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Exogenous phage recombinase-independent inactivation of chromosomal genes in *Yersinia enterocolitica*

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Characterization of newly identified genes is necessary to understand their functions. Phenotypic characterization of isogenic mutants provides good understanding of the functions of the genes in wild type strains. In the present study, we report the use of linear dsDNA as a substrate for homologous recombination in *Yersinia enterocolitica.* A double-stranded linear recombinant DNA (LRD) containing an antibiotic resistance gene flanked by homologous regions to the target gene was created. Transformation of this LRD into *Y. enterocolitica* led to the replacement of targeted loci with antibiotic resistance gene. Using this strategy, two chromosomal genes namely urease C (*ureC*) and hemophore A (*hasA*) were disrupted in three strains of *Y. enterocolitica*. These recombinations were independent of the EPR functions. This is the first report of EPR-independent inactivation of chromosomal genes in *Y. enterocolitica*.

Biography

Mahesh Shanker Dhar has just completed his Ph.D. from Department of Microbiology, University of Delhi South Campus, India. He has published 3 papers in reputed journals during his Ph.D. His research work mainly focused on host-pathogen interactions to unravel the virulence strategies used by pathogens to escape killing by phagocytes.

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