

Biotin-Conjugated pH-Sensitive Polymeric Micelle as a drug carrier for tumor targeting

김지현, 김민상, 이두성*
성균관대학교
(dslee@skku.edu*)

To achieve targeted drug delivery for chemotherapy, a ligand-mediated polymeric micelle was designed, which could have high affinity binding of a specific receptor on the surfaces of tumor cells. The Poly(ethylene glycol) grafted poly(β -amino ester) (PEB) amphiphilic block copolymers were synthesized with a Biotin by esterification reaction and characterized with H-1 NMR spectroscopy and gel permeation chromatography. The size of the Biotin-conjugated PEB micelles was determined by dynamic light scattering measurement, the existence of available biotin at the surface of the Biotin-conjugated PEB micelles was confirmed by HaBa/Avidin assay. Also, their cellular uptake properties and cytotoxicity assay were evaluated.