The use of rep-PCR (Diversilab®, bioMérieux) in combination with multiplex PCR (targeting virulence genes) reveals the transmission of Pseudomonas aeruginosa isolates among cystic fibrosis patients in a hospital background

Methods:
The use of molecular typing techniques such as rep-PCR (Diversilab®, bioMérieux), in combination with multiplex PCR targeting feR and pyocin genes and S-type pyocin genes to distinguish between P. aeruginosa isolates.

Conclusion:
In order to quickly detect and respond to bacterial transmissions and outbreaks in hospitals, an appropriate detection method to identify these transmission events and strains is indispensable. Although the use of rep-PCR to determine the clonally relatedness of potential transmissible strains is very useful, we have shown that a combination of the latter technique together with a specific multiplex PCR targeting virulence factors such as feR and pyocin genes allows for the accurate detection of transmission of P. aeruginosa among CF patients in a hospital environment. We showed that intra CF patient P. aeruginosa transmission can occur but that there is not really one highly transmissible CF clone spreading.

Objectives:
To rapidly detect transmission of Pseudomonas aeruginosa (P. aeruginosa) among cystic fibrosis (CF) patients in a hospital environment, so that the necessary measures can be taken to avoid future transmissions.

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