

## Bakteriophagen – Therapie und CRISPR/Cas Bacteriophages – Therapy and CRISPR/Cas

[Agata Anna Cisek](#), [Iwona Dąbrowska](#), [Karolina Paulina Gregorczyk](#) et al. (2017) **Phage Therapy in Bacterial Infections Treatment: One Hundred Years After the Discovery of Bacteriophages.** *Curr Microbiol.* 74(2), 277–283. Published online 2016 Nov 28. doi: [10.1007/s00284-016-1166-x](https://doi.org/10.1007/s00284-016-1166-x) PMID: [27896482](https://pubmed.ncbi.nlm.nih.gov/27896482/) PMCID: [PMC5243869](https://pubmed.ncbi.nlm.nih.gov/PMC5243869/)

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 „There was a reduction in the abundance of *Blautia*, *Catenibacterium*, *Lactobacillus*, and *Faecalibacterium* species and an increase in *Butyrivibrio*, *Oscillospira* and *Ruminococcus* after bacteriophage administration.“

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➔ **Antibiotikaresistente Bakterien, antibiotic resistant bacteria**  
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➔ **Horizontaler Gentransfer** <http://www.erlebnishaft.de/gentransfer.pdf>

## Bakteriophagen gewerblich Bacteriophages commercial

COMPANY	LOCATION	PRODUCTS	APPLICATIONS	IN TRIALS?
<a href="#">AmpliPhi</a>	Richmond, Virginia	Natural phage cocktails	<b>P. aeruginosa</b> lung infections in cystic fibrosis; <b>S. aureus</b> wound and skin infections; <b>C. difficile</b> gastrointestinal infect	Phase 1 approved November 2015
<a href="#">ContraFect Corporation</a>	Yonkers, New York	Bacteriophage lysins	S. aureus bacteremia	Phase 1 launched April 2015
<a href="#">Pherecydes</a>	Romainville, France	Natural phage cocktails	<b>E. coli</b> and <b>P. aeruginosa</b> burn and skin infections; <b>P. aeruginosa</b> respiratory infections; <b>S. aureus</b> bone/joint/prosthetic infect	Phase 1 launched September 2015
<a href="#">JSC Biopharm</a>	Georgien	Natural phage cocktails	<a href="#">See appropriate section</a>	<a href="#">See appropriate section</a>

➔ **A sampling of firms that are conducting research on viral treatments for bacterial infections**. Selection above according to  
<http://www.the-scientist.com/?articles.view/articleNo/44785/title/Viral-Soldiers/>

## Immunisierung von Bakterien gegen Phagen, Immunizing bacteria against phages. CRISPR/Cas, the Immune System of Bacteria and Archaea

„Die CRISPR/Cas-Methode (Clustered Regularly Interspaced Short Palindromic Repeats) ist eine biochemische Methode, um DNA gezielt zu schneiden und zu verändern (Genome Editing). Gene können mit dem CRISPR/Cas-System eingefügt, entfernt oder ausgeschaltet werden, Nukleotide in einem Gen können geändert werden“.

Quelle: <https://de.wikipedia.org/wiki/CRISPR/Cas-Methode>

"The CRISPR / Cas Method (Clustered Regularly Interspaced Short Palindromic Repeats) is a biochemical method for targeted DNA cutting and modification (genome editing). Genes can be inserted, deleted, or eliminated using the CRISPR / Cas system, nucleotides in a gene can be altered. "

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