



# MICROBIOLOGY 2019

## XXXIII SIMGBM Congress

Florence, June 19<sup>th</sup> – 22<sup>nd</sup>, 2019

### Wednesday, June 19<sup>th</sup>

- 14.00-16.00    **Registration**
- 16.00-17.00    **Opening Lecture**, Chairs: P. Visca, D. Zannoni  
**Volker Müller** (Goethe-Universität Frankfurt, Germany)  
*The anaerobic way of life: how to make a living by producing acetate from carbon dioxide and hydrogen*
- 17.00-19.00    **Plenary Session 1: Antibiotic resistome: where do antibiotic resistance genes come from?**  
Chairs: S. Borin, F. Marinelli
- 17.00-17.40    **José Luis Martínez** (Centro Nacional de Biotecnología, Madrid, Spain)  
*The One-Health and Global-Health axes of antibiotic resistance*
- 17.40-18.00    **Flavia Marinelli** (Univ. Insubria, Varese)  
*Resistance genes in glycopeptide antibiotic producers*
- 18.00-18.20    **Stefania Stefani** (Univ. Catania)  
*In-depth resistome analysis in clinical isolates*
- 18.20-18.40    **Christian Milani** (Univ. Parma)  
*Distribution of the antibiotic resistance in the mammalian gut microbiota*
- 18.40-19.00    **Gianluca Corno** (CNR, Verbania)  
*Introducing the ecological theory in the study of antibiotic resistances in waters*
- 19.00            **Welcome reception**

### Thursday, June 20<sup>th</sup>

- 09.00-11.00    **Plenary Session 2: Microbial symbiosis as driving force in plant's life**  
Chairs: M. Bazzicalupo, C. Viti
- 09.00-09.40    **Paola Bonfante** (Univ. Torino)  
*Mycorrhizal fungi between plants and bacteria: a network of interactions*
- 09.40-10.00    **Vittorio Venturi** (ICGEB, Trieste)  
*The pathobiomes of two bacterial diseases of rice; identifying microbial cooperators and antagonists of the pathogen*
- 10.00-10.40    **Catherine Masson-Boivin** (INRA, Toulouse, France)  
*Experimental evolution of legume symbionts: what have we learnt?*
- 10.20-10.40    **Renato Fani** (Univ. Firenze)  
*Metabolic interactions of endophytic bacteria and medicinal plants*

- 10.40-11.10 **Coffee break**
- 11.10-13.30 **Plenary Session 3: New antimicrobial strategies in the post-antibiotic era**  
Chairs: B. Colonna, D. Schillaci
- 11.10-11.50 **Makrina Totsika** (Queensland Univ. of Technology, Brisbane, Australia)  
*Bacterial virulence: the superbug's Achilles' heel?*
- 11.50-12.15 **Silvia Buroni** (Univ. Pavia)  
*A new molecular strategy to find drug targets in Burkholderia cenocepacia*
- 12.15-12.40 **Begoña Heras** (La Trobe Univ., Melbourne, Australia)  
*Structural insights into the regulation and inhibition of bacterial autotransporter proteins*
- 12.40-13.05 **Orietta Massidda** (Univ. Trento)  
*Are old and new cell wall growth and division proteins still attractive targets to develop new antibiotics?*
- 13.05-13.30 **Livia Leoni** (Univ. Roma Tre)  
*Repurposing old drugs for new anti-virulence strategies: a Pseudomonas aeruginosa story*
- 13.30-15.20 **Lunch & Posters viewing**
- 15.20-17.00 **Plenary Session 4: Intercellular communication in host-pathogen interactions**  
Chairs: L. Leoni, A.M. Puglia
- 15.20 – 16.00 **Tom Coenye** (Univ. Ghent, Belgium)  
*Intercellular communication in bacteria biofilm-host interaction*
- 16.00 – 16.20 **Pietro Alifano** (Univ. Salento)  
*Trans-kingdom interactions mediated by sialic acids in rhinopharynx*
- 16.20 – 16.40 **Paolo Landini** (Univ. Milano)  
*Biofilm and virulence of adherent-invasive Escherichia coli in the Crohn disease*
- 16.40 – 17.00 **Gianni Prosseda** (Univ. Roma Sapienza)  
*Role of efflux pumps in the interplay with host cells in pathogenic Escherichia coli*
- 17.00-17.30 **Coffee break**
- 17.30-19.10 **Plenary Session 5: New approaches to unravel fungal-host interactions**  
Chairs: D. Cavalieri, A. Tavanti
- 17.30-18.10 **Geraldine Butler** (Conway Institute, Dublin, Ireland)  
*Large-scale functional analysis of virulence in Candida parapsilosis using CRISPR*
- 18.10-18.30 **Monica Di Paola** (Univ. Firenze)  
*Evolution and variation of Saccharomyces cerevisiae in the human and insects gut*
- 18.30-18.50 **Arianna Tavanti** (Univ. Pisa)  
*Dissecting the role of adhesin encoding genes in the virulence of non-albicans Candida species*
- 18.50-19.10 **Francesco Strati** (Univ. Lausanne, CH)  
*Metagenomics approaches to study how immune system mediates the interactions of yeast and bacteria in the human gut*

