

Novel pH-responsive Polymeric Micelles: In vitro Experimentation of Various Anti-Cancer Drug

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In Drug Delivery System, polymeric micelles composed of pH-responsive block copolymers can strengthen the anti-cancer efficiency of a drug by storing in the target area. We synthesized methoxy poly(ethylene glycol)-poly(β -amino esters) block copolymers with different molar ratios and various bisacrylate ester by Michael type step polymerization. Anti-cancer drug having weak acid (chlorambucil and 5-fluorouracil), weak base (doxorubicin) and hydrophobic (Paclitaxel) were used. The High Performance Liquid Chromatography (HPLC) was used to measure a drug concentration. The in vitro drug release properties were performed a dialysis membrane in PBS buffer solution. The drug-loaded micelles to PBS medium exhibited the pH dependent release behavior.