Cuticle Protein Homologue of the Chinese Oak Silkworm, *Antheraea pernyi*: cDNA Cloning and Expression

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We have cloned a cDNA encoding the cuticle protein homologue from the Chinese oak silkworm, *Antheraea pernyi*. In this paper, the cloning, sequencing and expression of a cDNA of *A. pernyi* cuticle protein homologue are described. The cDNA sequences were 447 bp in length, encoding 149 amino acid residues. The predicted molecular masses for *A. pernyi* cuticle proteins were approximately 16.4 kDa (ApCP16.4). The deduced amino acid sequences of the *A. pernyi* cuticle protein cDNA showed protein sequence identity to insect cuticle proteins known. Northern blot analysis revealed that the *A. pernyi* cuticle protein showed epidermis-specific expression. The expression profile of *A. pernyi* cuticle proteins revealed by Northern blot analysis that the high-level mRNA expression of *A. pernyi* cuticle proteins was detected on the first day of larval ecdysis and on the first day after larval-pupal metamorphosis. The cDNA encoding the cuticle protein homologue of *A. pernyi* was expressed as a 16.4 kDa polypeptide in the baculovirus-infected insect cells.