscous <i>Klebsiella pneumoniae</i> : population heterogeneity shapes survival and host interaction
47	Alessia Sordillo	Antimicrobial peptides employed against the oral pathogen <i>Porphyromonas gingivalis</i> .
48	Annamaria Gallo	Exploring microalga and Streptomycete co-cultures as plant growth-promoting systems for sustainable agriculture
49	Ilaria Bortoluzzi	Evaluation of the efficacy of various drugs against some strains of <i>Mycobacterium abscessus</i> in the Granuloma-Like Structures (GLS) model
50	Alessia Gennai	Bacterial clearance in the human spleen occurs through a two-step mechanism mediated by the mannose receptor on sinusoidal lining cells.

Organizing and scientific committee

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