

## **N-terminally His-tagged hepatitis B core antigens : construction, expression, purification and antigenicity**

### **Abstract**

The core antigen of the hepatitis B virus (HBcAg) has been used widely as a diagnostic reagent for the identification of the viral infection. However, purification using the conventional sucrose density gradient ultracentrifugation is time consuming and costly. To overcome this, HBcAg particles displaying His-tag on their surface were constructed and produced in *Escherichia coli*. The recombinant His-tagged HBcAgs were purified using immobilized metal affinity chromatography. Transmission electron microscopy and enzyme-linked immunosorbent assay (ELISA) revealed that the displayed His-tag did not impair the formation of the core particles and the antigenicity of HBcAg.

**Keyword:** Hepatitis B capsid; Protein display; His-tag; Purification; Antigenicity