

Glutamate is the major excitatory neurotransmitter in the central nervous system (CNS) but evidence for peripheral glutamatergic fibers in mammals is still lacking. However, glutamate receptors have been identified in peripheral organs, including taste buds, the myenteric plexus, and pancreatic islet cell. Protection against anoxic damage could be explained by mechanisms mediated by postsynaptic metabotropic glutamate receptor 2 (mGluR2) or mGluR3 such as the inhibition of membrane excitability resulting from reduction of cAMP formation by a G-protein-dependent modulation of ion channels. Thus, mGluR2/3 behaves potentially as a major defensive mechanism anoxia-tolerant species. There are a few reports for the regional pattern of hypoxic damage which was inversely related to the expression of mGluR2/3. The aim of this study was to characterize expression of mGluR3 in the hypoxic liver in experimental model of rat liver cirrhosis. Proteomic analysis of protein extracts from CCl<sub>4</sub> induced cirrhotic rat livers revealed the presence of the mGluR3. The presence of mGluR3 in the macrophages was confirmed by immunohistochemical analysis in the fibrous septa. These results demonstrate that mGluR3 is involved in the liver in response to persistent hypoxic status such as fibrotic and cirrhotic conditions, and suggest that the expression of mGluR3 may be a key role liver functional metabolism and viability by interacting with the glutamate receptors in vivo.

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## **P#44**

### **Paget's Disease of the Breast in a Canine**

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Paget's Disease of the breast is a rare lesion that accounts for 2% of mammary gland tumors in humans, presenting clinically as an erythematous or eczematous rash of the nipple. The features may be clinically indistinguishable from eczema or other chronic forms of dermatitis. A 9-year-old Maltese female presented with pain in the right breast. The skin around the nipple was chronic ulcerated and the skin was inverted and hemorrhagic discharge flowed from the lesion. The epidermis contains an infiltrate of small groups of large pleomorphic cells that usually have abundant vacuolated clear-staining cytoplasm. Some larger groups of cells may form acinar structures. The tumor cell population showed positive staining for

PAS diastase-resistant mucins. For diagnostic confirmation, an immunohistologic evaluation was conducted. The tumor cells show positive membrane immunoreactivity for the HER-2/neu (c-erbB-2) oncoprotein. The lesion in the bitch was histologically similar to those in found women. There have been few previous reports of canine Paget's Disease of the breast showing a clear cell morphology.

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#### **P#45**

### **Outbreaks of Chicken Hydropericardium-Hepatitis Syndrome in Korea**

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A flock of 25-day-old broiler chickens, affected with hydropericardium-hepatitis syndrome (HHS) and with swollen kidneys and yellowish diarrhea, were investigated histopathologically. The mortality rate

increased after 20 days of age in a flock on a broiler farm. Grossly, typical dilated hydropericardium was observed and filled with blood tinged watery fluids in the sternal cavity, multifocal necrotic and yellowish liver, and congestive dilated kidneys. Histologically, the chickens had multifocal hepatic necrosis with intranuclear inclusions in the hepatocytes, a marked increase of macrophages in the spleen and lungs, moderate pericardial edema, and a degeneration of convoluted and collecting tubules, with hemorrhage in the kidneys. This case presents the first gross and histopathological examinations of HHS from outbreaks in Korea

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#### **P#46**

### **Angiotropic Metastatic Malignant Melanoma of Canine Mammary Gland Tumor**

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