



Programme

Sunday 26 June

12:30-14:30 Registration
14:30-16:00 Workshop on blood signatures/transcriptomics as biomarkers Chairs: Iñaki Comas , <i>Instituto de Biomedicina de Valencia (CSIC)</i> ; Daniela Maria Cirillo , <i>San Raffaele Scientific Institute, Milan</i> <u>OR01</u> Francesca Saluzzo , <i>Vita-Salute San Raffaele University</i> Looking for early treatment response biomarkers in TB platform trials: the EU-PEARL experience <u>GL01</u> Delia Goletti , <i>Istituto Nazionale Malattie Infettive L. Spallanzani</i> Biomarkers for TB infection: past, present and future <u>GL02</u> Yohhei Hamada , <i>University College London</i> Are mRNA based transcriptomic technologies mature enough to develop next-generation in-vitro diagnostic tests for tuberculosis? – A review of evidence and the technology landscape <u>GL03</u> Norbert Hittel , <i>Otsuka Pharmaceutical</i> LAM in sputum as a biomarker in clinical trials
16:00-16:30 Coffee break
16:30-19:00 Opening session Chairs: Daniela Maria Cirillo , <i>San Raffaele Scientific Institute, Milan</i> ; Stefan Niemann , <i>Forschungszentrum Borstel</i> Daniela Maria Cirillo , <i>San Raffaele Scientific Institute, Milan</i> and Tiziana Lazzarotto , <i>Director of the Microbiology ward, Bologna</i> Welcome <u>GL04</u> Opening keynote: Marina Tadolini , <i>University of Bologna - WHO GTB consultant</i> Unexpected challenges to end tuberculosis <u>GM Award</u> presented by Stefan Niemann <u>GL05</u> Gardner Middlebrook Awards 1 presented by BD <u>GL06</u> Gardner Middlebrook Awards 2 presented by BD <u>Award Ceremony 2021</u>
19:00 Welcome reception



Monday 27 June

08:00-09:00

Registration

09:00-10:30

Host-pathogen interaction

Chairs: **Paolo Miotto**, *San Raffaele Scientific Institute, Milan*, **Iñaki Comas**, *Instituto de Biomedicina de Valencia (CSIC)*

GL07 **Marcel Behr**, *McGill University*

Revisiting the timeline of TB: beyond latent and active TB

GL08 **Kristine Arnvig**, *University College London*

Sensing and adapting with RNA in *Mycobacterium tuberculosis*

OR02 **Stefano di Giorgi**, *University of Padova*

Ex vivo human model of TB based on Granuloma-like Structure (GLSs) to evaluate the efficacy of drugs

OR03 **Christian Utpatel**, *Research Center Borstel*

Diversity of *Mycobacterium tuberculosis* complex Lineage 1 - phylogeography, sub-lineages and their associated phenolic glycolipid patterns

10:30-11:00

Coffee break

11:00-12:45

Transmission/Evolution of TB complex

Chairs: **Matthias Merker**, *Research Center Borstel*; **Arash Ghodousi**, *Università Vita-Salute San Raffaele*

GL09 **Sébastien Gagneux**, *Swiss Tropical & Public Health Institute*

Ecology and evolution of MDR *M. tuberculosis*

GL10 **Timothy Walker**, *University of Oxford*

The effects of season and lineage on TB: old questions, new insights?

OR04 **Matthias Groeschel**, *Harvard Medical School*

Host-pathogen co-adaptation shapes susceptibility to infection with *M. tuberculosis*

OR05 **Maximilian Marin**, *Harvard Medical School*

Long read sequencing reveals gene conversion as a diversity generating mechanism in *Mycobacterium tuberculosis*

OR06 **Carla Mariner Llicer**, *Instituto de biomedicina de valencia (CSIC)*

Comparison of *Mycobacterium tuberculosis* genetic variability within sputum-culture paired samples in different settings: Mozambique and Georgia

12:45-13:45

Lunch

13:45-14:45

Poster session day 1



14:45-16:00

Covid and TB

Chairs: **Emmanuelle Cambeau**, *Université de Paris, Inserm UMR 1137 IAME*; **Stefan Niemann**, *Forschungszentrum Borstel*

GL11 **Troels Lillebaek**, *Statens Serum Institute*

From MTB to SARS-CoV-2 molecular epidemiology, experiences from Denmark

GL12 **Iñaki Comas**, *Biomedicine Institute of Valencia (IBV)*

TB and COVID-19: two sides of the same coin?

OR07 **Dario Garcia de Viedma**, *Instituto de Investigación sanitaria Gregorio Marañón. Madrid*

Tuberculosis along the pandemic: Molecular and genomic epidemiology to analyze changes in general dynamics and reinterpret relevant transmission clusters

16:00-16:30

Coffee break

16:30-18:00

Molecular diagnostic



Chairs: **Leen Rigouts**, *Institute of Tropical Medicine, Antwerp*; **Andrea Cabibbe**, *San Raffaele Scientific Institute, Milan*

GL13 **Stefan Niemann**, *Forschungszentrum Borstel*

Challenges to meeting the new MDR/XDR definitions from WHO

OR08 **Claudio Köser**, *University of Cambridge*

Lineage 1 is the odd one out for pretomanid and pyrazinamide – implications for antimicrobial susceptibility testing and treatment

OR09 **Amandine Sury**, *Sciensano, Brussels*

Phenotyping resistance to new and emerging medicines by a fast RNA-based drug susceptibility test

