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Purification and Biochemical Characterization of Pupal Major Haemolymph Protein of the Chinese Oak Silkmoth, *Antheraea pernyi*

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A pupal major haemolymph protein of the wild silkmoth, the Chinese oak silkworm *Antheraea pernyi* (AMHP), purified and identified. The protein AMHP was purified by a simple preparative polyacrylamide gel electrophoresis (PAGE) and diffusive elution. The preparation was shown to be homogeneous by 7.5% native-PAGE. The native molecular weight of the AMHP was 450 kDa with a 80 kDa single subunit, suggesting hexamer. The protein contained high amounts (18.3%) of aromatic amino acids, phenylalanine (9.7%) and tyrosine (8.6%). Therefore, the protein was identified as a kind of a storage protein referred to as an arylphorin. The protein was stained by Schiff's reagent, suggesting a glycoprotein. The protein contained 4.9% (w/w) sugar and mannose and N-acetylglucosamine were major components. Also, degradation of protein was begun by heat treatment at 90℃ for 20 minutes. From these results, it was concluded that the AMHP is a storage protein referred to as arylphorin which is purified from the pupal haemolymph of the wild silkmoth, *A. pernyi.*