

Auxiliary metabolic genes

Auxiliary metabolic genes (AMGs) are found in many bacteriophages but originated in bacterial cells.^[1] AMGs modulate host cell metabolism during infection so that the phage can replicate more efficiently. For instance, bacteriophages that infect the abundant marine cyanobacteria *Synechococcus* and *Prochlorococcus* (cyanophages) carry AMGs that have been acquired from their immediate host as well as more distantly-related bacteria.^[2] Cyanophage AMGs support a variety of functions including photosynthesis,^[3] carbon metabolism,^[4] nucleic acid synthesis and metabolism.^[5]

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