

## Supplementary Information

### Co-delivery of Hydrophilic Gemcitabine and Hydrophobic Paclitaxel into Novel Polymeric Micelles for Cancer Treatment

Yan Di<sup>a</sup>, Yunyun Gao<sup>a</sup>, Xiumei Gai<sup>a</sup>, Dun Wang<sup>b</sup>, Yingying Wang<sup>a</sup>,  
Xiaoguang Yang<sup>b</sup>, Dan Zhang<sup>c</sup>, Weisan Pan<sup>a</sup>, Xinggang Yang<sup>a\*</sup>

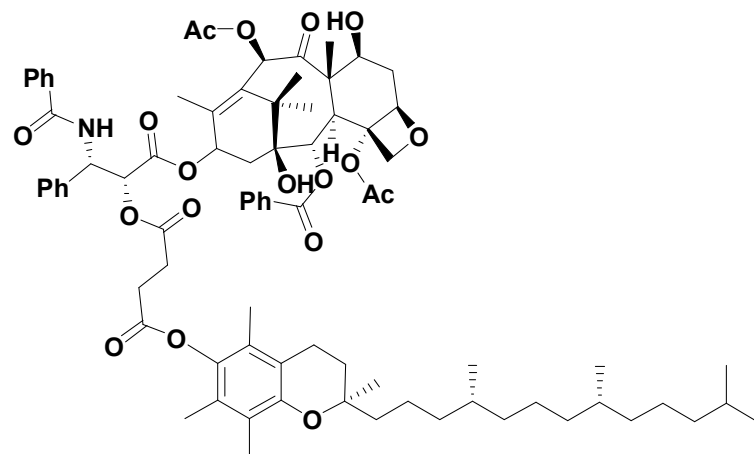
<sup>a</sup>Department of Pharmaceutics, School of Pharmacy, Shenyang Pharmaceutical University, Wenhua Road, Shenyang, 110016, China

<sup>b</sup>Key Laboratory of Structure-Based Drug Design and Discovery, Ministry of Education, Shenyang Pharmaceutical University, Shenyang, 110016, China

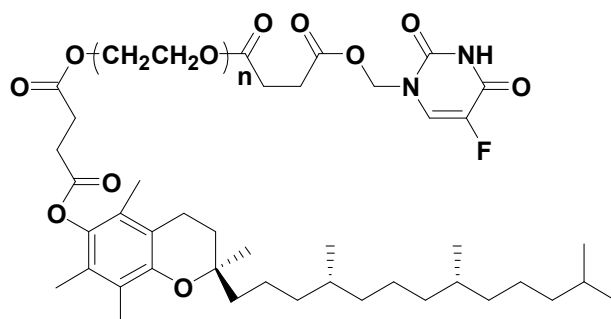
<sup>c</sup>Liaoning Pharma-union Pharmaceutical Co. Ltd., 122A Xianghuai Road, Benxi Economic Development Zone, Benxi, 117000, Liaoning Province

#### Corresponding Author:

Xinggang Yang, Email: [yangxg123@163.com](mailto:yangxg123@163.com)



