

F321**Cloning of *cadC* and characterization of regulatory mutations for *cadBA* expression in *Salmonella typhimurium***

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Salmonella typhimurium cadBA operon, encoding antiporter and lysine decarboxylase, is induced at low pH in the presence of lysine. Acid induction is mediated by positive regulator CadC, whose locus is closely linked to *cadBA* operon. CadC locus was cloned by using clone pool that propagated on *Salmonella*. Several regulatory mutations for *cadBA* expression were isolated by Tn10 insertion or spontaneous mutagenesis. Two *cadR::Tn10* mutants, in the absence of exogenous lysine, was negative regulator of *cadBA* expression. They were also resistant to thiosine, a lysine analogue which makes functional *cadR* cells, and complemented by *lysP* clone from *E.coli*. The mutation in JF2819 was in *cadC*, a transcriptional activator of *cadBA*. The *cadBA-lacZ* transcription on this mutation was dependent on lysine concentration but pH.

F322**Development of Broad-Substrate Range Strains in Xenobiotics Degradation**

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New broad-substrate range strains were developed by the conjugal transfer of Tol, NAH7 and pTS1137 plasmid to aniline-degrading *Pseudomonas acidovorans* KD and designated *Pseudomonas acidovorans* KD101(Tol), KD102(NAH7), and KD103(pTS1137), having degradative capability of toluene, naphthalene and aniline, respectively. Aniline-degradative capability of KD101, KD102, and KD103 strains was rather higher compared to that of the original strain, *P. acidovorans* KD. Also, mixed-culture of *P. acidovorans* KD and another aniline-degrading strain, *Flavimonas oryzae* K23 increased aniline-degradative capability. And two 2-chloroaniline and 3-chloroaniline-degrading mutants, *P. acidovorans* KD201 and *P. acidovorans* KD202 were isolated by the treatment of NTG.