

**Z403 Purification and Characterization of Insecticyanin  
from the Hemolymph of the *Agrius convolvuli***

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Insecticyanin(INS), a blue biliprotein, has been isolated from the last instar larval hemolymph of the *Agrius convolvuli* and its physiochemical properties were characterized. The INS has been purified by ultracentrifugation, Sephadex G-100 gel permeation chromatography, and preparative electrophoresis. INS is composed of three subunits of 23 KDa, and the native molecular mass was found to be approximately 72 KDa. Compared to N-terminal sequence with *Manduca sexta*, it revealed high similarity. From the result of western blotting and autoradiography, it was inferred that the INS is synthesized and released from the epidermis. The amino acid and lipid composition of INS were also analyzed.

**Z404 Molecular Cloning and Structural Analysis of hinnavins  
from Cabbage Butterfly, *Artogeia rapae***

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Hinnavins are antibacterial peptides, induced in *A. rapae* larvae as part of the humoral immune response to a bacterial invasion. We have previously investigated primary structure and characterization of these antibacterial peptides. To find out genes encoding hinnavins, degenerated primers were deduced from amino acid residues of mature hinnavins for 5' and 3' primer, respectively. cDNA library was constructed with mRNA isolated from the fat body of immunized cabbageworms in Uni-ZAP XR Vector(ZAP-cDNA Gigapack II Gold Cloning Kit). Hinnavins are now being screen with probe which is prepared using the subcloned cDNA fragment by the 5'- and/or 3'- RACE reactions.

Complete cDNA sequences and possible secretory mechanism into the haemolymph will be shown by the screening of cDNA library.