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(54) **Title:** BIOMARKERS FOR RESPIRATORY INFECTION

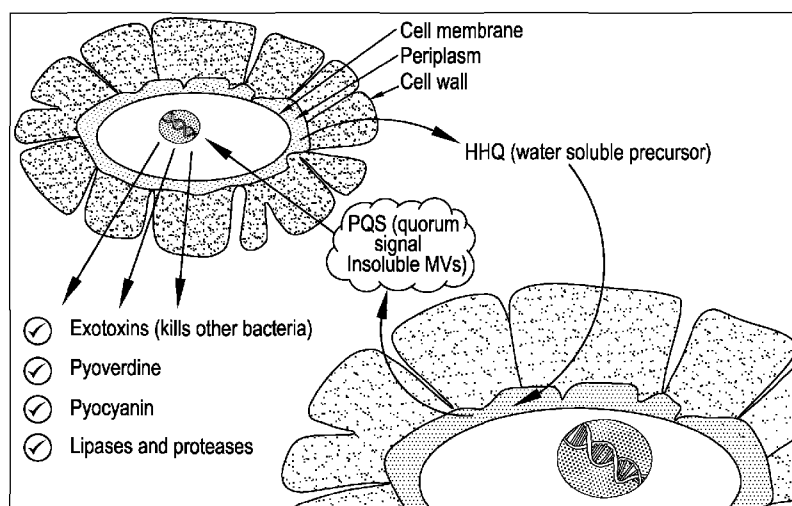


Figure 1

(57) **Abstract:** Methods of determining levels of activity of bacteria in the lungs of patients are described, in which levels of a marker of a bacterial iron scavenging processes (for example, siderophores) and levels of a secreted bacterial protein are measured over time. Changes in the measured levels over time allow levels of bacterial activity to be determined, and exacerbations of bacterial infection to be predicted and/or monitored. Additional markers may also be used. The methods of the invention may also be used for monitoring effectiveness of antibiotic treatment of lung infection. The invention is particularly useful for monitoring *P. aeruginosa* levels in lungs of cystic fibrosis patients. Kits for use in the methods are also described.