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Editorial Open Access

Unearthing the Truth About Bacterial Reservoirs in Cystic Fibrosis

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Prevention of primary bacterial colonization in patients with cystic fibrosis (CF) is paramount to patient quality of life and long term survival, but there is limited research into the prevention of environmental acquisition of highly pathogenic bacteria in CF such as Pseudomonas aeruginosa and Burkholderia cenocepacia. Hospital and clinic based isolation protocols have dramatically cut down on patient to patient transmission of pathogenic bacteria, but new acquisition of bacteria continues to occur in a stable fashion. And while Burkholderia species were originally discovered as a commensal soil pathogen, the risk to CF patients posed by strains residing in the natural environment is unknown. What is the best way to determine the impact of environmental reservoirs of bacteria in CF? Rapid PCR techniques for detecting P. aeruginosa in chlorinated water and aerosols are underway [1], but further soil and aerosol based studies are needed to determine their true impact. With the release of the Open Access journal Air & Water Borne Diseases, international scientists will have the opportunity to quickly share advancements in microbial transmission pathogenesis across the globe. Through open access, researchers can easily facilitate translational research opportunities in disorders affected by environmental acquisition of bacteria such as CF. Easily accessible and rapidly disseminated information is key to distributing knowledge across research groups in the age of economic cutbacks and limited governmental funding, and OMICS Group journals such as Air and Water Borne Diseases offer this unique opportunity. Again I ask what will be the best way to determine the impact of environmental reservoirs of bacteria in CF? Through rapid communication we hope to share the most effective biomarkers for diseases such as CF employing worldwide technologic advances

Reference

1. Lee CS, Wetzel K, Buckley T, Wozniak D, Lee J (2011) Rapid and sensitive detection of Pseudomonas aeruginosa in chlorinated water and aerosols targeting gyrB gene using real-time PCR. J Appl Microbiol 111: 893-903.

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