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P Element-Mediated Germ-Line Transformation of Bombyx mori

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This study was use of P element of the *Drosophila melanogaster* to obtain transformed *Bombyx mori*. To induce transformations by artificial introduction of genetic materials, a simple method of microinjection of DNA into eggs was developed using a microinjector and micromanipulator. The DNA to be injected is comprised of two components. The first consists of a helper plasmid containing a defective P element that although capable of producing the P transposase which can act in trans on another P transposon, is itself immobile. The second component consists of a transposon construct. The vector for this study is pUChsneo. pUChsneo has *lacZ* which has been used in many different kinds of expression assay. Amount of coinjected DNA is 0.06ng. The hatchability is about 1%. The larvae derived from DNA injected eggs and their progenies. To identify transformants, we analyzed by PCR and X-gal staining.

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Production of the Anti-HLA Monoclonal Antibody Using Human Hybrid Myeloma

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During transplant operation, we need specific antibodies against HLA antigens for the HLA typing between donor and recipient. On the production of the anti-HLA monoclonal antibody in the human system, up to this point available partner cell was not developed. We must develop more available fusion partner cell, therefore we fused SKO-007, human myeloma, and HeLa cell, human cervix carcinoma. We made more effective clones as human fusion partner cells. As a result, their doubling time is shorter than SKO-007 and they are 6-thioguanine resistant. The most available clone, HS-7, of them has the shortest doubling time, 35 hours, and its chromosome number is 70. It has been using for the production of the anti-HLA monoclonal antibody secreting hybridoma. It can be used as fusion partner cell for production of several monoclonal antibodies.