

Z206 **Hemocytic Differentiation In Hemopoietic Organ of the Mealworm Beetle, *Tenebrio molitor***

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Hemocytic differentiation of hemopoietic organs and its fine structural characteristics in the mealworm beetle, *Tenebrio molitor* were observed with light and electron microscopes. The abdominal hemopoietic tissue of this beetle was located along the dorsal diaphragm which continuous over the ventral wall of the heart. It has been observed that the hemocytes in loose islets of the organ were more differentiated than those of compact islets. We could observe four types of well-defined hemocytes such as prohemocyte, plasmatocyte, granulocyte and oenocytoid in loose islets of the hemopoietic organs. As for a hemocytic differentiation, we could observe that several types of hemocytes were originated from the common stem cells in the hemopoietic tissue. In addition, matured hemocytes in loose islets was discharged into hemolymph by the tearing of acellular membrane covering the islets.

Z207 **Fine Structural Analysis of the Silk Producing Apparatus in the funnel-web spider, *Agelena limbata***

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The silk producing apparatus of the funnel-web spider, *Agelena limbata* were located at the ventral end of the abdominal part, and were composed of internal silk glands and external spinning tubes. By the light and electron microscopic inspections, it was found that four types of silk glands were connected to the typical spinning tubes of each spinnerets. Each type of the silk gland was consisted of their typical secretory sac and duct respectively. Secretory epithelia of these glands were commonly composed of simple columnar cells which deposit chemically distinct secretory products into the lumen. The ampullate glands(AmG) and pyriform glands(PyG) were connected to the anterior spinnerets. The small spherical to pear-shaped glands are grouped into two clusters connected to the anterior spinneret. Another AmG, tubuliform glands(TuG), and aciniform glands(AcG) were connected to the median spinnerets. And another TuG and AcG were connected to the posterior spinnerets. Among these glands, AmG and TuG have spigots(large spinning tubes) whereas, AcG and PyG have spools(small spinning tubes) characteristically.