

## METHOD OF BACTERIOPHAGE PARTICLE CONDENSATION

### Authors

Prof. Robert Czajkowski  
Prof. Ewa Łojkowska  
Zofia Ozymko

Intercollegiate Faculty of Biotechnology  
University of Gdańsk  
Medical University of Gdańsk

### Commercialization opportunities



- ➔ Licensing agreement
- ➔ Transfer of ownership
- ➔ Spin off

### IP Status



The invention was submitted for patenting according to Polish (P.410134) procedures.

### Implementation progress



TRL 4  
Technology validated in  
laboratory conditions

Vast majority of bacteriophage research conducted in the pharmaceutical, agricultural or veterinary industries requires isolating new phage particles from soil, water, sewage, plant, or animal samples. The standard method of bacteriophage isolation, the so-called enrichment, involves incubating fresh cultures of bacteria with inoculum containing bacteriophage particles.

Existing enrichment methods possess a number of disadvantages. Firstly, bacteriophage multiplication rate in the culture relies on the size of inoculum used, with smaller volumes resulting in much slower multiplication. Secondly, enrichment methods lacks selectivity - if two or more species of bacteriophage are present in the sample, only one of them may propagate, at the expense of other phage species. Alternative methods based on centrifugation, filtration, dialysis or adsorption of bacteriophage particles are not only time-consuming, but also require costly laboratory equipment and skilled personnel.

Invented method allows for bacteriophage concentration without selective multiplication in host culture cultures, which results in significant acceleration of bacteriophage particle production and cost reduction. The method is simple, quick, reliable and enables bacteriophages to be successfully isolated from samples with a hundredfold lower concentration of phage particles than conventional propagation in bacterial culture. Moreover, the method does not require specialized laboratory equipment and is significantly less expensive than other methods based on centrifugation, filtration or dialysis.

### Technology Transfer Office



biuro@ctt.ug.edu.pl



58 523 33 74  
58 523 33 75



ul. Jana Bażyńskiego 1a  
80-309 Gdańsk