



About this edition:

This edition of our quarterly Newsletter highlights the application of Mass Spectrometry in Phage Research and Analytics and we would like to highlight a publication, providing a standardized framework for using personalized phages more safely and consistently in a clinical environment.

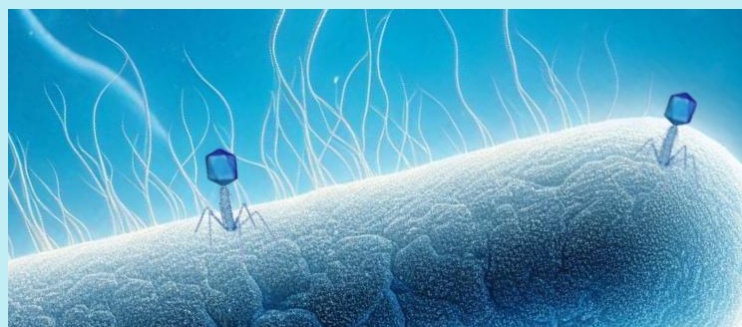
Also our QconCATs have been featured in two recent publications.

You can meet us at the 2026 Symposium on *New Concepts in Prokaryotic Virus-host Interactions* taking place in Berlin in October. We are looking forward to fruitful discussions and networking opportunities. And we will take a closer look at the posters presented at the symposium, as PolyQuant is a sponsor of this year's poster prize.

Application Spotlight: Phage Analytics

Being natural antimicrobial agents, phage research and especially its application as alternative to antibiotics has received a lot of attention in the past years.

Therapeutic phage preparations are complex protein mixtures containing phage proteins, remnants of the host cell (HCP), prophage proteins, and other co-purifying components. This demands for sophisticated quality control to ensure stability and safety of the product.



What LC-MS/MS can tell you about therapeutic phage preparations

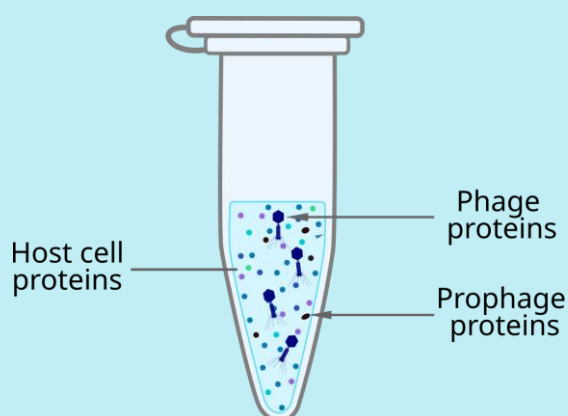
Mass spectrometry enables the identification of thousands of proteins in one measurement.

It allows following the decline of HCPs during the purification process while simultaneously providing valuable information on the identity of the proteins present in the analyte sample.

Thus, instead of optimizing the purification based on a decrease of global HCP levels, LC-MS/MS uncovers which proteins are difficult to remove, if there are high-risk proteins present in the product and if there are proteins present that can negatively affect product function or stability.

We have established ELISA and antibody-independent workflows, combining tools from proteomics, bioinformatics and our proprietary QconCAT technology for providing information on:

-  Co-purifying HCPs
-  Phage proteins (identity, stoichiometry, ...)
-  Prophage proteins



Our custom services can be implemented at any production stage and support knowledge-based risk assessment as well as targeted adaptation of the purification process.

Recommended read

A consensus-based guideline for personalized bacteriophage therapy

[Nature Medicine, September 21, 2026.](#)

Phage therapy is often used as a last resort intervention when conventional antibiotic treatments fail.

Due to the urgency and need for personalized solutions, there is often no time for clinical trials and GMP-grade production. Unless there are appropriate standard phage preparations available, many personalized phage treatments have to rely on non-GMP-grade phages.

Thus, an international, multidisciplinary group involving professional societies, patient representatives and international experts developed guidelines for personalized phage therapy.

This guideline provides a framework for recommendations covering the entire treatment pathway from patient selection, phage matching to quality control, dosage determination and treatment monitoring to ensure patient safety and clinical compliance.

QconCAT Research Highlights

The COPI coatomer influences LDL receptor activity, hepatic lipid storage, and apoB secretion

Panteloglou G et al., [Atherosclerosis 2026 Aug 25](#)

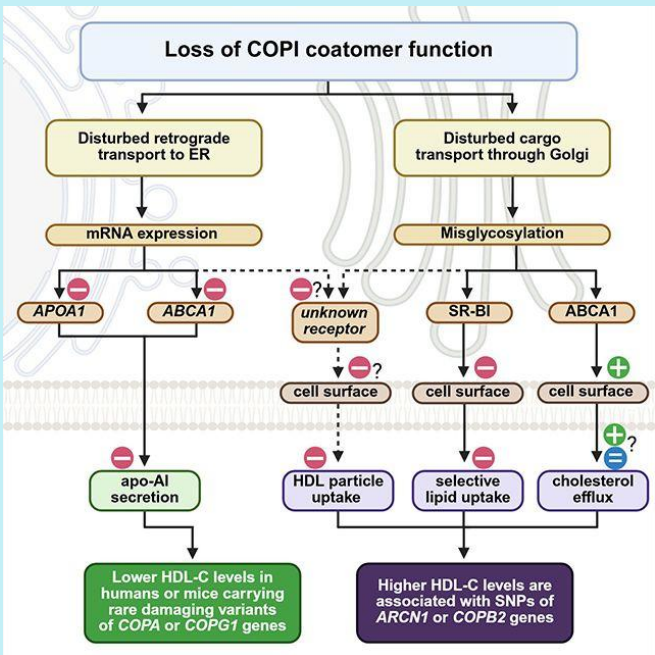
and

The COPI coatomer regulates several steps of HDL metabolism

Panteloglou G et al., [Arterioscler Thromb Vasc Biol. 2026 Aug 13](#)

These two publications aim at identifying genes that limit the uptake of HDL holoparticles into hepatocytes.

Starting with a genome-wide siRNA screen they identified a role for the Coat protein I (COPI) complex. To study the underlying cellular mechanism, the authors employed various analytical technologies from lipoprotein profiling to targeted proteomics, supported by QconCATs from PolyQuant. Targeted loss of function experiments in vitro as well as genetic association studies in humans and three mouse models with mutated or disrupted COPI genes were performed, indicating a role in regulation of LDLR activity, apoB secretion and hepatic lipid content.



Upcoming conferences – where to meet us next

We are looking forward to attending the 2026 Symposium on [New Concepts in Prokaryotic Virus-host Interactions](#), taking place in Berlin from October 5th-7th, 2026.

Featuring research topics like viral cell biology, new unicellular and multicellular anti-viral defences and viral impact on microbial communities, this symposium provides an excellent platform for networking and collaboration between a scientific, clinical and industry audience.

Special highlight: Best posters will be awarded with a prize, sponsored by [PolyQuant](#) and [FEMS microLife](#).

