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Identification and Characterization of the Properties of *Drosophila* Prothoracicotropic Hormone (PTTH)

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Prothoracicotropic hormone (PTTH), a brain secretory polypeptide of insects stimulates the prothoracic glands to produce and release ecdysone, the steroid essential to insect development. We previously purified PTTH from *Drosophila melanogaster*, concluded that PTTH is a single glycoprotein of relative molecular mass of 66 kDa which are held together by several intradisulfide bonds. Molecular weight variation of PTTH proved to be caused by carbohydrate chain degradation. Immunohistochemistry was performed against brains with ventral ganglion of *Drosophila* third instar larvae. Two pairs of immunoreactivity to the PTTH antibody were found in posterior-lateral protocerebrum. Immunoscreening was performed using a polyclonal antiserum against *Drosophila* 45 kDa PTTH and *Drosophila* third instar larva cDNA expression library. We obtained 25 positive immunoreactive PTTH cDNA clones and selected 6 clones which showed more intensive signal. Those 6 cDNA sequences were partially determined by dideoxynucleotide method and showed no significant homology with the known DNA sequences including PTTH of other insects. It was also found that PTTH induces phosphorylation of several components in ring gland cells which later increases the ecdysone synthesis rate.

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***Hpa*II Restriction Fragment Length Polymorphism of the Apolipoprotein A1 Promoter Region in Korean**

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The apolipoprotein A1 (APOA1) is concerned to lipoprotein metabolism, and is possibly associated to hypertriglyceridaemia. We examined a G → A mutation at position -75 of the APOA1 gene promoter from 170 unrelated Korean individuals. The mutation was genotyped by the polymerase chain reaction and subsequent digestion using *Hpa*II and *Bst*NI. As the results, the allele frequencies of G (non-mutated) and A (G⁻⁷⁵ → A) were 0.79 and 0.21, respectively. The individual numbers showing GG, GA and AA genotypes were 100, 60 and 10 each other. When the allele distribution between human races were compared, the frequency of A allele of Korean was slightly higher than those of Caucasian (0.15) and Japanese (0.12). The genotype distribution was well agreed with the Hardy-Weinberg equilibrium.