

Selection of Differentially Expressed cDNA Clones during *Bombyx mori* Embryogenesis

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The silkworm, *Bombyx mori*, diapause at early embryonic stage before dermal differentiation is completed. The embryonic diapause in insects is induced by a neuropeptide named diapause hormone(DH), secreted from the suboesophageal ganglion (Yamashita 1996).

As an initial step to define the molecular mechanism of initiation and termination of diapause during embryogenesis of the silkworm, *Bombyx mori*, mRNA transcripts from maintained or activated diapause eggs were compared by differential expression using cDNA microarray. Twenty five individual cDNA clones were identified as expressed differentially. Among those clones, we focused on the differential expression of cytochrome oxidase subunit I (COI), whose expression was significantly increased in diapause-activated eggs. To validate this observation, we examined *COI* mRNA expression by Northern blot analysis. This gene was expressed at low level in diapausing eggs, but was begun to remarkably increase the expression level at day 6 in developing eggs. Thus, the expression of silkworm *COI* mRNA might be correlated with increase of oxygen consumption during embryogenesis and organogenesis.