5th World Congress on Targeting Infectious Diseases

TARGETING PHAGE & ANTIBIOTIC RESISTANCE
Phage therapy and other innovative ideas

May 17 - 18, 2018 Florence - Italy

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CONFIRMED SPEAKERS

Impact of virulent bacteriophages on vibrio cholerae infection and their use in preventing cholera
Mimin Yen, Tufts University, USA

Fighting multi-drug resistant Klebsiella pneumoniae by using lytic phages
Marco Maria D'Andrea, University of Siena, Italy

Control of catheter associated biofilms through efflux inhibition
Brian Jones, University of Brighton, United Kingdom

Microbiota & medicine revolution: the strategic role of phage
Marvin Edeas
Institut Cochin, University Paris Descartes, France

Lytic bacteriophages in the treatment of biofilm-forming bacteria involved in prosthetic joint infections
Mariagrazia Di Luca
Charité-Universitätsmedizin, Germany

Microencapsulation of purified bacteriophages for targeted therapeutic applications
Danish Malik
Loughborough University, United Kingdom

Microarray patches for prevention and treatment of infectious diseases and their potential for reducing antibiotic resistance
Aoife Rodgers
Queen’s University Belfast, United Kingdom

Phage-based antimicrobials: novel approaches for managing drug-resistant bacteria
Alexander Sulakvelidze
Intralytix Inc., USA

Antimicrobial discovery from extreme halophiles
Brendan Gilmore
Queen’s University Belfast, United Kingdom

Development of Infection-responsive surface coatings for bacteriophage delivery in the catheterised urinary tract
Scarlet Milo
University of Bath, United Kingdom

Reincarnation of a staphylococcal pathogenicity island as an antibacterial drone
Richard Novick,
New York University, USA

Development and use of personalized bacteriophage-based therapeutic cocktails to treat a patient with a disseminated resistant Acinetobacter baumannii infection
Robert T. Schooley, University of California, USA

Topics:
- Phage Therapy 2018: recent advances & challenges
- Innovations against antibiotic resistance

Tracks:
- Phage isolation and characterization
- Phage/Host interaction
- Phage therapy & pathologies
- Clinical Trials
- Strategies to combat antibiotic resistance
- New generation of antibiotics
- Veterinary settings
- Agri-Food industries
Day 1 – May 17, 2018

7h30  Registration & welcoming of attendees – Badges & Abstracts book Distribution

8h55  Opening Ceremony

9h00  General Introduction: How to overcome and combat antibiotic resistance in 2018?

Session 1: Phage Therapy 2018: recent advances & challenges

9h20  Fighting multi-drug resistant Klebsiella pneumoniae by using lytic phages
       Marco Maria D`Andrea, University of Siena, Italy

9h45  Control of catheter associated biofilms through efflux inhibition
       Brian Jones, Queen Victoria Hospital NHS Foundation Trust, United Kingdom

10h10 Impact of virulent bacteriophages on vibrio cholerae infection and their use in preventing cholera
       Minmin Yen, Tufts University, USA

10h35  Coffee Break, Poster & Networking Session

11h20 Lytic bacteriophages in the treatment of biofilm-forming bacteria involved in prosthetic joint infections
       Mariagrazia Di Luca, Charité – Universitätsmedizin Berlin Hospital, Germany

11h45 Microencapsulation of purified bacteriophages for targeted therapeutic applications
       Danish Malik, Loughborough University, United Kingdom

12h10 Development of infection-responsive surface coatings for bacteriophage delivery in the catheterised urinary tract
       Scarlet Milo, Queen Victoria Hospital NHS Foundation Trust, United Kingdom

12h35  Lunch Break, Poster & Networking Session

14h00 Development and use of personalized bacteriophage-based therapeutic cocktails to treat a patient with a disseminated resistant Acinetobacter baumannii infection
       Robert T. Schooley, University of California, USA

Short Oral Presentations (7 minutes for presentation + 3 minutes for questions)

