Programme

Sunday 25 June

12.00-14.00
Registration

14:00-16:00
New regimens for TB and TPP to shape the future of TB treatment

Chairs: **Daniela Maria Cirillo,** *San Raffaele Scientific Institute, Milan*; **Philip Supply,** *Univ. Lille, CNRS, Inserm, CHU Lille, Institut Pasteur de Lille, U1019 - UMR 9017 - CIIL - Center for Infection and Immunity of Lille*

GL01 **Samuel Schumacher,** *WHO, Geneva*
Target Regimen Profiles (TRPs) for TB treatment - VIRTUAL

GL02 **Francesca Conradie,** *WITS HEALTH, University of the Witwatersrand, South Africa*
TB universal regimens; pros and cons for adults and pediatric population

GL03 **Christian Leinhardt,** *WHO, French Institute for Research on Sustainable Development (IRD), Montpellier*
New regimens, new TB drugs: what to expect? TPP for TB regimens

GL04 **Saskia Den Boon,** *WHO*
Target Product Profiles for Tests for TB Treatment Monitoring and Optimization

16:00-16:30
Coffee break

16:30-17:00
Student mini-symposium on new drugs and DR TB (5 min flash talks)

Chairs: **Stefan Niemann,** *Forschungszentrum Borstel*; **Silva Tafaj**, *University Hospital "Shefqet Ndroqi", Tirana*

P38 **Marco Schiuma,** *Department of Biomedical & Clinical Sciences "Luigi Sacco", Università degli Studi di Milano, Italy.*
Rifampicin and isoniazid dosage adjustment according to TDM and acetylator status: a single centre prospective observational study

P63 **Jihad Snobre,** *Mycobacteriology Unit, Biomedical Sciences, Institute of Tropical Medicine (ITM), Antwerp*
Exploring the impact of mutations in Rv0678 gene on bedaquiline resistance in Mycobacterium tuberculosis: insights from computational biostructural proteomics

P61 **Ilariaa Iannucci,** *Universita Vita-Salute San Raffaele, Milan*
In vitro susceptibility testing of GSK656 against Mycobacterium tuberculosis complex isolates to establish the epidemiological cut-off values and MIC distribution

P08 **Emilie Rousseau,** *Molecular and Experimental Mycobacteriology, Research Center Borstel,*
Mutation rates in strains of different Mycobacterium tuberculosis lineages associated with emergence of multi-drug resistant tuberculosis

P30 **Darshaalini Nadarajan,** *National and Supranational Reference Laboratory for Mycobacteria, Research Center Borstel, Leibniz Lung Center, Borstel, Germany*
Prospective evaluation of targeted next-generation sequencing of Mycobacterium tuberculosis complex strains in routine diagnostics in Germany.

P35 **Virginia Batignani,** *San Raffaele Scientific Institute*
Xpert MTB/XDR assay for the rapid diagnosis of TB resistance. A country wide cross sectional observational prospective study from Pakistan

17:00-18.45
Opening session

Chairs: **Daniela Maria Cirillo,** *San Raffaele Scientific Institute, Milan*; **Silva Tafaj,** *University Hospital "Shefqet Ndroqi", Tirana*

GL05 Opening Keynote **Silvia Bino,** *Head of Infectious Diseases, Institute of Public Health*
High priority and emerging pathogens in Albania

GL06 Gertrud Meissner Award presented by S. Niemann

GL07 Gardner Middlebrook Award presented by BD

Monday 26 June

08:00-09:00
Registration

09:00-10:30
Host pathogens interaction in *M tuberculosis*

Chairs: **Leen Rigouts,** *Institute of Tropical Medicine, Antwerp*, **Matthias Merker,** *Research Center Borstel*

GL08 **Margarida Saraiva,** *Department of Microbiology and Immunology, McGill University*
Study of host pathogen interactions in TB by using an in clinico to in vitro to in vivo approach

GL09 **Stephanie Boisson-Dupuis,** *Rockefeller University, NYC*
Novel genetic etiologies in susceptibility to tuberculosis

OR01 **Sarah Danchuk,** *McGill University, Montreal*
Understudied and overlooked: Characterizing Mycobacterium orygis

