

### Polymer design of improvement of pH-sensitive micelle

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Polymeric drug delivery systems can be used not only to maximize the therapeutic activity while minimizing the negative side effects, but also to achieve temporal and distribution controls in drug therapy. pH-sensitive micelles, composed of poly( $\beta$ -amino ester)(PAE) as the hydrophobic parts and methoxy poly(ethylene glycol)(MPEG) as the hydrophilic parts, have been used for delivering drug into acidic tumor tissues. In this study, pH-sensitive polymer was designed by grafting together a copolymer using methoxy poly(ethylene glycol) (MPEG), poly(D,L-lactide)(PLA), poly( $\beta$ -amino ester)(PAE). pH-sensitive properties with different molecular weight of PLA have been evaluated.