

E121 Cloning of a cDNA Encoding Lysozyme II from *Artogeia rapae*

In Seok Bang*, Hak Ryul Kim¹, and Sung Moon Yoe
Dept. of Biological Sciences, Dankook University and
¹Dept. of Biology, Korea University

Lysozyme II is one of the antibacterial protein that is produced by the cabbage butterfly, *Artogeia rapae*. The 5' and the 3' regions of the Lysozyme II gene were amplified using the PCR protocol for the rapid amplification of cDNA ends (RACE) from the fat body of the *A. rapae*, immunized with *E. coli* K12. The complete nucleotide sequence of the gene has been determined. It has an open reading frame of 417 bp nucleotide corresponding to 138 amino acid residues. The highly conserved regions from lysozymes of different insects were also well conserved in the lysozyme II of cloned cDNA. The deduced amino acid sequence of the gene was compared to that of other reported lysozymes, including those of *Manduca sexta* and *Hyalophora cecropia*. The degree of sequence identity was for each 75.4% and 68.1%, respectively.

E122 Isolation and Nucleotide Sequence of Hinnavin II cDNA Clone from Cabbage Butterfly, *Artogeia rapae*

In Seok Bang*, Hak Ryul Kim¹, and Sung Moon Yoe
Dept. of Biological Sciences, Dankook University and
¹Dept. of Biology, Korea University

Insect immune protein, hinnavin II, is inducible anti-Gram negative and/or anti-Gram positive bacterial peptide. cDNA clone encoding hinnavin II was isolated from the fat body of the cabbageworm, *Artogeia rapae*, immunized with *E. coli* K12. The cDNA clone has shown that the hinnavin II is included a prepro-sequences composed of 24 amino acid residues in the N-terminus which is not present in the mature peptides.

Comparative analysis of hinnavin II and other antibacterial proteins from different insects provides evidence for the existence of a family of antibacterial proteins.