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
  - Minmin 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
  - Inralytx 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
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
*Mario 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-associatied infections  
*Evgenii Rubalski, 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 Jonczyk-Matysiak, Polish Academy of Sciences, Poland*

16h45  Mycobacteriophage based platforms to discover drug targets for mycobacteria  
*Sujay 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, Jafra, 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