DO NOT CONSIDER FOR TALK

10th Annual SEA Symposium Abstract

Indiana University of Pennsylvania

Indiana PA

Corresponding Faculty Member: Cuong Diep (cqdiep@gmail.com)

Maroc7: a Mycobacterium phage from Utah

Tori Swartz, Sarah Shiber, Carl Luciano, Seema Bharathan, Cuong Q Diep

Bacteriophages are viruses that infect bacteria. Understanding their biology and diversity could lead to treatments for antibiotics resistance and diseases such as cystic fibrosis. Phages infect very specific hosts, which reduces side effects for any potential therapy. Here, we annotate a Mycobacterium smegmatis temperate phage called Maroc7, which was isolated in 2010 by students at Brigham Young University. Maroc7 belongs to the Subcluster A1, which has a -1 frameshift in the tail assembly chaperone (gp21-22). Interestingly, gp34 (minor tail protein) has a cytosine insertion that resulted in a premature stop codon in the middle of the gene. Therefore, the second half of the gene (gp35) was called as a new gene with a 74 bp overlap with gp34. This suggests that gp34 is a nonessential gene. It would be interesting to determine experimentally whether the truncated protein is produced or not.