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Hierarchical release of liposomes with aqueous two phase system: A new strategy for long circulating liposomes

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We discovered the unique release behavior of aqueous two phase system (ATPS) within liposomes, which might pave new revenue for long-circulating liposomes. ATPS is composed of PEG and dextran. The unique release behavior is based on the disproportional distribution of DOX in each polymer phase. The release time was prolonged 3 h more than regular liposomes. Lipid vesicles were fabricated by electro-formation and extrusion methods. Furthermore, cytotoxicity and localization in HeLa cells of nanoscale vesicles were estimated. The inhibition rate was twice than pure drug.

Biography

Xunan Zhang is pursuing his PhD at Harbin Institute of Technology. He is a Member of Professor Xiaojun Han's group which has published more than 40 papers in the fields of artificial cell membranes, controlled drug release, biosensors and microfluidics since established, in 2012.

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