# Molecular Analysis of Allatostatin cDNA in the Midgut of the German Cockroach, *Blattella germanica*

**JaeHyuck Yang[1], Joong-Cheol Park and Bong Hee Lee**

Dept. of Biology, Korea University, Seoul

Allatostatins (ASTs, Tyr/Phe-Xaa-Phe-Gly-Leu/Ile-$NH_2$ family) were known to inhibit juvenile hormone (JH) biosynthesis *in vitro* by corpora allata (CA) in the cockroach, *Blattella germanica*. In order to determine the sequence of AST coding region, a cDNA library was constructed by RT-PCR with total RNA purified from midgut of *B. germanica*. To get the PCR product, PCR was conducted using the oligo d(T) primer and degenerated primers designed from the highly conserved region of *Diploptera punctata* and *Periplaneta americana*. The amplified fragments were subcloned into pGEM-T Easy vector, so three cDNA clones obtained were sequenced. They all were composed of 1,128bp and this can encode 375 amino acids for synthesis of ASTs in midgut of the adult cockroach. The nucleotide sequences of cDNA obtained are similar to those of *D. punctata* and *P. americana* reported previously. AST cDNA synthesizes thirteen subtypes of ASTs in midgut of adult cockroach, *B. germanica*.