Samir Jaoua, Metabolomics 2014, 4:2
http://dx.doi.org/10.4172/2153-0769.S1.026

OMICS Group Conferences
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3rd International Conference and Exhibition on
Metabolomics & Systems Biology
March 24-26, 2014 Hilton San Antonio Airport, San Antonio, USA

Exploration of *Bacillus thuringiensis* bacteriocin coding genes by Tn*10* transposon insertion mutagenesis

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Bacillus thuringiensis strain BUPM4 is known for its ability to produce a bacteriocin, called bacthuricin F4 (BF4), which inhibits the growth of several Gram-positive bacteria and particularly *Bacillaceae*. This study aimed to use the insertional transposon mutagenesis approach for disrupting and thus identifying genes associated with BF4 synthesis. Here, the mini-Tn*10* transposon was used to generate a library of *B. thuringiensis* mutants. Twenty thousand clones were screened for the search of mutants with affected bacteriocin synthesis. By molecular hybridization, it was demonstrated that the mini-Tn*10* transposition occurred in different sites. Clone MB1, containing a mini-Tn*10* single-copy insertion, lost the BF4 synthesis, but maintained its immunity to BF4. The flanking sequences surrounding the mini-Tn*10* insertion were cloned and sequenced. Homology searches of the surrounding ORFs revealed a strong similarity to a phage tail component, which allowed us to postulate that BUPM4 bacteriocin could be a phage tail-like one

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