

F318 Cloning and nucleotide sequencing of the *argG* gene
from *Corynebacterium glutamicum*

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A gene of *Corynebacterium glutamicum* encoding argininosuccinate synthetase was cloned and the nucleotide sequence was determined. The gene was cloned by heterologous complementation of *E. coli* mutant. Sequence analysis indicated that recombinant plasmid containing 5.4kb fragment complementing the *E. coli argG* mutant had the clustered organization of the arginine biosynthetic genes within the cloned DNA fragment. Computer analysis confirmed this organization and revealed that the nucleotide sequence of the *argG* gene had a high similarity to that of *Mycobacterium tuberculosis* and *Streptomyces clavuligerus*

F319 Molecular cloning and nucleotide sequencing of the aromatic
amino acid biosynthetic genes from *Corynebacterium glutamicum*

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Complementation of *aroB* and *D* genes in *Corynebacterium glutamicum* was done by transforming genomic DNA library into the corresponding aromatic amino acid auxotrophs of *Escherichia coli*. The recombinant plasmids, designated pROB1 and pROD5, complement the *E. coli aroB* and *aroD* mutants, respectively. The recombinant plasmids were physically mapped with several restriction enzymes. To determine the location of the gene, we subcloned pROB1 and performed unidirectional deletion for pROD5, using ExonucleaseIII and S1 nuclease. The deletion products were used as sequencing templates. We also determined the DNA nucleotide sequences of the fragments and report here the sequences of *aroB* and *D* genes. *aroB* and *aroD* genes encode 5-dehydroquinate synthase and 5-dehydroquinase dehydratase, respectively.