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EXPERIMENTAL INFECTION OF HUMAN HEPATITIS B VIRUS IN TREE SHREWS AND ITS RELATION TO HEPATOCARCINOGENESIS

Yan Ruiqi[1] Su Jianjia[2] Huang Dingrui[2] Gan Youchuan[2]
Yang Chun[2] Huang Guohua[2] Luo Dan[2]

(1 Cancer Institute, Sun Yat-Sen University of Medical Sciences, Guangzhou, 510060;
2 Guangxi Institute for Research on Cancer)

Tree shrews were inoculated with human hepatitis B virus (HBV). More than half of the experimental animals were infected. Successive generative infection with the sera of HBV-infected tree shrews had been conducted and was prevented by hepatitis B vaccine. Experimental infection with standard HBV serum revealed that tree shrews are sensitive to HBV infection. By using this animal model, hepatocarcinogenic action of HBV and/or aflatoxin B_1 (AFB_1) was investigated. The incidence of hepatocellular carcinoma (HCC) and precancerous lesion was significantly higher in the animals both infected with HBV and exposed to AFB_1 than those either HBV-infected or AFB_1-ingested alone. The integration of HBV DNA into the host hepatocyte gene was found during hepatocarcinogenesis among the tree shrews infected by HBV. These results suggest that exposure to HBV and AFB_1 may play a synergistic role in the occurrence of HCC, and support the viewpoint of etiological relationship between HBV and HCC.

Subject headings hepatitis B virus; hepatoma, experimental/etiology; Tupaia/microbiology

·新成果·

血管平滑肌α肾上腺素受体触发 Ca^{2+} 运动的研究

课题负责 关永源

(中山医科大学药理学教研室;广州,510089)

该项研究采用离体血管条收缩,Ca^{2+} 内流子外溢及 Fura-2 荧光测定胞浆 Ca^{2+} 瞬即变化等技术,研究血管平滑肌α肾上腺受体触发 Ca^{2+} 运动的特点及机理。研究发现 α_1 和 α_2 受体均可引起胞内 Ca^{2+} 释放及胞外 Ca^{2+} 内流。α_1 受体引发的 Ca^{2+} 内流包含对电压依赖性 Ca^{2+} 通道拮抗药硝苯吡啶敏感与非敏感2种成分,前者与蛋白激酶C激活相关,后者受胞内 Ca^{2+} 释放所调控。在此基础上,提出血管平滑肌的 α_1 与 α_2 受体支配其兴奋-收缩偶联的同一功能区,α_1、α_2 受体之间存在变构激活等新的学术观点。研究为国内首创,并具国际先进水平,1994年获国家教委科技进步一等奖。

(陈丽芳)