

D101 **Distribution of Allatostatin - Immunoreactivity in Neurons of Developing Larval Central Nervous System of *Bombyx mori***

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Antisera against a neuropeptide, allatostatin, inhibiting *in vitro* biosynthesis of juvenile hormone(JH) in corpora allata(CA) have been used to analyze changing pattern of the number, localization and structure of allatostatin-immunoreactive(AS-IR) neuron in developing larval central nervous system(CNS) of *Bombyx mori*. No AS-IR neurons were found in the 1st and 2nd CNS of AS-IR neurons. Moderate immunoreactivity began to appear in the CNS of the 3rd instar larva of which only brain contained two pairs of bilateral AS-IR cell bodies. However, weak allatostatin-immunoreactivity also occur in the 3rd-instar subesophageal ganglion. Allatostatin-immunoreactivity in the 4th instar CNS showed very similar pattern to that in the 3rd instar CNS, except for strong immunoreactivity in one pair of AS-IR neurons in the subesophageal ganglion. In the 5th-instar CNS, three-pairs of bilateral AS-IR neurons project their axons to ipsilateral nervi of corpora cardiac I.

D102 **Localization of Tachykinin-Related Neuropeptides in the Developing Central Nervous Systems of the Moth *Spodoptera litura***

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Neuropeptides with similarities to vertebrate tachykinins, designated tachykinin-related peptides(TRPs), have been identified in several insect species. In this investigation we have utilized an antiserum raised to one of the locust TRPs, locustatachykinin- I (Lom TK- I), to determine the distribution pattern of LomTK-like immunoreactive(LTKI) neurons in the developing neuron system of the *Spodoptera litura*. A number of LTKI neurons could be followed from the larval to the adult nervous system: a set of median neurosecretory cells(MNCs) in the brain, a pair of brain descending neurons and a few sets on neurons in the ventral nerve cord . A new finding is the presence of LTKL I neurosecretory cells with axon terminals in the anterior aorta, suggesting for the first time a neurohormonal role of LTKL I neurons in the ventral nerve cord is decreasing somewhat, whereas the number is increasing in the brain. Thus the functional roles of TRPs may change to some extent during development.