Title: Phage Resistance Generated during Phage Therapy and its Countermeasure Strategy

Congress Theme: Phage Therapy
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Summary

Phage resistance is a common issue during phage therapy, which could result in the re-occurrence of infections and the failure of phage therapy. Phage resistance mechanisms had been studied *in vitro,* however, the mechanisms *in vivo* and its countermeasure strategies are not well understood. Here we reported that phage resistance mutant could be generated by mutation for acute infections. Thus, using next evolution phage-typing (NEPT) to select a phage that could kill the mutants, and make a cocktail that includes these two phages could effectively inhibit phage resistance. And for chronic infections, there are many subpopulations in the infection site and should use a specific phage and a broad host range phage cocktail to eliminate all the heterogenous bacteria.