

Supplements

Fig. 1 Results of transformation using pMarA in *B. nematocida* B16g (A) and detection of the genetic stability of mutants after subculture by PCR experiments of *Kan^r* gene (B). A: Cutted into 1/3 of the transformation results in a 160mm Petri dish. B: M: DNA marker; 1: B16g; 2~7: Mutants before subculture; 8~13: Mutants after subculture.

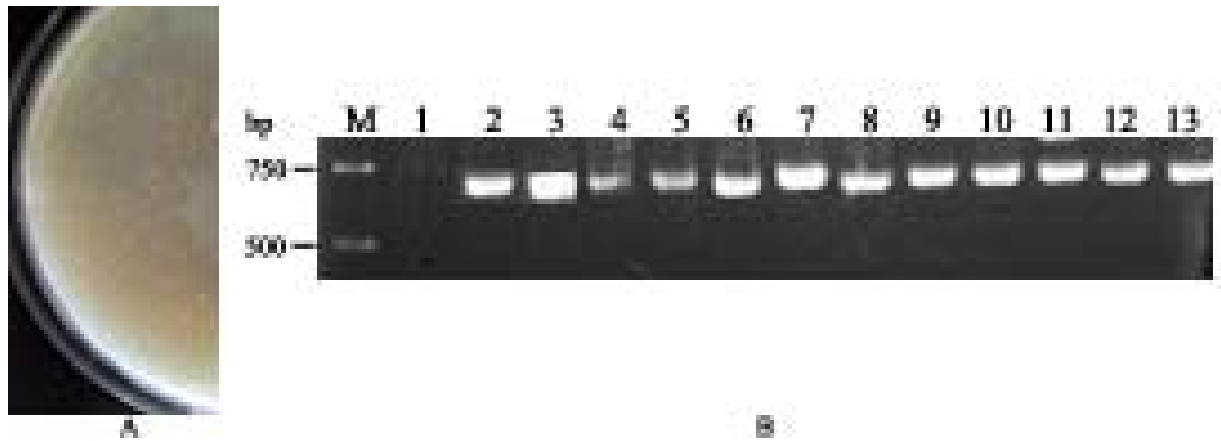


Fig. 2 Primary screening results by bioassay analysis. The action of different bacteria against nematode *C. elegans* observed under a dissecting microscope. A. A worm was dead and destroyed on the plates incubated with B16g after 3 days. B. A nematode was alive on the plates incubated with *E. coli* after 3 days. C&D. The worm was alive and intact on the mutant strain plate.

