

# DERIVATIVES OF BROAD HOST RANGE PLASMID R906 AS POTENTIAL VECTOR-COSMOPOLITES

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Vector molecules are the basic tool in genetic engineering. Molecular cloning of individual genes within vector molecules in other than *E. coli* microorganisms, even as the further transfer of the cloned genes into the hosts, more suitable for their expression, is possible with use of vector-cosmopolites. It is shown that in DNA of plasmid R906 there are several restriction sites for endonucleases *EcoR*I, *Bam*H I and *Hind*III .

Fragmented by these restrictases , DNA of plasmid R906, after the treatment by DNA ligase phage T4 was transformed into *E. coli* cells K12. Six classes of antibiotic-sensitive cells were selected. The biochemical and electronic-microscopic study of the mutant plasmids evidences the absence of different sites of restriction in them and loss by them of fragments up to 15 kb. Besides, individual restriction fragments of plasmid R906 were cloned within the vectors pTK16 and pBR32. All the selected derivatives were investigated for preservation of the properties of cosmopolitism of plasmid R906, as well as of the genes of incompatibility, and the genes defining antibiotic resistance. Those, which preserved the properties of cosmopolitism, have also other features, which enlarge the potential of their use as multi-purpose vectors.