

## **Abstract**

**The cause of chronic carriage of hepatitis B virus (HBV) remains obscure despite of many efforts trying to explore the underlying mechanism. Some recent studies suggest that polymorphism of tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ) gene and mannose-binding lectin (MBL) gene may be related to the carrier state of HBV. Among them, MBL is a protein that is closely related to the opsonization of immune reaction. TNF- $\alpha$  is an cytokine that play an important role in regulating the immune response.**

**Taiwan is highly prevalent for chronic HBV infection. It is worthwhile to study whether the gene polymorphism may be related to the high carrier rate in Taiwan. Our first-year result showed that the rate of TNF- $\alpha$  promoter variation was significantly higher in both unvaccinated and vaccinated carrier children than in the healthy adult control. On the other hand, the rate of MBL gene variation was similar between the carrier children and the healthy adults.**

**Keywords : Hepatitis B virus ; gene polymorphism ; TNF-alpha ; mannose binding lectin**