OR02 **Paolo Miotto,** *San Raffael Scientific Institute*
Mycobacterial extracellular vesicles (MEVs) as a novel option in bladder cancer therapy

OR03 **Issy Schiavi,** *St. George's University of London*
Mycobacterial interactions promote Vγ9Vδ2 T cells to target and kill cancer cells

OR04 **Jana Schoenfeld,** *Research Center Borstel, Germany*
Uncovering epigenetic changes in early-stage MTBC-infected macrophages

10:30-11:00
Coffee break

11:00-12:45
Resistance to new antitubercular drugs and clinical implications

Chairs: **Francesca Conradie,** *University of Witwatersrand, Johannesburg*; **Philip Supply,** *Univ. Lille, CNRS, Inserm, CHU Lille, Institut Pasteur de Lille, U1019 - UMR 9017 - CIIL - Center for Infection and Immunity of Lille*

GL10 **Claudio Köser,** *Cambridge University*
The X(DR)-Files – I want to believe

OR05 **Kurt Wollenberg,** *National Institute of Allergy and Infectious Diseases*
Molecular evolutionary analysis of a clade of closely-related Delamanid-resistant Mycobacterium tuberculosis (M.tb) strains from Eastern Europe and Central Asia.

OR06 **Annelies Van Rie,** *University of Antwerp*
Bayesian probability of bedaquiline resistance to guide rifampicin-resistant tuberculosis treatment

OR07 **Valeriu Crudu,** *State University of Medicine and Pharmacy, Chisinau, Moldova*
Evolution of resistance to new drugs in high tuberculosis burden country.

OR08 **Sonia Borrell,** *Swiss Tropical and Public Health Institute-University of Basel*
Drug-specific differential culturability in diverse strains of Mycobacterium tuberculosis

OR09 **Siavash Valafar,** *Chicago Medical School*
Prognosis and Prevention of Antibiotic Resistance in Mycobacterium tuberculosis: the Isoniazid (INH) Case Study

12:45-13:30
Lunch

13:30-14:30
Poster Session 1

14:30-15:45
Future of next generation sequencing

Chairs: **Kristin Kremer,** *KNCV Tuberculosis Foundation, Den Haag*; **Andrea Cabibbe,** *San Raffaele Scientific Institute, Milan*

GL11 **Philip Fowler,** *University of Oxford*
Whole genome sequencing for tuberculosis: it works, how do we get it used more widely?

OR10 **Vincent Rennie,** *Family Medicine and Population Health (FAMPOP), Faculty of Medicine and Health Sciences, University of Antwerp*
The MAGMA platform for global and equitable WGS-guided management of drug resistant TB and TB control

OR11 **Maximilian Marin,** *Department of Biomedical Informatics, Harvard Medical School*
Analysis of the limited Mtb pan-genome reveals potential pitfalls of pan-genome analysis approaches

OR12 **Christophe Sola,** *INSERM UMR1137*
TB-ANNOTATOR: A scalable web application that allows in-depth analysis of very large sets of publicly available Mycobacterium tuberculosis complex genomes.

15:45-16:15
Coffee break

16:15-17:30

Animal models to study mycobacterial infections

Chairs: **Margarida Saraiva,** *Department of Microbiology and Immunology, McGill University*; **Leen Rigouts,** *Institute of Tropical Medicine, Antwerp*

GL12 **Pere-Joan Cardona Iglesias,** *Hospital Universitari Germans Trias i Pujol, Badalona*
Mouse models to study TB pathogenesis

GL13 **Nicola Lore,** *IRCCS San Raffaele Scientific Institute*
Mouse models to study host-pathogens interaction in *M.abscessuss* lung infections

OR13 **Maria Vidal Ramos,** *Unitat de Tuberculosi Experimental, Microbiology Dept. Germans Trias i Pujol Research Institute and Hospital (IGTP-HUGTIP), Badalona*
Mycobacterium tuberculosis infecting Drosophila melanogaster: first insights of the new latent tuberculosis infection model.

