

Z402 Effect of the Mitochondrial Lactate Dehydrogenase Inhibitor in Various Tissues of Perciforme and Cypriniforme Fishes

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The various tissues of Perciforme (*Siniperca scherzeri*, *Odontobutis plathcephala*) and Cypriniforme fishes (*Hemibarbus longirostris*, *Pungtungia herzi*, *Zacco platypus* and *Zacco temminckii*) were homogenized and then centrifuged to isolate the cytosolic lactate dehydrogenase (1.1.1.27, LDH). Each mitochondrial LDH inhibitors have been isolated by ultrasonic treatment with 5mM imidazole-HCl buffer (pH 6.0) containing 175mM NaCl from the LDH-free crude mitochondrial fraction of them. The most inhibited tissues in *Siniperca scherzeri* and *Odontobutis plathcephala* was kidney and skeletal muscle, respectively. On the other hand, not inhibited tissue of them was liver. In Cypriniforme fishes, the skeletal muscle was not inhibited except *Hemibarbus longirostris*. Our results can be confirmed that the mitochondrial LDH inhibitor interacts with the LDH isozymes in various tissues. Also, in skeletal muscle of *Siniperca scherzeri*, the mitochondrial LDH inhibitor was remarkably showed that it assisted to bind the LDH isozymes to the LDH-free crude mitochondrial fraction than other tissues.

Z403 Effect of neurotoxin 6-aminonicotinamide on the morphological and biochemical changes in blood cells of Japanese quail

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Effects of neurotoxin 6-aminonicotinamide (6-AN) on the morphological and biochemical changes in blood cells of Japanese quail were investigated. 6-AN stimulated the multiple appearance of tear drop cells and several blast cells such as pronormoblast, basophilic normoblast and polychromatophilic normoblast. In addition, the numbers of red blood cell, white blood cell and hemoglobin were severely reduced. The electron micrograph showed that the size of red blood cell nucleus becomes enlarged and its chromatin is highly condensed. In white blood cell, mother cells like myeloblast and promyelocyte were distinctively produced. In particular, the numbers of heterophil increased significantly but its size is relatively smaller than that of the control and pair-fed groups. The numbers of thrombocyte decreased significantly. Activities of serum aspartate aminotransferase and creatine phosphokinase increased significantly compared to the control and pair-fed groups. In conclusion, 6-AN appeared to interfere with the hematopoiesis occurring in the bone marrow.