



MycoBDN/ ADVANCE-TB meeting

September 25th & 26th, 2024
Badalona, Barcelona (Spain)

Auditori, Institut d'Investigació Contra la
Leucèmia Josep Carreras
Ctra de Can Ruti, Camí de les Escoles, s/n
08916 Badalona, Barcelona (Spain)

Organisers:

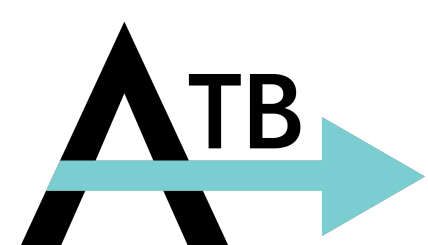
Esther Julián (UAB), Cris Vilaplana (IGTP-HUGTIP),
Alicia Lacoma (IGTP-CIBERES), Lilibeth Arias (IGTP)



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Organized by:



mycONET

UAB
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Germans Trias i Pujol
Hospital



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INVESTIGACIÓN
BIOMÉDICA EN RED

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September 25th 2024

10.30h

Registration and welcome

Section 1: New therapeutic strategies and ways to assess their efficacy

Chairs: Santiago Ramon and Margarida Saraiva.

11.00h

Talks - 15min talk + 5min discussion

1. **The zebrafish model to dissect TB pathogenesis** - Francisco J Roca Soler (Infectious Disease Pathology, Clinical Microbiology and Tropical Medicine, Universidad de Murcia)
2. **Host-signalling for efficient response and membrane-repair upon mycobacterial infection in *Dictyostelium discoideum*** - Sandra Guallar (Department of Biochemistry, University of Geneva, Switzerland)
3. **Evaluation of critical parameters in the hollow-fibre system for tuberculosis through its Implementation at the University of Zaragoza** - Diana A. Aguilar Ayala (Universidad de Zaragoza)
4. **OPTIKA, a new high content kill-kinetic assay to assess in vitro drug combinations against *Mycobacterium tuberculosis*** - Jordana Galizia (Universidad de Zaragoza)
5. **Accelerating *M. abscessus* drug discovery with novel double-reporter strains** - Tânia Martins da Silva (i3S - Instituto de Investigação e Inovação em Saúde, Universidade do Porto)

12.45h

Flash talks - 5min each with 20min of general discussion

1. **A novel cost-effective *D. melanogaster* model for exploring therapies against mycobacterial diseases** - Maria Vidal (UTE, Fundació Institut Germans Trias i Pujol)
2. **Oral administration of heat-killed *Mycolicibacterium manresensis* induces an increased response against subsequent infections in the *Drosophila melanogaster* model** - Mariona Cortacans (UTE, Fundació Institut Germans Trias i Pujol)
3. ***Galleria mellonella* and mycobacteria** - Víctor Campo (Bacterial Infection and antimicrobial therapy, IBEC)

4. **Efficacy of mycobacteriophage D29 against intracellular *Mycobacterium smegmatis***
- Daria Smalchuk (Innovation in Respiratory Infections and Tuberculosis Diagnosis, Fundació Institut Germans Trias i Pujol)
5. **New targets to inhibit TNF-mediated pathogenesis in TB** - M. Elena Fernandez Pelluz
(Infectious Disease Pathology, Clinical Microbiology and Tropical Medicine, Universidad de Murcia)
6. **Exploring novel structure-based strategies targeting the energy metabolism of *Mycobacterium tuberculosis*** - Katerina Barmpidi (Computational Biology Chemistry & Gastronomy Group, Institute of Biomedicine and Institute of Theoretical and Computational Chemistry, Universitat de Barcelona)
7. **RS Ratio and MBLA implementation from in vitro low volume samples** - Santiago Ferrer, Claire Jordan and Juan Calvet (Collective for Multidisciplinary Biomedical Imaging, Engineering, and Sciences, Universidad Carlos III de Madrid, UC3M)

13.20h

Common Discussion and Q&A for Flash talks

13.40h

Lunch

Section 2: Pathogen virulence factors

Chairs: Esther Julián and Francisco Roca.