17:30-19:00

Round Table: Bordering EU countries: Situation, challenges and way out (Availability and affordability of NGS technologies to control DR TB, Viral Diseases and AMR)

Chairs: **Silvia Bino,** *Institute of Public Health, Tirana*; **Hasan Hafizi,** *University Hospital for Lung diseases, Tirana*

Round table discussion

Tuesday 27 June

08:30-09:00
Registration

09:00-10:45
Host pathogens interaction in NTMs

Chairs: **Troels Lillebaek,** *Statens Serum Institut, Copenhagen*; **Eva Sodja,** *University Clinic of Pulmonary and Allergic Diseases Golnik*

GL14 **Lucas Boeck,** *University Hospital Basel*
Phenogenomic analyses: linking mycobacterial behaviours to molecular mechanisms

GL15 **Stephen Leon Icaza,** *IPBS-Toulouse*
The organoid revolution to assess mycobacterial pulmonary infections

OR14 **Federico Di Marco,** *San Raffaele Scientific Institute, Emerging Bacterial Pathogens Unit*
Single cells RNA sequencing of peripheral blood mononuclear cells reveals hyperinflammatory monocytes in patients with Mycobaterium abscessus pulmonary disease

OR15 **Ivana Palucci,** *Catholic University of Sacred Heart, Rome*
Cysteamine/Cystamine exert anti-Mycobacterium abscessus activity alone or in combination with amikacin.

OR16 **Francesca Nicola,** *San Raffaele Scientific Institute*
The spatial distribution of type 1 and type 17 immune transcriptomics profiles in murine models of chronic lung infection by opportunistic pathogens

10:45-11:15
Coffee break

11:15-13:00
Innovation in diagnostics

Chairs: **Christophe Sola,** *Université Paris-Saclay*; **Paolo Miotto,** *San Raffaele Scientific Institute, Milan*

GL16 **Morten Ruhwald,** *FIND, Geneva*
Future trends and innovation in diagnostics for TB

OR17 **Onya Opota,** *Institute of Microbiology, Lausanne University Hospital and University of Lausanne*
Nanomotion technology in combination with machine learning: a new approach for rapid antibiotic susceptibility test for Mycobacterium tuberculosis

OR18 **Leen Rigouts,** *Institute of Tropical Medicine, Antwerp, Belgium*
Successful *Myocbacterium* tuberculosis culture isolation from spiked tongue swabs processed by the Kudoh-Ogawa or cetylpyridinium chloride methods.

OR19 **Faridath Massou,** *Laboratoire de Reference des Mycobacteries*
Deeplex Myc/TB directly on sputum detects more mixed infections and heteroresistance compared to culture-based whole genome sequencing.

OR20 **Margaretha de Vos,** *FIND, Geneva*
Diagnostic accuracy of upper airway swabs and saliva with Xpert MTB/RIF Ultra for the detection of tuberculosis in adults

OR21 **Kristin Kremer,** *KNCV Tuberculosis Foundation*
The simple one-step stool processing method to diagnose tuberculosis is robust enough for global scale up

13.00-14.00
Lunch

14.00-15.00
Poster Session 2

15:00-16:15
Innovation in diagnostics (cont.)

Chairs: **Leen Rigouts,** *Institute of Tropical Medicine, Antwerp, Belgium*; **Richard Anthony,** *National Institute for Public Health and the Environment (RIVM), Bilthoven*

OR22 **Emilyn Costa,** *South African Medical Research Council Centre for Tuberculosis Research, Division of Molecular Biology and Human Genetics, Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town*
Evaluating DNA extraction commercial kits from Mycobacterium tuberculosis clinical primary liquid (MGIT) culture for downstream sequencing applications

OR23 **Miguel Moreno,** *Biomedicine Institute of Valencia IBV-CSIC*
The role of MIC shifts as early markers of treatment failure in tuberculosis

OR24 **Tim Bull,** *St. George's University of London*
Ph neutral anti-microbial peptide-based decontamination of samples enhances recovery in culture of low load Mycobacterium tuberculosis

OR25 **Erik Svensson,** *International Reference Laboratory of Mycobacteriology, Statens Serum Institut, Copenhagen*
Detection of Mycobacterium tuberculosis and resistance mutations in different sample types using FluoroType MTBDR v2. A study from Germany and Denmark.

