D101 Effects of *pleiohomeotic* genes on the development of the *Drosophila* central nervous system.

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The *pleiohomeotic* (*pho*) gene is one of *Polycomb* group genes that are involved in maintaining the expression pattern of the homeotic genes. To investigate the effects of *pho* in the development of the central nervous system(CNS), we used enhancer trap line of *ming* that is specifically expressed in a subset of CNS. *ming* enhancer trap line was crossed to obtain *ming*; *pho* double mutant and β -gal activity was examined to see the pattern of the CNS development. A small percent of maternal-effect *pho* embryos developed to the late embryogenesis. We did not see an unique abnormal pattern in the CNS of *pho* embryos. However, all *pho* embryos showed abnormal development of the CNS. The longitudinal CNS nerve track was gapped, short, or missing. The effects of other *Polycomb* group genes on the CNS development will be presented, too.

D102 Identification and tissue-specific distribution of myofusin isoforms

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We have isolated the cDNA encoding a various isoform of myofusin, the novel protein related muscle cell differentiation, by hybridization to the myofusin C-59 probe. Nucleotide sequence analysis and amino acid comparison define these clones, G-2, Z-9 and Z-3. The deduced amino acid sequence demonstrates that G-2, Z-9 and Z-3 are isoforms of C-59. These isoforms share extensive homology with C-59 myofusin that includes: (a) the SH3 domain found at the C-terminus in all isoforms; (b) several copies of 31-residue module. G-2, Z-9 and Z-3 have 31-residue module repeated 4 times, 5 times and 6 times, respectively. We used a panel of primers and RT-PCR to determine the distribution of the isoforms in chicken embryo. Isoform G-2 was found in muscle, brain, liver, heart, and stomach whereas isoform Z-3 and/or Z-9 was present in muscle and brain exclusively. The unequal distribution of the isoforms suggests tissue-specific regulation of the isoform expression and indicates a fuctional specialization of the encoded isoform subtypes.