14.45h

Talks - 15min talk + 5min discussion

1. **Acylation of glycerolipids in mycobacteria** - Marcelo Guerin (Structural Glycobiology, Instituto de Biologia Molecular de Barcelona, IBMB-CSIC)
2. **Genomics and transcriptomics differences between a virulent strain and a mild strain: possible targets for Mtb treatment** - Javier Alonso del Real (Tuberculosis Genomics Unit, Instituto de Biomedicina de Valencia, IBV-CSIC)
3. **Mycobacteria virulence adaptation in the *Drosophila melanogaster* model** - Marta Arch (UTE, Fundació Institut Germans Trias i Pujol)

15.50h

Flash talks - 5min each with 20min of general discussion

1. In vitro evolution and mutation rates in *Mycobacterium smegmatis* - Milena Galvis
(PathoGenOmics, Instituto de Biología Integrativa de Sistemas, I2SysBio-CSIC)
2. New advances in the role of NucS in the development of antibiotic resistance in *Mycobacterium tuberculosis* - Sonia Gullón (Centro Nacional de Biotecnología, CNB-CSIC)
3. Genomic analysis of persisting infections by non-tuberculous mycobacteria - Sergio Buenestado Serrano (Hospital General Universitario Gregorio Marañón)
4. Evaluation of mycobacterial extracellular vesicles isolation methods - Laura Lerma
(Mycobacteria Research Laboratory - UAM, Universidad Autónoma de Madrid)

16.10h

Common Discussion and Q&A for Flash talks

16.30h

Coffee break

17.00h - 19.00h

CIBERES side meeting - *only for CIBERES members*

September 26th 2024

Section 3: Epidemiology and infection control

Chair: Iñaki Comas and Mireia Coscolla.

09.00h

Flash talks - 5min each with 20min of general discussion

1. *M. tuberculosis* pangenome to elucidate genomic differences between human and animal lineages - Paula Ruiz Rodríguez (PathoGenOmics, Instituto de Biología Integrativa de Sistemas, I2SysBio-CSIC)

6. Deciphering mycobacteria-tumor cell interaction - Núria Sabando Garcia

(Mycobacteria Research Laboratory - UAB, Universidad Autònoma de Barcelona)

7. Circulating Biomarkers for TB Prognosis and Treatment Response in the context of the SMA-TB clinical trial - Nino Gogichadze (UTE, Fundació Institut Germans Trias i Pujol)

10.20h

Common Discussion and Q&A for Flash talks

10.40h

Coffee break

11.15h

Talks - 15min talk + 5min discussion

1. The role of IL1b in lung homeostasis and TB disease - Margarida Saraiva (I3S)

2. Impact of air pollutants on respiratory infections - Iris Romero (Innovation in Respiratory Infections and Tuberculosis Diagnosis, Fundació Institut Germans Trias i Pujol)

3. Genetic dissection of vesiculogenesis in *Mycobacterium tuberculosis* - Rafael Prados (Mycobacteria Research Laboratory - UAM, Universidad Autònoma de Madrid)

4. Sex and progression towards active TB in an experimental mouse model. Impact of stress-induced glucocorticoids and intermittent fasting - Pablo Soldevilla (UTE, Fundació Institut Germans Trias i Pujol)

5. Tissue immunophenotyping reveals divergent immune responses to *Mycobacterium tuberculosis* in lung parenchyma and vasculature of tuberculosis mice model - Sergio Diaz (Innovation in Respiratory Infections and Tuberculosis Diagnosis, Fundació Institut Germans Trias i Pujol)

13.00h

Open discussion session

Chairs: Esther Julián, Cris Vilaplana and Alicia Lacoma

13.45h

Closure and lunch



 www.advancetb.eu

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