

Ultrastructural Localization 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. Prohemocytes were ovoid cells with a simple structural organization. Plasmatocytes cytoplasm contains well-developed rough endoplasmic reticulum, nenerous mitochodria and ribosome. Ggranulocyte has characterized by numerous granules embedded in cytoolasm. Oenocytoids were large cells a hemocytescells a hemocytes with few cytoplasmic organells. In additon, matured hemocytes in loose islets was discharged into hemolymph by the tearing of acellular membrane covering the islets.