

[BIO28]

**Regulation studies of *phaC* (C1 and C2) genes in *Pseudomonas* sp. USM4-55**

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The *phaC1* and *phaC2* genes codes for the medium chain length polyhydroxyalkanoate (mcl PHA) syntase of *Pseudomonas* USM4-55, which produces mcl PHA when grown in an excess of carbon source and under nitrogen limitation. To study the regulation of the PHA syntase genes (C1 and C2), plasmid fusion containing promoterless reporter genes (*lacZ*), *phaC1*, *phaC2* and kanamycin resistant genes were successfully constructed using a multi host plasmid vector, pJRD215. The resulting plasmid fusion, named pKEM301 and pKEM302 (for C1 and C2 respectively) contained a 6 kb DNA insert of the reporter genes. The construct is integrate in the place of the chromosome of wild type *Pseudomonas* sp.USM4-55. Homologous recombination occurred. Expression of *phaC1* and *pha C2* are assayed by measuring the  $\beta$ -galactosidase activity.