

## Scleroglucan-Coated Liposomes for Oral Vaccine: Stability in gastric fluid and Immune responses

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### Abstract

Proper stimulation of the mucosal immune system offers the effective protection of human body from pathogens. The aim of this study is to prepare the scleroglucan-coated liposomes (SG-Lip) containing the antigen, GFP- expressing *Salmonella typhimurium* (ST), and characterize for their size, shape, stability in simulated gastric fluid, and their antibody stimulating efficiency following oral administration. The shape of the SG-Lip observed by TEM was spherical and their particle size and zeta potential was significantly dependent on scleroglucan contents in the liposomal formulations. In the stability studies, the change of relative turbidity of SG-Lip was significantly diminished. Delivery to Peyer's patches or mesenteric lymph nodes was enhanced significantly in SG-Lip group. In particular, ST-loaded SG-Lip could produce better serum IgA and intestinal IgA levels compared with the plain liposomes. These results indicate that SG-Lip can be used as a potential delivery carrier for effective oral immunization.

### **Acknowledgement**

This study was supported by a grant of the Korea Health 21 R&D Project, Ministry of Health & Welfare, Republic of Korea (03-PJ1-PG10-21200-0009).

### **References**

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