Journal of Pharmaceutical Sciences and Emerging Drugs

Short Communication

A SCITECHNOL JOURNAL

Using plural phages to treat Multiple Drug Resistant (MDR) Acinetobacter baumannii

Tirasak Pasharawipas

Rangsit University, Thailand

Abstract:

Acinetobacter baumannii (AB) is one of the important multiple drug resistant (MDR) bacterial infection with environmental contamination especially in hospitals. AB is the major fatal cause of acquired hospital bacterial infection. With the limitation to develop new antibiotic drug, nowadays, phage therapy is reignited as an alternative strategy to fight against MDR bacterium. One of the main problems concerning phage therapy is that bacterium can develop to be a lysogen which becomes resistant to the same phage treatment. This lysogenic mechanism is regulated when bacterium host is infected by temperate phage which unfortunately seems to be the major kind of isolated phages by various researchers. It is seldom to isolate virulent phage which can keep re-infecting the bacterial host by the phage's progeny without lysogenic pathway. Using the proper amounts of temperate phage, so called multiplicity of infection (MOI), to infect the bacterial hosts can theoretically prevent lysogenic pathway. However, it is not practical to perfectly prepare the proper amount of MOI for the treatment. In this study, many isolated ABs have been obtained from patients. The AB 116 and AB 160 are used as the models to study their susceptibility to phage therapy. Plural kinds of AB-phages (bacteriophages of AB) for each particular AB have also been isolated and called AB-phage a, b, c and d. AB-phage a and c can infect AB 116 while AB 160 can be infected by AB-phage a, b and d. In this presentation, using plural AB-phage to treat AB in vitro will be presented and discussed.

Biography:

Tirasak Pasharawipas has completed his PhD from Mahidol University in Bangkok, Thailand and Post-doctoral studies in Neuro-virology and Cancer Biology from Temple University, Philadelphia. He is a Professor in Medical Science department of Rangsit University. Most of his publications concern viral diseases and immunity in invertebrates, inducible viral receptors and phage therapy.