3-3-6. Purification and Characterization of Apolipophorin-III of Common Cabbage Butterfly, *Artogeia rapae*

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The ApoLp-III in the adult hemolymph of A. rapae can associate reversibly with Lipophorin. The ApoLp-III was purified from the adult and larval hemolymph by kBr density gradient ultracentrifugation, gel permeation chromatography, anion exchange chromatography and preparative electrophoresis (Prep cell). ApoLp-I, II, and III have the molecular weights of 212 kDa, 80 kDa, 18 kDa, respectively. N-terminal sequence of apoLp-III were determined. The N-terminal amino acid sequence of ApoLp-III shows 50~57% identity with that of other lepidopteran insects. ApoLp-III have the antibacterial activity. Bacterial injection increased the amount of ApoLp-III in the hemolymph when compared with normal hemolymph indicating that ApoLp-III plays a role in insect immunity. Immunological analysis was also investigated with the anti-ApoLp-III.