

Z305 Tyrosine Phosphorylation of FAK Occurs during the Early Chondrogenic Differentiation of Chick Mesenchymal Cells

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We investigated the tyrosine phosphorylation states of focal adhesion kinase (FAK) and its association with cytoskeletal proteins in *in vitro* micromass culture of wing bud mesenchymal cells. Tyrosine phosphorylation of FAK was increased and peaked at day 3 of the culture (at condensation step). Phosphorylated FAK was associated with abundant fibronectin (FN) and cytoskeletal proteins including talin, vinculin and actin. In consistent with tyrosine phosphorylation pattern of FAK and expression level of FN and $\beta 1$ integrin, the association of pp125FAK with cytoskeletal proteins was decreased to basal level. Disrupting the actin cytoskeleton by treatment of cytochalasin D and inhibition of tyrosin phosphorylation with herbimycin A after condensation down-regulated tyrosine phosphorylation of FAK and association of FAK with FN, which resulted in increase the accumulation of sulfated proteoglycan. These results suggest that the integrin mediated interaction of cell and FN regulate chondrogenic condensation and differentiation through controlling the tyrosine phosphorylation of FAK.

Z306 Immunocytological Identification of Allatotropin in the Central Nervous System of *Bombxy mori*

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Allatotropin (Mas-AT) antibody raised against from synthetic peptide from *Manduca sexta* was used for detecting Mas-AT immunoreactive neurons in the central nervous system of *Bombxy mori*. In this study, we identified the very strong immunoreactive neurons in the frontal and terminal ganglia, respectively, throughout the fifth larval instar. The four strong immunoreactive neurons (two small and large) are located in the anteromedial portion of the frontal ganglia. Mas-AT immunoreactivity could be seen in axons originating from the soma of these cells, projecting down the recurrent nerve. Over twenty pairs of newly identified small cells are found in the brain. These cells have small somata, do not resemble any of the described cerebral neurosecretory cells (NSC), and only exhibit weak immunoreactivities. In the ventral nerve cord, most prominent immunoreactivities are shown in the terminal abdominal ganglion. Two large and strong immunoreactive cells are located the median portion and their axons are projected down.