

Evaluation of novel drug delivery system carrier “bio-nanocapsules” possessing active targeting machinery in the forthcoming cosmetics field

Shunichi Kuroda

Nagoya Univerisity

Bio-nanocapsule (BNC) is a hollow particle consisting of liposome and hepatitis B virus (HBV) surface antigen (HBsAg) L proteins. Due to the high similarity in surface structure between HBV and BNC, BNC is considered to harbor three functions like HBV: active targeting activity (originally to human liver), membrane fusogenic activity, and stealth activity (escaping from reticuloendothelial system in body). Recently, we have developed *in vivo* pinpoint drug and gene delivery system using BNC as a platform by replacing the human liver-specific recognition region (pre-S region) on BNC surface to the targeting molecules of interest. In this study, I have evaluated the applicability of BNC technology for the transdermal delivery, which would be useful technology in the forthcoming cosmetic field.