CONSIDER FOR TALK

10th Annual SEA Symposium Abstract

Western Kentucky University

Bowling Green KY

Corresponding Faculty Member: Claire Rinehart (claire.rinehart@wku.edu)



Wyatt R Ringo

Features for Six Mycobacteriophage: BeeZoo (K1), Childish (B1), Kahve (B1), Priya (A9), Sandalphon (F1), and Adnama (E)

Gillian D Brown, Marcus Q Brown, Alison M Cash, Miriam A Chinkers, Hannah K Congleton, Katherine E Crider, M'Kyia N Davis, Christian P Dillard, Madison J Ellis, Anas Gondal, Olive M Halmadine, Evan C Hendrickson, Mason B Herschberg, Georgia A Hoffman, Brooklyn N Kassinger, Samantha J Kitchen, Reinhard M Knerr, Emma A Lamb, Elliott J Law, Zavyore C Martinez, Noah L Middlebrook, Sabid S Mir, Erin E Moe, Jeffery K Moreman, Connor J Patterson, Elizabeth P Peden, Wyatt R Ringo, Sasha V Sairajeev, Hannah K Shapiro, Aashka N Sheth, Julia M Stekardis, Alexander A Stewart, Anna R Strunjas, Bailey N Thompson, Briley A Thompson, Isabella G Uhls, Emina Vranjkovina, Naomi S Rowland, Amanda K Staples, Bobby L Gaffney, Claire A Rinehart, Rodney A King

Five phages, BeeZoo, Childish, Kahve, Priya, and Sandalphon were isolated from soil samples taken in Bowling Green, KY. Adnama was isolated from soil which came from Louisville, KY. All phages were grown on Mycobacterium smegmatis mc2155.   
  
BeeZoo is a typical cluster K1 phage that displays large 3.2 mm turbid plaques after 48 hrs of growth at 30°C. It codes for a tyrosine integrase. It has a genome that is 60,494 bp long with 98 genes. It is a siphoviridae morphotype that has a 50 nm diameter head and a 220 nm long tail. It codes for 1 tRNA.  
  
Childish is a typical cluster B1 phage that displays large 3-4 mm plaques with large halos after 24-48 hrs incubation at 37°C. It has no integrase. Childish has a genome size of 69,044 bp with 100 genes. It is a siphoviridae morphotype and has a head diameter of 47 nm and a tail length of 327. It carries no tRNAs.  
  
Kahve is also a typical cluster B1 phage that displays clear plaques after 24 hrs at 37°C. Kahve has a genome size of 69,031 bp with 102 genes. It has not integrase. It is a siphoviridae morphotypes and has a head diameter of 55 nm and a tail length of 297 nm. It carries no tRNAs.  
  
Priya is a typical cluster A9 phage that displays 2 mm plaques. It has a genome size of 52,949 bp with 96 genes. It carries no integrase. It is a siphoviridae morphotype with a 35 nm diameter head and a 170 nm long tail. It codes for 2 tRNAs.  
  
Sandalphon is a typical cluster F1 phage that displays 1 mm slightly turbid plaques after 24 hrs at 37°C but with a turbid halo after 48 hrs. It does not code for an integrase. It has a genome size of 59,540 bp with 103 genes. It is a siphoviridae morphotype with a 62 nm diameter head and a 230 nm long tail. It carries no tRNAs.  
  
Adnama is a typical cluster E phage that displays 2 mm turbid plaques and codes for a tyrosine integrase. It has a genome size of 75,208 bp with 148 genes. It is a siphoviridae morphotype with a 35 nm diameter head and a 170 nm long tail. It codes for 2 tRNAs.