

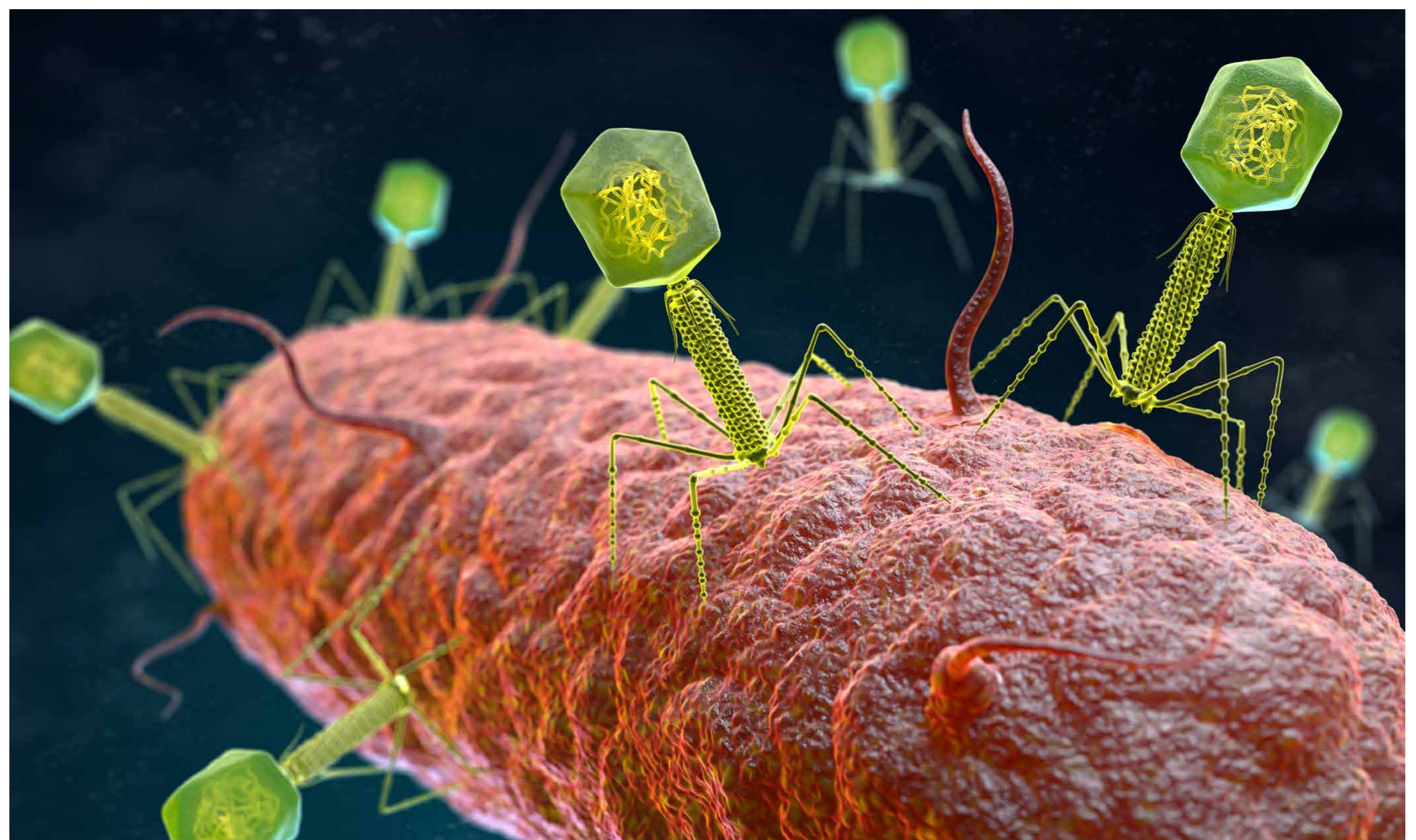
THE ART OF RESEARCH



Understanding phages – the new best weapon against bacteria

A better understanding of how the body reacts to viruses which infect bacteria may be the light at the end of the tunnel for patients battling antibiotic-resistant infections.

Caleb Swanepoel is a master's student in medical virology at the University of Cape Town.



Understanding phages can help in the fight against antibiotic-resistant infections.

Presented in association with the Institute of Infectious Disease and Molecular Medicine, this programme forms part of #theArtofResearch, an initiative of research communication specialists Jive Media Africa.



For patients with life-threatening antibiotic-resistant infections, phage therapy could be the last hope for treatment. Phage therapy is the use of specific viruses (phages) which infect bacteria to treat bacterial infections. Like tiny killer robots, phages target bacteria and replicate inside them, destroying the bacteria and creating even more phages in the process.

Because of a lack of knowledge about how the human body may react to different phages, a new drug

investigation must be launched every time a patient needs phage therapy.

Caleb Swanepoel's research aims to provide a better, more general understanding of the way the human immune system reacts to different types of phages.

"If we know how the type of phage influences the body's reaction to it, we can draw up a general trend for many different phages based on their type," says Swanepoel. "This could provide a guideline for how a patient might react to treatment, and

which phages may be safer or more effective than others."

A real effort needs to be made to classify the immune response to as many different, diverse phages as possible so that we can build up a list of safe, useful phages – like an online store catalogue.

"The relevant laws need to change quickly to allow doctors to treat people with phage therapy, using catalogued phages, without first having to conduct a lengthy new drug trial."