OR26 **Dmytro Butov,** *Kharkiv National Medical University*
Consideration of the results of the Xpert MTB/RIF method on the treatment outcome of patients with M\XDR pulmonary tuberculosis during the COVID-19 epidemic in Kharkiv region, Ukraine

16:15-16:45
Coffee break

16:45-17:30
General Assembly

Wednesday 28 June

09:00-09:30
Registration

09.30-11.00
Session Non tuberculous mycobacteria, epidemiology and more

Chairs: **Troels Lillebaek,** *Statens Serum Institut, Copenhagen*; **Dorte Bek Folkvardsen,** *Statens Serum Institut, Copenhagen*

GL17 **Victor Næstholt Dahl,** *Aarhus University Hospital*
Global trends of pulmonary infections with nontuberculous mycobacteria

OR27 **Margo Diricks**, *Research Center Borstel*
Exploring the plasmidome of non-tuberculous mycobacteria

OR28 **Nils Wetzstein,** *Department of Internal Medicine, Infectious Diseases, University Hospital Frankfurt, Goethe University, Frankfurt am Main*
Genomic landscape of M. avium complex in Central Germany

OR29 **Xenia Iversen,** *International Reference Laboratory of Mycobacteriology, Statens Serum Institut, Copenhagen, Denmark*
Frozen in Time: Unlocking the History of Nontuberculous Mycobacteria

OR30 **Sandra Salillas-Berges,** *Radboud University Medical Center*
Rifampicin substituted by clofazimine in the recommended therapy of Mycobacterium avium pulmonary disease: a hollow-fibre model study

11.00-11.30
Coffee break

11:30-12.30
Session Biology of Pathogen

Chair: **Erik Svensson,** *Statens Serum Institut, Copenhagen*; **Mireia Coscolla,** *University of Valencia*

OR36 **Rina De Zwaan,** *National Institute for Public Health and the Environment*
Next-generation sequencing cluster typing; All single nucleotide polymorphisms are equal but some are more equal than others

OR31 **Kerri Malone,** *EMBL-EBI*
Fine-scale evolution of Mycobacterium tuberculosis growth rate

OR32 **Philip Supply,** *Univ. Lille, CNRS, Inserm, CHU Lille, Institut Pasteur de Lille, U1019 - UMR 9017 - CIIL - Center for Infection and Immunity of Lille*
CRISPR-Cas molecular memory in Mycobacterium canettii reveals the putative ancestral environmental origin of M. tuberculosis

OR34 **Sladjana Prisic,** *University of Hawaii at Manoa*
From bad to worse: Does zinc limitation make M. tuberculosis more virulent?

12:30-13.30

Session Biology of Pathogen

Chair: **Miguel Moreno,** *CSIC, Valencia*; **Violeta Valcheva,** *Bulgarian Academy of Sciences*

OR35 **Melanie Grobbelaar,** *Stellenbosch University*
Evolution of drug resistance and treatment outcome within a longitudinal retrospective study – linking outcome to treatment.

OR33 **Igor Mokrousov,** *St. Petersburg Pasteur Institute*
Paleopathological and molecular evidence of tuberculosis in human skeletal remains from 18th-19th century Orthodox cemeteries in Irkutsk, Eastern Siberia

OR37 **Joaquin Sanz,** *Universidad de Zaragoza - Instituto BIFI*
Improving vaccine descriptions in model-based impact prognosis of new tuberculosis vaccines: removing arbitrariness and reducing bias.

OR38 **Siavash Valafar,** *Chicago Medical School*
Diversifying Evolution in Mycobacterium tuberculosis and Evasion of Molecular Diagnostics for Isoniazid (INH) Resistance is most prevalent in Asia

13:30-14.00

Poster Awards and Closing Ceremony

Chair: **Daniela Maria Cirillo,** *San Raffaele Scientific Institute, Milan*; **Troels Lillebaek,** *Statens Serum Institut, Copenhagen*; **Silva Tafaj,** *University Hospital "Shefqet Ndroqi", Tirana*

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