

Preparation and Characterization of Biotin-Conjugated pH-Sensitive Polymeric Micelle for Tumor Targeting

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pH-sensitive polymeric micelles have been investigated as drug carriers for chemotherapy. To achieve targeted drug delivery, ligand-mediated micelles were developed, which were able to penetrate into the target tumors due to their high binding affinity to a specific receptor on the surface of tumors. Recently, many studies have shown the presence of biotin transport systems in epithelia of liver, intestine, placenta and human peripheral blood mononuclear cells. In this study, Biotin, as a cell penetrating ligand, conjugated poly(β -amino ester)-graft-poly(ethylene glycol) (Biotin-PAE-g-PEG) pH-sensitive block copolymers were synthesized and their cellular uptake properties were evaluated.