

Accepted Manuscript

Title: Non-Tuberculous Mycobacteria multispecies biofilms in cystic fibrosis: development of an *in vitro* *Mycobacterium abscessus* and *Pseudomonas aeruginosa* dual species biofilm model

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PII: S1438-4221(17)30547-7
DOI: <https://doi.org/10.1016/j.ijmm.2018.03.003>
Reference: IJMM 51217

To appear in:

Received date: 2-11-2017
Revised date: 17-2-2018
Accepted date: 5-3-2018

Please cite this article as: Rodríguez-Sevilla, Graciela, García-Coca, Marta, Romera-García, David, Aguilera-Correa, John Jairo, Mahíllo-Fernández, Ignacio, Esteban, Jaime, Pérez-Jorge, Concepción, Non-Tuberculous Mycobacteria multispecies biofilms in cystic fibrosis: development of an *in vitro* *Mycobacterium abscessus* and *Pseudomonas aeruginosa* dual species biofilm model. *International Journal of Medical Microbiology* <https://doi.org/10.1016/j.ijmm.2018.03.003>

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**Non-Tuberculous Mycobacteria multispecies biofilms in cystic
fibrosis: development of an *in vitro* *Mycobacterium*
abscessus and *Pseudomonas aeruginosa* dual species
biofilm model**

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Abstract

Lung disease in cystic fibrosis (CF) is characterized by the progressive colonization of the respiratory tract by different bacteria, which develop polymicrobial biofilms. In the past decades, there has been an increase in the number of CF patients infected with Non-Tuberculous Mycobacteria (NTM). Although *Mycobacterium abscessus* is the main NTM isolated globally, little is known about *M. abscessus* multispecies biofilm formation. In the present study we developed an *in vitro* model to study the phenotypic characteristics of biofilms formed by *M. abscessus* and *Pseudomonas aeruginosa*, a major pathogen in CF. For that purpose, dual species biofilms were grown on polycarbonate membranes with a fixed concentration of *P. aeruginosa* and different inoculums of *M. abscessus*. The

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