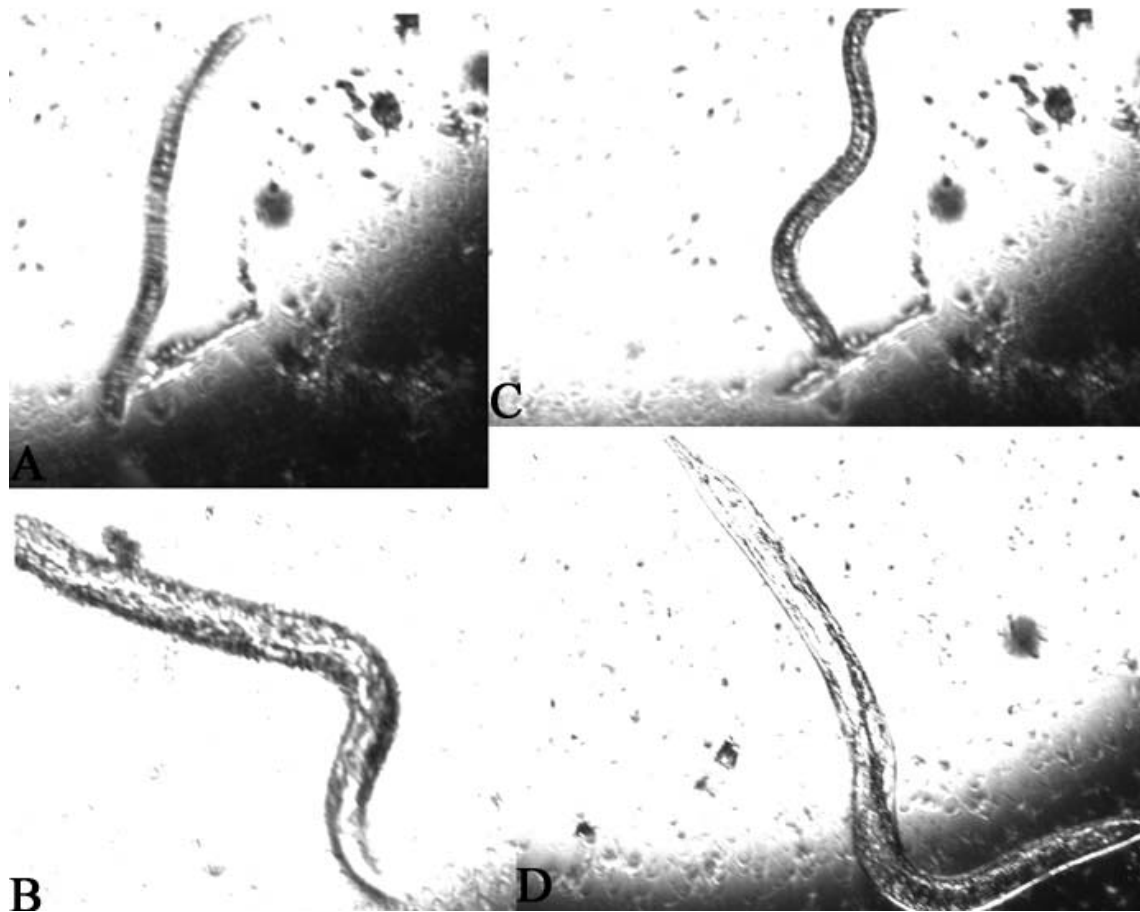


Fig. 3 Secondary screening results by co focal fluorescence microscope. A-F was indicated separately the worm infected with B16g, BnGNCT-A32, BnGNCT-A180, BnGNCT-B210, BnGNCT-D1 and BnGNCT-E63 for 5 days.

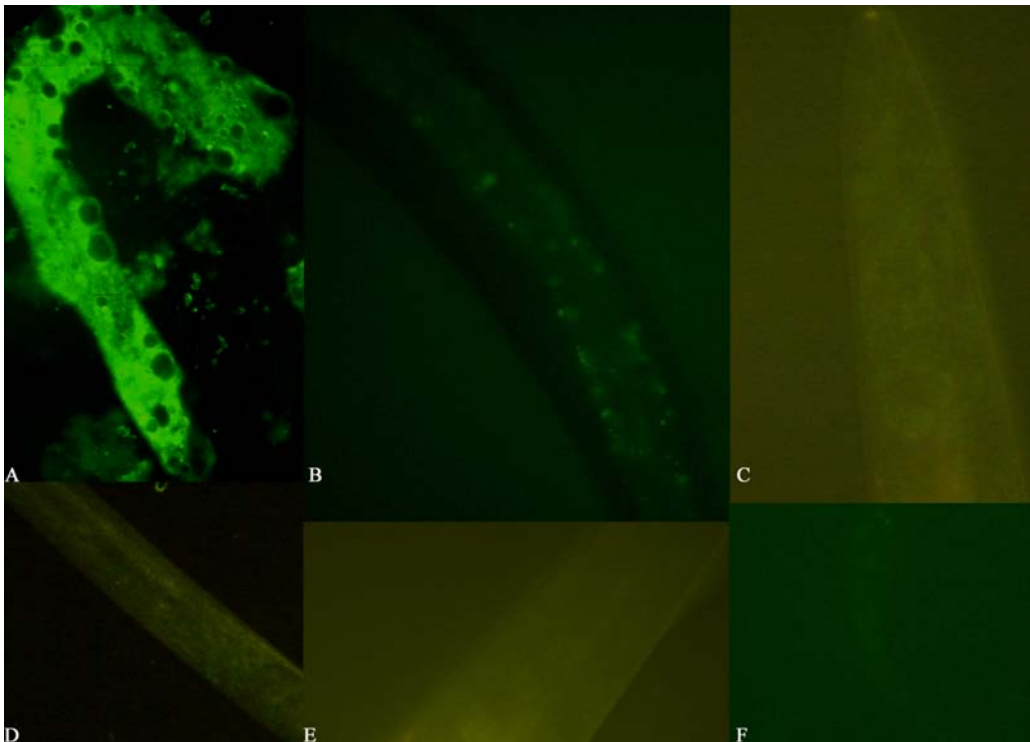


Fig. 4 Process on sequences insertion sites identification of the five mutants. A. Results of genome DNA extraction. M: DNA marker; 1~5: BnGNCT-A32, BnGNCT-A180, BnGNCT-B210, BnGNCT-D1 and BnGNCT-E63; B&C. Extraction of the digestion products with TaqI of the mutant genome. B: M-DNA marker; B1-2: BnGNCT-A32, BnGNCT-A180; C: M-DNA marker; C1-3: BnGNCT-B210, BnGNCT-D1 and BnGNCT-E63. D. Amplification of flanking sequences of non-colonization mutants. M: DNA marker; 1~5: Mutants BnGNCT-A32; BnGNCT-A180; BnGNCT-D1; BnGNCT-B210 and BnGNCT-E63.

