Isolation of cDNA Clones Differentially Expressed from the Dung Beetle *Copris tripartitus* Stimulated with Lipopolysaccharide

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The *Copris tripartitus* lives in an environment with abundant pathogens. These pathogens are, firstly, bacteria living in soil that are ingested during feeding or introduced into the body following injury. Therefore, it can be supposed that *Copris tripartitus* living in the pathogen-abundant environment must have peptides against bacteria.

The purpose of this study was to find out some cDNA clones responsible for bacteria resistance in *Copris tripartitus*. The suppression subtractive hybridization and GeneFishing DEG system were employed to identify differentially expressed genes in the dung beetle, *Copris tripartitus*, immunized with lipopolysaccaride.

Results showed that one cDNA clone from 11 subtracted clones were selected through dot blot analysis. The differential expression patterns of the selected cDNA clone was confirmed by Northern blot analysis. Full-length nucleotide sequence of selected cDNA clone were determined by 5' and 3' rapid amplification of cDNA ends (RACE). The nucleotide sequence deduced from selected full-length cDNA showed no significant homologies to those of reported nucleotides. Antibacterial peptide, Coleoptericin, was also inducible by lipopolysaccharide in *Copris tripartitus* immunized with lipopolysaccaride. RT-PCR and Northern blot analysis were performed to confirm that Coleoptericin are differentially expressed in *Copris tripartitus*. Full-length nucleotide sequence of Coleoptericin were determined by 5' and 3' rapid amplification of cDNA ends.