

10^{as} JORNADAS FORMACIÓN CIBERES

*Jornadas conjuntas con
CIBERFES*



**Escuela Nacional de Sanidad
Instituto de Salud Carlos III
19 y 20 de Octubre 2017**

Madrid

Viernes, 20 de Octubre

09: 30-10:00 Sesión de Presentaciones Orales 3

O13. *“Whole genome sequencing analysis of clusters involving immigrants to develop tailored molecular tools to discriminate between recent transmission in the host country and new importations”* - **Estefanía Abascal**. Grupo CB06/06/0058, CIBERES

O14. *“Resveratrol attenuates muscle mass loss in the mouse gastrocnemius during hindlimb immobilization”* - **Laura Mañas García**. Grupo CB06/06/0043, CIBERES

O15. *“Protective role of pulmonary surfactant against non-typable haemophilus influenzae respiratory infection”* - **Zoe Gonzalez Carnicero**. Grupo CB06/06/0002, CIBERES

O16. *“Interference of microRNA-27a-5p and microRNA-146a-5p in cultured human alveolar epithelial cells stimulated with IL-1 β ”* - **Eva López**. Grupo CB06/06/0044, CIBERES

Modera: JL Izquierdo

10:00-10:45 Presentaciones ayudas iniciación 1

I1. *“Whole genome sequencing analysis of adult invasive pneumococcal disease (IPD) caused by serotype 11A”* - **Aida González Díaz**. Grupo CB06/06/0037, CIBERES

I2. *“Processing TB granuloma samples for host-expression studies. Experience from the SH-TBL Project”* - **Albert Despuig Busquet**. Grupo CB06/06/0031, CIBERES

I3. *“Long term effectiveness of positive airway pressure for obesity hypoventilation syndrome”* - **Ana Nacarino Burgos**. Grupo CB06/06/0029, CIBERES

I4. *“Relationships between disease stage and bronchial microbiome in COPD”* - **Cristina Lalmolda Puyol**. Grupo CB06/06/1089, CIBERES

Modera: Cristina Prat

10:45-11:30 Sesión de Pósters 3

P39. *“Clinical implications of Streptococcus pneumoniae identification based only on the optochin susceptibility test”* - **María Ercibengoa Arana**. Grupo CB06/06/0056, CIBERES

P40. *“Developing a new Drosophila melanogaster model to study the innate immune response against TB”* - **Marta Arch Sisquella**. Grupo CB06/06/0031, CIBERES

P41. *“Recurrent Klebsiella pneumoniae bacteraemia in adults: persistence and reinfection”* - **Meritxell Cubero González**. Grupo CB06/06/0037, CIBERES

Processing TB granuloma samples for host-expression studies. Experience from the SH-TBL Project.

Albert Despuig Busquet
Grupo CB06/06/0031, CIBERES

Background:

Despite tuberculosis (TB) disease have positive treatment outcomes, nowadays there is no validated correlator of protection, diagnosis or prognosis. Promising genetic profiles have described in blood of TB patients. Despite it has been highlighted the importance to check, compare and validate these profiles with host's-expression in tissue, access to fresh TB lesions is scarce, so the literature is limited.

Hypothesis:

Using an existing RNA isolation protocol on frozen samples from human TB lesions will allow us to obtain high-quality total RNA to be used for Next Generation Sequencing (NGS).

Methods and Results:

Proper conservation of surgical specimens after therapeutic surgery is crucial for preserving RNA integrity (RIN). Cryofracturing methods from frozen tissue into a course powder is preliminary for grinding the tissue through FastPrep systems. This is followed by total RNA isolation and DNA removal through commercial kits. Concentration and RIN of total RNA obtained is evaluated by a Bioanalyzer system. We performed 70 total RNA isolations from samples (from 5 different granuloma areas) from 14 patients (7 M; 7 F). We needed to adapt the cryofracturing and grinding protocol to the different granuloma zones. We obtained RNA from 62 samples with enough quality to perform NGS. Higher RNA degradation correlated with necrotic granuloma areas (RIN 4.34 center cavity vs RIN 5.81 healthy area). **Conclusions:** 1. Cryofracturing and grinding frozen human TB lesions has to be adapted to each type of sample, but is an effective method to obtain total RNA from TB granulomas for high-throughput applications. 2. Lower RNA integrity was found in necrotic zones, which correlates with a mayor tissue destruction in each granuloma TB lesion area.

Acknowledgements:

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