## Friday, June 21<sup>st</sup>

- 09.00-11.00 **Plenary Session 6: Microbiology meets the cultural heritage**  
Chairs: T Rinaldi, C. Urzi
- 09.00-09.40 **Guadalupe Pinar** (Univ. Boku, Austria)  
*Technological development applied to the study of cultural heritage*
- 09.40-10.00 **Teresa Rinaldi** (Univ. Roma Sapienza)  
*Calcite biomineralization in the Etruscan tombs of Tarquinia*
- 10.00-10.40 **Paolo Visca** (Univ. Roma Tre)  
*Rosy discoloration of mural artworks; from culturome to metagenome*
- 10.20-10.40 **Laura Bruno** (Univ. Roma Tor Vergata)  
*Cyanobacterial biofilms deteriorating stone monuments*
- 10.40-11.00 **Clara Urzi** (Univ. Messina)  
*New methods and molecules to control biodeterioration*
- 11.00-11.30 **Coffee break**
- 11.30-13.30 **Plenary Session 7: Bacterial cell surface and signaling**  
Chairs: L. Baccigalupi, A. Polissi
- 11.30-12.10 **Jean-François Collet** (Institut de Duve, Bruxelles, Belgium)  
*Using the lipoprotein RcsF as a tool to explore hidden secrets of the E. coli cell envelope*
- 12.10-12.30 **Paola Sperandeo** (Univ. Milano)  
*New insights into the Lpt machinery for lipopolysaccharide transport to the cell surface*
- 12.30-12.50 **Francesco Imperi** (Univ. RomaTre)  
*LPS modifications, polymyxin resistance and biological fitness in Pseudomonas aeruginosa*
- 12.50-13.10 **Rachele Isticato** (Univ. Napoli)  
*The spore surface: a dynamic structure*
- 13.10-13.30 **Isabel Delany** (GSK Vaccine, Siena)  
*Cell surface antigens as vaccine targets*
- 13.30-15.30 **Lunch & Posters viewing**
- 15.30-16.30 **Plenary Lecture 2**, Chairs: R. Proveddi, C. Thaller  
**Laurent Debarbieux** (Institut Pasteur, Paris, France)  
*Phage therapy: yesterday, today and tomorrow*
- 16.30-17.30 **Plenary Lecture 3**, Chairs: M. Bazzicalupo, R. Fani  
**Duccio Cavalieri** (Univ. Firenze)  
*Ecology and biology of wine yeasts: the florentine school*
- 17.30-18.00 Franco Tatò Prize 2019  
Mario Campa Prize 2019  
Naicons Prize 2019
- 18.00-20.00 **Annual Assembly of SIMGBM Members**
- 20.30 **Social dinner**

## Saturday June 22<sup>nd</sup>

09.00-12.00 **PhD day parallel sessions**: Short Talks selected from Abstracts of PhD students

**A: Microbial genetics and genomics**

Chairs: F. Briani, G. Prosseda

**B: Environmental and industrial microbiology**

Chairs: S. Borin, B. Vitali

**C: Interactions between microbes/viruses and their hosts**

Chairs: A. Calistri, F. Iannelli