

The Necessity of Research on Antibiotic Alternatives and The Possibility of Use Phage Therapy to Replace Antibiotics

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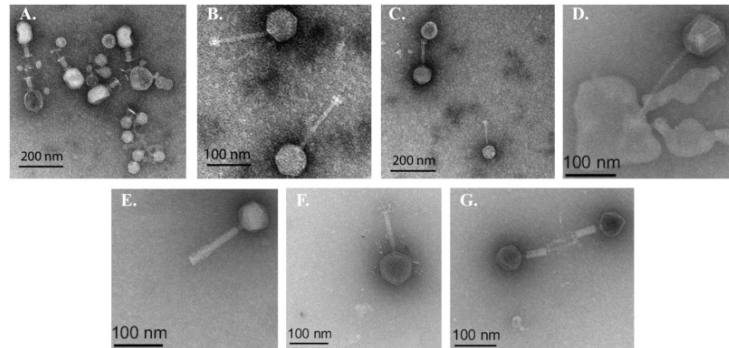
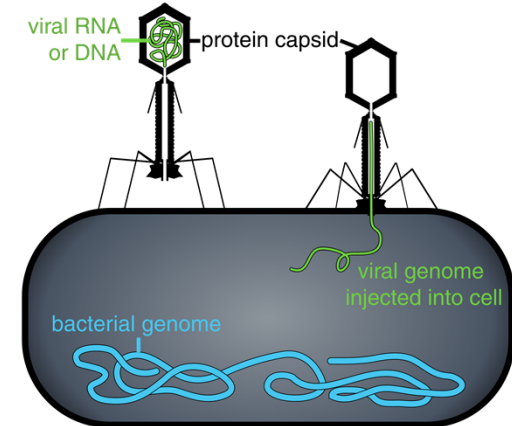
Abstract

Antibiotics came into widespread use in the 20th century after the discovery of modern penicillin and its excellent performance as an anti-infective medicine in warfare. Medical professionals know that antibiotics are not a panacea, but that does not stop medical professionals from being enthusiastic about using antibiotics to solve problems because it is faster and easier to use antibiotics than the complexity and ineffectiveness of other microbial treatments.

This mentality led to the misuse of antibiotics in the 20th century and directly contributed to the increase in microbial resistance to antibiotics. After the 21st century, medical practitioners found that antibiotics were becoming less and less effective, and even "superbugs" emerged that were completely resistant to most antibiotics. Medical practitioners knew they needed to find a treatment alternative, and phage therapy, which had been proposed in the 20th century, was reintroduced.

What are phages?

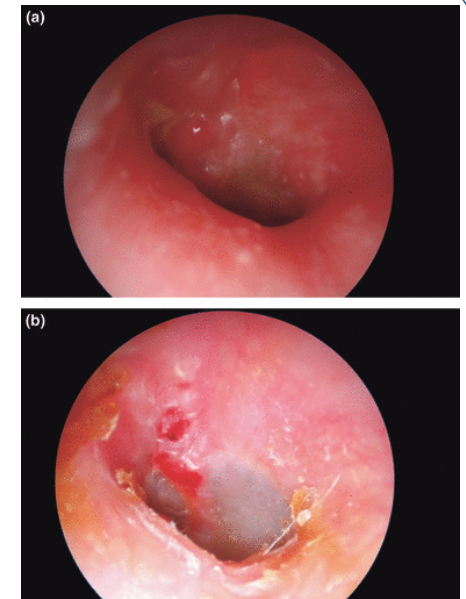
Phages, formally known as bacteriophages, are viruses that solely kill and selectively target bacteria. They are the most common biological entities in nature and have been shown to effectively fight and destroy multi-drug resistant bacteria.



Dr. Shawna McCallin uses a phage cocktail to treat bacterial infections on burned skin in mice.

References

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Dr. Catherine Hawkins Topical treatment of *Pseudomonas aeruginosa* otitis of dogs with a bacteriophage mixture: A before/after clinical trial.