Bacteriophage Cocktails for the Treatment of Acute Respiratory Infections caused by MDR ESKAPE Pathogens

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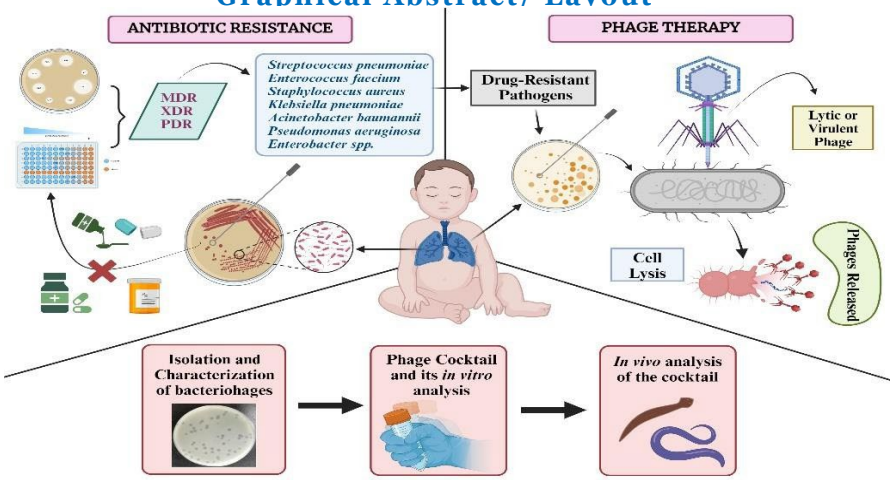
3

Graphical Abstract/ Lavout



Project Description: (Restricted to 150 words):

Acute respiratory infection is a great concern in children under 5 years of age. Especially, the development of pneumonia is deterrent to public health. Among various infections and disease prognoses in children under five, acute respiratory infections are very significant and causes a high occurrence in early stages of life. Bacterial infection can often lead to respiratory complications. Thus, evading these bacteria is very substantial in preventing complications and morbidity. Bacteria that are highly observed include *Streptococcus pneumoniae*, and ESKAPE pathogens (*Enterococcus faecium*, *Staphylococcus aureus*, *Klebsiella pneumonia*, *Acinetobacter baumannii, Pseudomonas aeruginosa*, *Enterobacter* spp.) ESKAPE pathogens are high-priority pathogens as listed by World Health Organization. Phage therapy is the use of viruses to kill pathogenic bacteria. Phages have been used for a very long time, especially in respiratory infections. Data indicates that phage treatment is effective against a variety of under-five bacterial pathogens in preclinical and clinical settings, including lung bacterial pathogens. Phage treatment combats the progression of lung bacterial infections in several ways. Thus, exploring their mechanism is critical for better phage applications.

Products/ Instruments/ Results/ Outreach Activities (Pictures)