Klebsiella pneumoniae, *Acinetobacter baumannii*, and *Pseudomonas aeruginosa*, (the ESKAPE group), are recognized as critical pathogens, exhibiting resistance to multiple antibiotics and emerging therapies. Despite the promise, certain chronic infections still harbor resilient bacterial persisters even after phage therapy.

To address this challenge, the PHAGES-AntiPERS consortium, comprising experts from diverse fields such as medicine, microbiology, and bioinformatics, is dedicated to pioneering innovative strategies. The consortium aims to combat the development of persister cells in chronic and biofilm-associated infections treated with lytic phages and antibiotics.

Our goal is to devise and verify "anti-persisters proof of concept strategies" by combining antimicrobial agents like antibiotics, lytic phages, phage-derived enzymes (endolysins and depolymerases), and anti-persister compounds (toxin-antitoxin systems, quorum sensing inhibitors, and ppGpp signaling inhibitors). We will investigate the eradication of persister bacterial cells both in laboratory settings and in living organisms, assessing the phenotypic and genomic factors underlying anti-persister activity at both phage and bacterial levels.

The success of **PHAGES-AntiPERS** relies on establishing a reference database and biobank of strains from *K. pneumoniae*, *Pseudomonas aeruginosa,* and *A. baumannii* prone to persistent infections. We are building also an **AntiPERS Phage bank** tailored to target persister cells thus laying the groundwork for innovative and effective treatments against persistent infections including biofilm related ones.