OR10 **Christian Chukwuezo Otum**, *Stellenbosch University*

Site-directed mutagenesis of Mycobacterium tuberculosis and functional validation to investigate potential bedaquiline resistance causing mutations

OR11 **Teresa Walz**, *Research Center Borstel*

Mycobacterium tuberculosis complex bacteria adaptation to antibiotics: Evolution informed tuberculosis treatments

19:00-Midnight

Congress party



Tuesday 28 June

08:30-09:00

Registration

09.00-10.30

New diagnostic strategies

Chairs: **Elisa Tagliani**, *San Raffaele Scientific Institute, Milan*; **Leen Rigouts**, *Institute of Tropical Medicine, Antwerp*

GL14 **Morten Ruhwald**, *FIND*

Update on the TB diagnostic pipeline, a response to the impact of the covid-19 pandemic

OR12 **Viola Dreyer**, *Research Center Borstel*

Rapid molecular diagnostics of resistance tuberculosis by targeted stool sequencing

OR13 **Faridath Massou**, *Supranational Reference Laboratory for Tuberculosis, Cotonou*

Multicentre evaluation of Xpert XDR and TrueNat 2nd line tests under field conditions

OR14 **Leonardo de Araujo**, *Research Center Borstel*

Collaborative implementation of targeted next-generation sequencing for the diagnosis of drug-resistant tuberculosis in Eswatini.

OR15 **Julian Libiseller-Egger**, *London School of Hygiene and Tropical Medicine (LSHTM)*

A standard and framework to facilitate the comparison and benchmarking of methods for resistance prediction from genomic data

10.30-11.00

Coffee break

11:00 - 12:00

MDR TB

Chairs: **Daniela Maria Cirillo**, *San Raffaele Scientific Institute, Milan*; **Matthias Merker**, *Research Center Borstel*

OR16 **Rita Sorrentino**, *San Raffaele Scientific Institute*

Role of smallRNAs in rifampicin tolerance in *M. tuberculosis* complex

OR17 **Diana Machado**, *Instituto de Higiene e Medicina Tropical, IHMT, Universidade Nova de Lisboa, UNL, Lisboa,*

Efflux-mediated pretomanid high-level resistance in *Mycobacterium tuberculosis*

OR18 **Galo Goig**, *Swiss Tropical and Public Health Institute*

Transmissibility of drug-resistant tuberculosis in a high-endemic setting as explained by bacterial genetic epistasis



12.00-13.00

Vaccine

Chairs: **Troels Lillebaek**, *Statens Serum Institut, Copenhagen*, **Iñaki Comas**, *Instituto de Biomedicina de Valencia (CSIC)*

GL15 **Frank Cobelens**, *Amsterdam Institute for Global Health and Development (AIGHD)*
Tuberculosis vaccine development: accelerate!

OR19 **Pere-Joan Cardona**, *Hospital Universitari Germans Trias i Pujol. IGTP*
Immunotherapy with RUTI vaccine, a new universal tool to improve the chemotherapy in active tuberculosis

OR20 **Julia Figl**, *Friedrich-Loeffler-Institut, Institute of Molecular Pathogenesis, Jena*
Efficacy of recombinant BCG vaccine candidates against *Mycobacterium bovis* infection in goats

13.00-14.00

Lunch

14.00-15.00

Poster session day 2

15.00-16.00

Non tuberculosis mycobacteria

Chairs: **Nicola Lore**, *San Raffaele Scientific Institute, Milan*; **Sebastien Gagneux**, *Swiss Tropical & Public Health Institute*

GL16 **Jakko van Ingen**, *Radboud University Medical Center, Nijmegen*
The future of NTM treatment: PK/PD and EUCAST susceptibility testing

OR21 **Nicola Lore**, *San Raffaele Scientific Institute*
Unravelling the pathogenicity of *Mycobacterium abscessus* clinical isolates in CF pulmonary epithelial cell and mouse models of respiratory infection

OR22 **Margo Diricks**, *Research Center Borstel*
Delineating *Mycobacterium abscessus* population structure and transmission employing high-resolution core genome multilocus sequence typing

16.00-16.30

Coffee break

16.30-17.30

General Assembly

18.00-20.00

Guided tour of the city

20.00-23:00

Traditional dinner



Wednesday 29 June

09:00-09:30 Registration
09.30-11.00 New Policies Chairs: Andrea Cabibbe , <i>San Raffaele Scientific Institute, Milan</i> ; Bouke de Jong , <i>Institute of Tropical Medicine, Antwerp</i> <u>GL17 Daniela Maria Cirillo</u> , <i>San Raffaele Scientific Institute, Milan</i> Summary of the new policies <u>GL18 Paolo Miotto</u> , <i>San Raffaele Scientific Institute, Milan</i> The WHO catalogue of mutations in <i>M.tuberculosis</i> and associated drug resistance <u>GL19 Emmanuelle Cambau</u> , <i>Université de Paris, Inserm UMR 1137 IAME</i> Session New standards on sensitivity testing
11.00-11.30 Coffee break
11.00-12.45 Closing lecture Chair: Daniela Maria Cirillo , <i>San Raffaele Scientific Institute, Milan</i> ; Silva Tafaj , <i>University Hospital "Shefqet Ndroqi", Tirana</i> <u>GL20 Vanni Bucci</u> , <i>UMass Chan Medical School</i> Microbiome dynamics and peripheral immune renormalization during anti-Mtb treatment
12.45-13.30 Poster awards and closing ceremony



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