

MycoPORTO

September 19th-20th, 2019.
ICBAS, Porto, Portugal.

ABSTRACTS BOOK

SCIENTIFIC MEETING ON MYCOBACTERIA

MycoPORTO

Sponsors



Welcome

TO PORTO



MycoPorto Organizing Committee

Margarida Saraiva, i3S, University of Porto

Salomé Gomes, ICBAS, University of Porto

Nuno S. Osório, ICVS, University of Minho

Hélder Bastos, Centro Hospitalar de S. João and i3S, University of Porto

SCIENTIFIC PROGRAMME

Thursday 19th September 2019 - morning

9:00 am Registration

9:30 am - 10:00 am Welcome

Professor Henrique Cyrne Carvalho, ICBAS Director & Organizing Committee

SESSION 1: GENETIC DIVERSITY AND EVOLUTION

Chairs: Iñaki Comas and Nuno S. Osório

10:00 am - 10:30 am KN1: Host-pathogen co-evolution: from mapping of candidate genes to prediction of worldwide genetic risk.

Luísa Pereira, i3S, Porto

10:30 am - 10:45 am OC1: How close is close? The revolution has arrived to the taxonomy of Mycobacterium.

Maria Jesus Garcia, Autonoma University, Madrid

10:45 am - 11:00 am OC2: A high resolution picture of tuberculosis transmission obtained from direct-from-sputum whole-genome sequencing.

Galo A. Goig, CSIC, Valencia

11:00 am - 11:30 am Coffee Break.

11:30 am - 12:00 am KN2: The origin of tuberculosis in the Palaeolithic predicts unprecedented population growth due to female protection.

Pere Joan Cardona, Universitat Autònoma de Barcelona, CIBERES, Barcelona

12:00 am - 12:15 pm OC3: Uncovering the epitopes underlying the induction of varying adaptive immune responses by different Mycobacterium tuberculosis lineages.

Carlos Magalhães, ICVS, Braga

12:15 pm - 12:30 pm OC4: Using Whole Genome Sequencing to Decode Mycobacterium tuberculosis Transmission: application in a low-burden country

Irving Cancino-Muñoz, CSIC, Valencia

12:30 pm - 12:45 pm OC5: Whole-Genome Sequencing application to a fast-transmitted strain detected by classical methods

J Comin-Polo, Instituto Aragonés de Ciencias de la Salud, Zaragoza

12:45 pm - 2:00 pm Lunch

Poster Session

SCIENTIFIC PROGRAMME

Thursday 19th September 2019 - afternoon

SESSION 2: FIELD WORK IN TB

Chairs: Mireia Coscolla and Helder Bastos

2:00 pm - 2:30 pm KN3: The BCN-Tbilisi clinical studies, lessons learnt from a long-term collaboration.
Cristina Vilaplana, Universitat Autònoma de Barcelona, CIBERES, Barcelona

2:30 pm - 2:45 pm OC6: Dynamics of TB mixed infections through space and time.
Miguel Moreno-Molina, CSIC, Valencia

2:45 pm – 3:00 pm OC7: Epidemiological dynamics of a 25 years outbreak in Gran Canaria inferred from whole genome sequencing
Mariana Lopez, CSIC, Valencia

3:00 pm - 3:30 pm KN4: Lessons learned on TB from field work in Bissau.
Christian Wejse, Aarhus University, Aarhus

3:30 pm - 4:15 pm Coffee Break

SESSION 3: TREATMENT AND DRUG RESISTANCE I

Chairs: Jesus Blasquez and Sofia Samper

4:15 pm - 4:45 pm KN5: Teaching new tricks to an “old dog”: reprogramming Ethionamide to fight Multidrug Resistant Tuberculosis. Alfonso Mendoza, GSK, Madrid

4:45 pm – 5:00 pm OC8: Towards the elucidation of the rifampicin/beta-lactam synergy in Mycobacteria
Maria Pilar Arenaz-Callao, Research & Development Agency of Aragón (ARAID) Foundation & University of Zaragoza, Zaragoza

5:00 pm – 5:15 pm OC9: Mode of action elucidation studies of the avermectins against Mycobacteria
José Manuel Ezquerro, University of Zaragoza, Zaragoza

5:15 pm – 5:30 pm OC10: Mode of action elucidation studies of a new chemical series active against Mycobacteria and other microbial pathogens
Ana Cristina Millan, University of Zaragoza, Zaragoza

5:30 pm – 5:45 pm OC11: Phenotypical and molecular characterization of streptomycin-resistant M. tuberculosis clinical isolates from a Portuguese cohort
Deisy Rocha, ICVS, Braga & i3S, Porto

5:45 pm – 6:15 pm KN6: The story of MDR-TB in Portugal: a genomic perspective on a persistent public health problem.
João Perdigão, Faculdade Farmácia, University of Lisbon, Lisbon

