

Better than antibiotics? Bacteria-targeting viruses show potential against pneumonia

Like other cells, bacteria often find themselves victims of viral infections, dying as new viruses burst out to infect their neighbors. If this happens out in regular ecosystems, people reasoned that maybe bacteria-killing viruses would also work in a pneumonic lung. But those maybes had always been accompanied by a long list of reasons why a virus wouldn't work. Now, a group of researchers has tested it on mice with pneumonia, and none of those reasons seems to be an issue.

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There are a lot of potential advantages to using phages to target bacterial infections, beyond the fact that every cell infected will produce more bacteria-killing phages. Many phages have a small range of bacterial species that they can infect, so they're less likely to wipe out all the other bacteria that are normally part of the ecosystem that lives in or on our bodies.

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[R]esearchers found that the [virus-delivering] particles themselves were gone from the lungs within 18 hours of the treatment. And there was no indication of an immune response to any of the phages. In addition, bacterial samples taken following the treatment showed no sign of containing bacteria that were resistant to phage infection. In short, none of the obvious problems that we'd expect from phage treatment seemed to be occurring. All of which looks incredibly promising.

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