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Postembryonic Development of Leucokinin I-Immunoreactive Neurons in the Brains of the Wax Moth *Galleria mellonella*

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The changes of neurons and its distribution, using an antiserum raised against a neuropeptide, leucokinin-I(LK-I), were studied in the brains of the 1st instar, 3rd instar, fifth instar, seventh instar larvae and prepupae, 0-day pupae, 5-day-old pupae and adult from the wax moth *Galleria mellonella*. In the brain of the third instar larvae, about 10 LKI-immunoreactive (LKI-IR) cell bodies were found. Of these LKI-IR neurons, four cell bodies were intensely detected in the pars intercerebralis and the remaining as seen in the lateral region. In case of the fifth instar larvae, six cell bodies were prominently found in the pars intercerebralis and 5-6 cell bodies were located in the cerebral lateral region. In the seventh instar larvae, the number of immunoreactive cells decreased to four which also are located in pars intercerebralis, whereas its number also was diminished to two and four cell bodies at the prepupae and 0-day pupae, respectively. During the metamorphic changes from 5-day-old pupae to adult, the four LKI-IR neurons was constant.

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Localization Change of Leucokinin I-Immunoreactive Neurons in the Ventral Ganglia of the Wax Moth *Galleria mellonella* during Postembryonic Development

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The localization of leucokinin-I immunoreactive (LKI-IR) neurons in the ventral ganglia of the wax moth *Galleria mellonella* was examined by the wholemount method. During larval stages, from the 3rd to 7th instar larvae, there were two pairs of of large, highly prominent LKI-IR cell bodies in each of abdominal ganglia 3-8 distributed as bilateral pairs. Those immunoreactive cells are located on the ventrolateral region and their cell bodies often bifurcate. The axons projected from the ganglia via the ventral nerve, where they may terminate to varicose branches in target organ. In the case of prepupae and 0-day pupae, 2 pairs of LKI-IR neurons appeared in the 2nd abdominal ganglion. However, with approaching to the adult, the number of immunoreactive neurons abruptly increased to four pairs in the terminal abdominal ganlia. It is suggested that leucokinin I, one of neuropeptide family in insects, may have a unique function in the life of adult.