F107 Analysis of a Mutant Involved in *decapentaplegic(dpp)* Signal Transduction Pathway and Its Partial Cloning

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A TGF-β superfamily *Drosophila* homologue, *decapnetaplegic(dpp)* is a multipotenet cytokine. The study of *dpp* signal transduction pathway provides many informations for TGF-β function in mammalian development. To identify new components of *dpp* signal transduction pathway, we screened mutants enhancing weak *dpp* mutant. We used *hobo* enhancer trap mutagenesis which gave an easy way to clone by plasmid rescue. A new poteintal mutant was named as an enhancer of *dpp* (*E(dpp)*). *E(dpp)* enhnaced *dpp* weak lethal and denticle belt phenotype. The *E(dpp)/dpp* trnasheterozygotes enhanced lethality, and showed abnormal head involution and germ band formation that caused filzkopper internalized. We obtained a cDNA clone using plasmid rescued genomic DNA fragment. This cDNA sequence was compared by blast search and *Drosophia* EST clone CK01122 was obtained . This CK clone was expressed in trachea system. This result will be presented.

F108 Antibody analysis of fragile X syndrom patients

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This research was for evaluating diagnostic value of antibody test through the examination of southern blot analysis, chromosome analysis, antibody test for 198 individuals. In antibody test of control individuals and carriers with a premutation, FMRP were detected in the lymphocytes, whereas the lymphocytes of male Fragile X syndrome patients were devoid of FMRP. The result of DNA analysis for diagnosis of Fragile X syndrome patients, five Fragile X syndrome male patient,two Fragile X syndrome female patients, three carriers were diagnosed. Five boys who were diagnosed as the patients by antibody test were turned out full mutation and having multiple smear beside normal single band. The result of chromosome analysis for finding out the cutting point of Fragile X syndrome patients's Xq 27.3 site, fragile site of X chromosome was not expressed. As a result, when diagnosing Fragile X syndrome patients, chromosome analysis had difficulties because the fragile X site expression frequency of patients was very low. Antibody test was a fast and simple method but the diagnostic power was "perpect" for males, whereas the results were less specific for females.