

Z301 **Collection of P Enhancer Trap Lines Expressing β -galactosidase in the Midgut and Visceral Mesoderm**

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P enhancer trap lines expressing β -galactosidase in the midgut and visceral mesoderm were collected to screen the modifier of *decapentaplegic (dpp)*. *dpp* is expressed in the visceral mesoderm of PS7 and induces the expression of *labial* in the endoderm of the midgut. *dpp* mutation causes the abnormal formation of the gut. Embryos from each line were collected for overnight and stained with X-gal. We have so far screened 508 lines that were delivered from Dr. Jungbin Yim and Indiana Stock Center. 34 potential lines were collected. The results of complementation test, *labial* expression pattern and the chromosomal location will be presented.

Z302 **Interaction of Polycomb Group Genes with GAGA and Zeste in the Regulation of *Drosophila Ultrabithorax* Gene**

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The *Polycomb* group (PcG) genes of *Drosophila* are required for maintaining the differential expression state of developmental regulators throughout development. To know whether PcG gene products interact with GAGA, Zeste and NTF in maintaining the expression of *Ultrabithorax (Ubx)*, we produced the fly strains containing the PcG mutants and fly strains containing GAGA, Zeste, or NTF binding sites on *Ubx*. In both *extra sex comb (esc)* and *Polycomb (Pc)* mutation, *Ubx* was ectopically expressed outside of their normal domains along the anterior-posterior axis during germ band shortening. Our results indicated that PcG proteins interact with GAGA and Zeste to maintain the expression pattern of *Ubx* gene.