

세미나 초록

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발표 주제	Genetic modification of bacteriophages to combat foodborne pathogens
발표 내용	<p>As viruses that specifically infect bacterial or archaeal cells, bacteriophages (phages) are ubiquitous in environments where their hosts are present, including food. Upon precise host recognition, phages penetrate the host cell wall and membrane to deliver their genome into the host cytoplasm and initiate replication by snatching the host's metabolic resources and biosynthetic systems. In the final stage of the phage replication cycle, the infected host cell undergoes lysis, releasing newly synthesized phage particles into the environment, where they continue to propagate by infecting additional host cells. Given their host specificity and potent bacteriolytic activity, phages are increasingly recognized as promising biocontrol agents against pathogenic bacteria, especially in light of the emerging "post-antibiotic era." Beyond these fundamentals of phage biology and basic applications, this presentation will cover our recent studies on the use of phage derivatives which were genetically altered in three different ways as innovative solutions to overcome challenges posed by foodborne pathogens.</p>