14h25 Selection and characterisation of phages able to degrade biofilm produced by clinical isolates of E. faecalis
       Pasquale Marmo, University of Roma Tor Vergata, Italy

14h35 Analysis of the conserved genes present in MRSA strains: Can they make phage therapy harder than expected?
       Ignacio Mir-Sanchis, University of Chicago, USA

14h55 State-of-the-art of modeling in vivo dynamics of naturally-occurring phages and in vivo dynamics of therapeutic phages
       Victoriya Volkova, Kansas State University, USA
15h05  Bacteriophage therapy and urinary tract infections  
*Tamara Perepanova, S.R. Institute of Urology and Interventional Radiology, Russia*

15h15  Experience and perspectives of phage therapy of cardiovascular implant-assotiated infections  
*Evgenii Rubalskii, Hannover Medical School, Germany*

15h25  Concept of individualized medicine based on personalized phage therapy for intensive care unit patients suffering from healthcare-associated infections  
*Andrey Aleshkin, G. N. Gabrichevsky Moscow Research Institute for Epidemiology and Microbiology, Russia*

15h35  Coffee Break, Poster & Networking Session

16h25  Safe & active sustained release of phages in gastro-intestinal tract  
*Farzaneh Moghtader, Hacettepe University, Turkey*

16h35  Phages intended for preventing and treating infections caused by paenibacillus larvae in honey bee larvae  
*Ewa Janczyk-Matysiak, Polish Academy of Sciences, Poland*

16h45  Mycobacteriophage based platforms to discover drug targets for mycobacteria  
*Sujoy Das Gupta, Bose Institute, India*

16h55  Efficient in vivo phage therapy via immunological cloaking  
*Yoon Sung Nam, Korea Advanced Institute of Science & Technology, Korea*

17h05  Bacteriophage ΦSA012 has a broad host range against Staphylococcus aureus and effective lytic capacity in a mouse mastitis model  
*Hidetomo Iwano, Rakuno Gakuen University, Japan*

17h15  Comparison of effectiveness of experimental phage cocktail, single phage and commonly used antibiotics in eradication of *salmonella enterica* serotypes found in poultry  
*Katarzyna Kosznik-Kwaśnicka, Polish Academy of Sciences, Poland*

17h25  Acenitobacter prophage mining for production of specific endolysins  
*Ahmed Sahib Abdulamir, Alnahrain University, Iraq*

17h35  Use of a biolog™ system for monitoring and overcoming phage and antibiotic resistance during the treatment of MDR infections in humans  
*Biswajit Biswas, Biological Defense Research Directorate, USA*

17h45  A phage-display-generated peptide that transports biologics and phages through the mucosa  
*Alf Hamann, Deutsches Rheuma-Forschungszentrum, Germany*

17h55  Biological reprospecting of FDA approved drugs for identification of potent QS inhibitor and antibiofilm agent: Targeting *Pseudomonas aeruginosa* LasR through enhanced molecular docking and dynamics studies  
*Nidhi Verma, Central University of Rajasthan, India*

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**Phage Therapy Speed Collaboration**

This session is dedicated to all attendees, academics, start-ups and industrials who are looking for collaboration: each attendee can present his project during one or two minutes to other attendees.

If you would like to take part to the Phage Therapy Speed Collaboration, please contact us.

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18h30  End the first day

20h00  Targeting Phage & Antibiotic Resistance 2018 Dinner - You can register online before May 7.
Day 2 – May 18, 2018

8h55  Opening of the second day

**Session 2: Innovations against antibiotic resistance**

9h00  Antimicrobial discovery from extreme halophiles  
*Brendan Gilmore*, Queen’s University Belfast, United Kingdom

9h25  Microarray patches for prevention and treatment of infectious diseases and their potential for reducing antibiotic resistance  
*Aoife Rodgers*, Queen’s University Belfast, United Kingdom

9h50  Reincarnation of a staphylococcal pathogenicity island as an antibacterial drone  
*Richard Novick*, New York University, USA

10h15  Coffee Break, Poster & Networking Session

11h15  Microbiota & medicine revolution: the strategic role of phage  
*Marvin Edeas*, Institut Cochin, University Paris Descartes, France

