How Mycobacteriophage Infection Is Affected by Variant Forms of Iron Doped Hydroxyapatite Nanoparticles

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Mycobacteriophages are Viruses that infect Mycobacterium smegmatis. Iron doped Hydroxyapatite Nanoparticles can increase Mycobacteriophage Oliver Walter's Infection of Mycobacterium smegmatis. Variant forms of iron doped Hydroxyapatite Nanoparticles were tested for two distinct reasons. Variations of Particles producing distinct results helps determine by which mechanism the Hydroxyapatite Nanoparticles increase the phages ability to kill Mycobacterium smegmatis. Second is to isolate and understand the optimum Nanoparticle for different types of phages against different bacterial strains. This is important in making phage therapy a viable option in fighting antibiotic resistant bacteria. Experimental data was gathered via plaque assays; of Oliver Walter infecting Mycobacterium smegmatis. The data was then inputted into computer programs to understand validity and determine statistical significance.

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