6:15pm – 7:15 pm Wine tasting

8:00 pm Optional Dinner

SCIENTIFIC PROGRAMME

Friday 20th September 2019 - morning

09:00 am - 09:30 am Scientific and administrative meeting of CIBERES participants

SESSION 4: TREATMENT AND DRUG RESISTANCE II

Chairs: Jose Antonio Ainsa and Salomé Gomes

9:30 am - 10:00 am KN7: Dissecting the mycobacterial MGLP pathway: A structural point of view.
Pedro Pereira, i3S, Porto

10:00 am - 10:15 am OC12: Pretomanid derivatives formulated in π -Pepto-Micelles for tuberculosis therapy by the intravenous route in zebrafish embryo and mice
Nils-Jørgen Knudsen Dal, University of Oslo, Oslo

10:15 am – 10:30 am OC13: Anti-Tuberculosis activity of selected Nitronaphthofuran compounds
Noelia Alonso-Rodriguez, University of Oslo, Oslo & Institut Pasteur, Paris

10:30 am- 10:45 am OC14: In silico repurposing of approved drugs against tuberculosis: targeting membrane transporters and energy metabolism.
Liliana Rodrigues, GHTM, IHMT, Lisboa

10:45 am - 11:00 am OC15: Towards efficient in vitro screening tools to discover new clinical options in the treatment of non-tuberculous Mycobacteria
Marta Gomara, University of Zaragoza, Zaragoza

11:00 am – 11:30 am Coffee Break

SESSION 5: PHYSIOLOGY

Chairs: Rui Appelberg and Jerome Nigou

11:30 am - 12:00 am KN8: Connecting vesiculogenesis and cell wall remodelling in Mycobacterium tuberculosis.
Rafael Prados-Rosales, Autonoma University, Madrid

12:00 am - 12:15 am OC16: Specificity and mutagenesis bias of the mycobacterial alternative mismatch repair analyzed by mutation accumulation studies.
IMartin-Blecua, CSIC, Madrid

12:15 am - 12:30 pm OC17: The FAD synthetase, an unexploited antimicrobial target against Mycobacterium tuberculosis.
Ernesto Anoz-Carbonell, Universidad de Zaragoza, Zaragoza & Università degli studi di Padova, Padova

12:30 pm - 12:45 pm OC18: Unveiling Mycobacterial methylmannose polysaccharide biosynthesis: a unique 1-O-methyltransferase specific for 3-O-methylated mannosides.
Jorge Ripoll-Rozada, i3S, Porto

12:45 pm - 2:00 pm Lunch
Poster Session

SCIENTIFIC PROGRAMME

Friday 20th September 2019 - afternoon

SESSION 6: HOST PATHOGEN INTERACTIONS I

Chairs: Esther Julian and Gil Castro

2:00 pm - 2:30 pm KN9: Impact of the inflammatory environment in the protective CD4+ T cell response to Mycobacterium tuberculosis infection.

Egídio Torrado, ICVS, Braga

2:30 pm - 2:45 pm OC19: Extracellular vesicles of Mycobacterium ulcerans: involvement in bacterial toxin diffusion and pathogenicity

Melanie Foulon, INSERM, Angers

2:45 pm - 3:00 pm OC20: Safety and toxicity study of the immunomodulatory agent Mycobacterium brumae in two different animal models

Marc Bach, Universitat Autònoma de Barcelona, Barcelona

3:00 pm - 3:15 pm OC21: Experimental evidence for the in vivo attenuation of Mycobacterium africanum.

Baltazar Cá, i3S, Porto

3:15 pm – 3:45 pm Coffee

Break

SESSION 7: HOST PATHOGEN INTERACTIONS II

Chairs: Rafael Prados Rosales and Margarida Saraiva

3:45 pm - 4:15 pm KN10: Cryo-EM beauty and benefit for Bionano: our experience with a macromolecular secretion system in Mycobacterium tuberculosis.

Peter J. Peters, The Maastricht Multimodal Molecular Imaging institute, Maastricht

4:15 pm - 4:30 pm OC22: Mycobacterium tuberculosis modulates sialylation in the lung with an impact on disease susceptibility

Kaori Fonseca, i3S, Porto

4:30 pm - 4:45 pm OC23: Novel innate immunity mechanism impacting mycobacterial infections

Mariana Resende, i3S, Porto & ICVS, Braga

4:45 pm - 5:00 pm OC24: Mycobacterium avium infection-induced thymic atrophy is associated with alterations in bone marrow precursors, thymic stroma and thymocyte viability

Palmira Barreira Silva, ICVS, Braga

5:00 pm - 5:30 pm KN11: Living fossils? The African origins of the M. tuberculosis complex.

Bouke de Jong, Institute of Tropical Medicine, Antwerp

5.30 pm - 5.45 pm Final remarks.

5:45 pm Walk by the river Douro and Port cellar visit

Optional Dinner