11h40  Inhibition of Shikimate kinase from M. Tuberculosis and H. Pylori for antibiotic discovery  
*Concepción González-Bello*, Universidade de Santiago de Compostela, Spain

11h50  Gut microbiome and virome after human fecal transfer  
*Karin Moelling*, University of Zurich, Switzerland

12h00  Genome editing of virulent staphylococcal phages using CRISPR-CAS10  
*Asma Hatoum-Aslan*, University of Alabama, USA

12h10  CRISPR-CAS9 promotes the re-sensitization of enterobacteriaceae clinical strains to β-Lactams  
*Thaysa Tagliaferri*, RWTH Aachen University Hospital, Germany

12h20  Therapeutic application of phage OMKO1 in two cases of antimicrobial resistant pseudomonas aeruginosa  
*Benjamin Chan*, Yale University, USA

12h30  Mycobacterial tuberculosis NadD, a promise for targeting latent and drug-resistant tuberculosis  
*Leonardo Sorci*, Polytechnic University of Marche, Italy

12h40  Using phage to select for evolution of reduced virulence in pathogenic bacteria  
*Paul E. Turner*, Yale University, USA

12h50  Lunch Break, Poster & Networking Session

**Session 3: Presentation of Innovations & Perspectives**

14h00  Phage-based antimicrobials: novel approaches for managing drug-resistant bacteria  
*Alexander Sulakvelidze*, Intralytix, USA

14h25  Novel phage based therapeutics to address antibiotic resistance  
*Naomi Zak*, Biomx, Israel

14h35  Engineering bacteriophage recognition baseplates in staphylococcal phages  
*Jeffrey Radding*, EnBiotix Inc., USA
14h45 Bridging a gap in phage therapy: towards fast and efficient production of highly purified phages for various applications  
*Frenk Smrekar*, Jafral, Slovenia

14h55 Addressing challenges for the clinical development of phage products  
*Sandra Morales*, AmpliPhi Biosciences, Australia

15h05 Detection of bacteria in air by using an air sampler carrying phages and gold nanoparticles by raman probe  
*Erhan Piskin*, Institute of Graduate School of Science and Engineering, Turkey

15h15 *Salmonella rissen* φ1: a molecular switch  
*Marina Papaianni*, University of Naples Federico II, Italy

15h25 A phase 1 clinical trial to evaluate the safety, tolerability and preliminary efficacy of bacteriophages in patients with staphylococcus aureus chronic rhinosinusitis  
*Sarah Vreudge*, University of Adelaide, Australia

15h35 Coffee Break

15h50 Isolation of environmental campylobacter phages and their application for meat decontamination and phage-therapy in poultry  
*Giuseppe Aprea*, Istituto Zooprofilattico Sperimentale dell’Abruzzo e del Molise “G. Caporale”, Italy

16h00 Isolation and characterization of bacteriophages active against avian pathogenic e. Coli  
*Džiuginta Jakočiūnė*, University of Copenhagen, Denmark

16h10 Effect of dilution rate on continuous production of phages using two chemostats in series  
*Francesco Mancuso*, Loughborough University, United Kingdom

16h20 Metagenome analysis of a russian and georgian cocktails and a placebo-controlled safety trial of a single phage versus phage cocktail in healthy staphylococcus aureus carriers  
*Shawna McCallin*, University of Lausanne, Switzerland

16h30 Listeria monocytogenes’ infective prophage that promotes virulence is controlled by an ancient cryptic prophage, an evidence for the co-optation of phage remnant regulatory genes  
*Anat Herskovits*, Tel Aviv University, Israel

16h40 Potential use of phages as sanitizing agents to reduce hospital pathogens on hard surfaces  
*Elisabetta Caselli*, University of Ferrara, Italy

17h50 Round Table Discussion & Concluding Remarks

Targeting Phage & Antibiotic Resistance 2018 Awards

17h30 End of Targeting Phage & Antibiotic Resistance 2018