

Inducible Histamine Protects Mice from Hepatitis through H2-Receptor Stimulation

Shuji Mori 1, 2, Hideo Takahashi 2 and Masahiro Nishibori 2

(1. Shujitsu Univ., Sch. Pharm., 2. Okayama Univ. Grad. Sch. Med. Dent & Pharm. Sci.)

Histamine has been well known as a mediator of allergic inflammation. In addition, histamine has been demonstrated to be involved in the regulation of innate and acquired immune responses through H2-receptors. In the previous study with human peripheral blood mononuclear cells, we observed that histamine exerts various regulatory effects on monocyte / macrophage function.

In this symposium, we show that inducible histamine protects mice from lethal hepatitis, induced by heat-killed *P. acnes* (1mg, i.v.) followed by challenge with a low dose of lipopolysaccharide (1 μ g), by reducing the excessive cytokine response in the liver.

Additionally, from in vivo studies with histidine decarboxylase knockout and H1-, H2-receptor knockout mice, the protective effect of histamine against fulminant hepatitis is found to be performed through H2-receptor stimulation.