Cystic fibrosis sputum media induces an overall loss of antibiotic susceptibility in *Mycobacterium abscessus*

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Mycobacterium abscessus complex (MABSC) comprises a group of environmental microorganisms, which are a concerning cause of opportunistic respiratory infections in patients with cystic fibrosis or bronchiectasis. Only 45.6% of MABSC treatments are successful, and therefore this is a need to discover new antimicrobials that can treat these pathogens. However, the transferability of outcomes to the clinic is flawed by an inability to accurately represent the lung environment within the laboratory. Herein, we apply two preestablished formulations of sputum media (ACFS and SCFM1) to MABSC antibiotic susceptibility testing. Using conventional broth microdilution, we have observed strain and antibiotic dependent alterations in antimicrobial sensitivity in each sputum media compared standard laboratory media (7H9), with an overall reduction in susceptibility within the physiologically relevant conditions. We provide a timely contribution to the field of *M. abscessus* antibiotic discovery by emphasising the need for improved physiological relevance.