PTX-VE



SRB-VE

Fig S1. Chemical structure of PTX-VE and SRB-VE

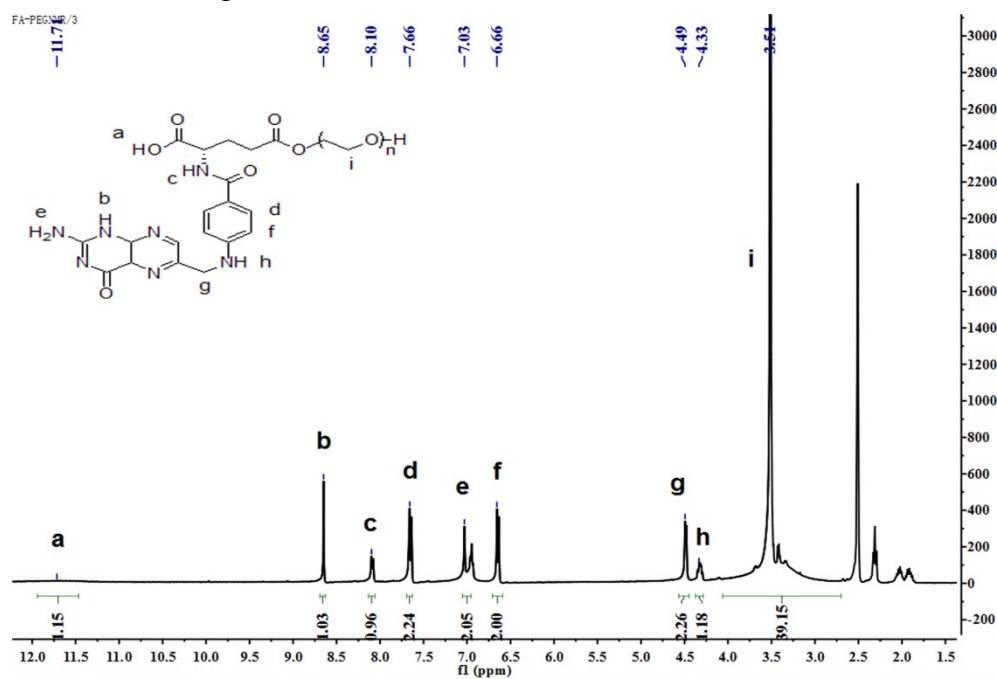


Fig S2. <sup>1</sup>H-NMR spectrum of FA-PEG

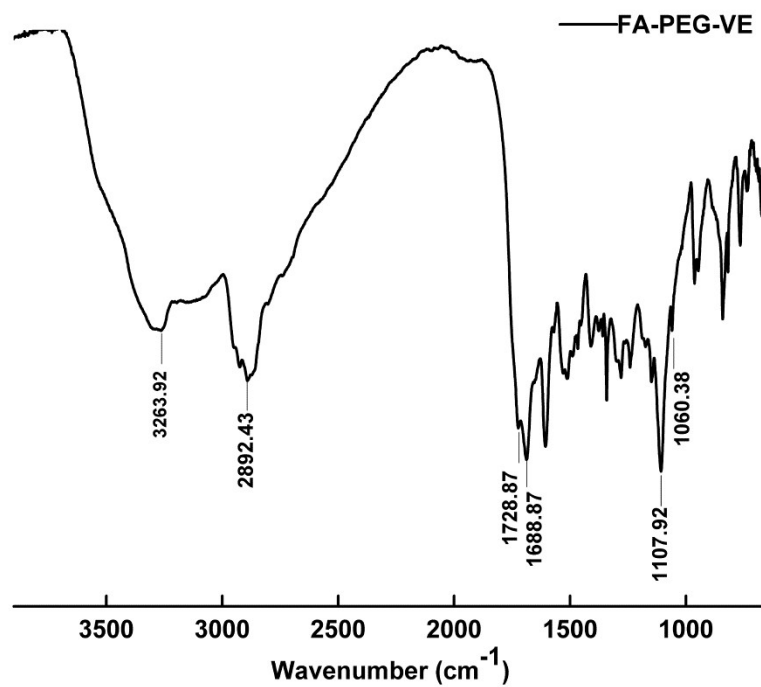


Fig S3. FTIR spectra of FA-PEG-VE

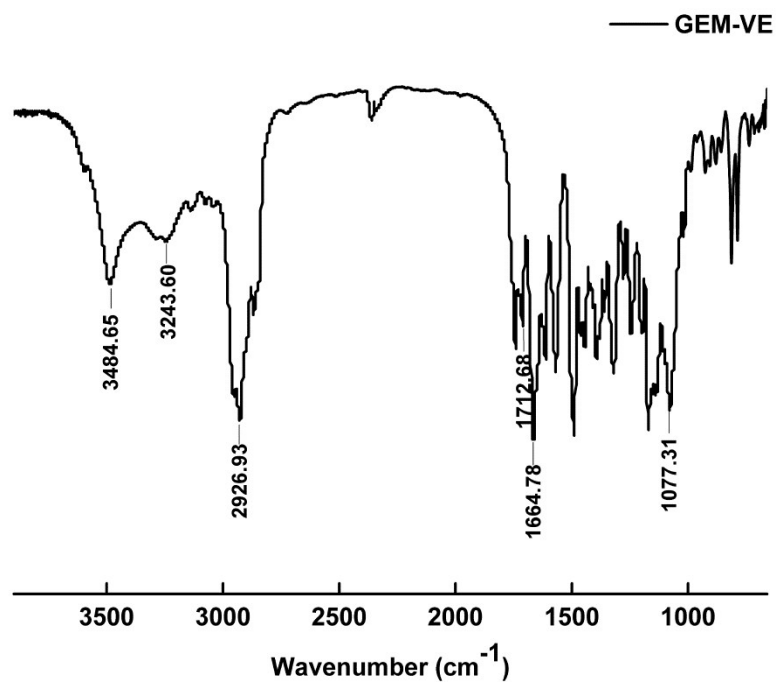


Fig S4. FTIR spectra of GEM-VE

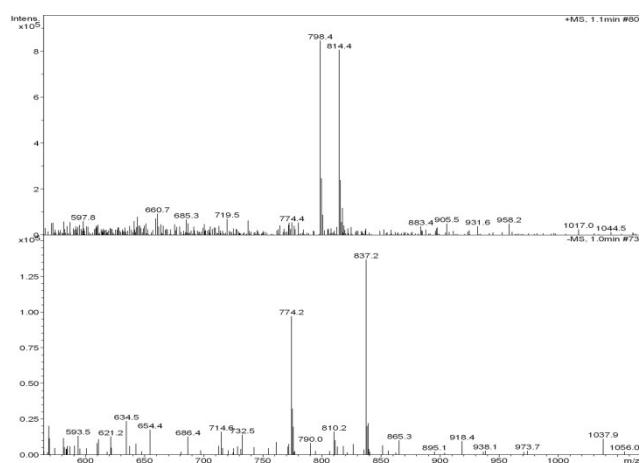


Fig S5. Mass spectra of GEM-VE

Table S1. Fluorescence intensity ( $I_1/I_3$ ) ratio of pyrene in different concentrations of MPEG-PLGA and FA-PEG-VE

Concentration of materials (g/L)	MPEG-PLGA			FA-PEG-VE		
	$I_1/I_3$	$I_1/I_3$	$I_1/I_3$	$I_1/I_3$	$I_1/I_3$	$I_1/I_3$
$1 \times 10^{-6}$	1.103	1.075	1.045	1.033	1.005	0.983
$1 \times 10^{-5}$	1.287	1.190	1.260	1.196	1.117	1.045
$5 \times 10^{-5}$	1.390	1.378	1.350	1.218	1.164	1.100
$1 \times 10^{-4}$	1.433	1.410	1.424	1.136	1.180	1.077
$2 \times 10^{-4}$	1.489	1.469	1.453	1.099	1.010	1.055
$5 \times 10^{-4}$	1.340	1.371	1.372	0.962	0.920	0.869
$1 \times 10^{-3}$	1.205	1.198	1.228	0.815	0.829	0.799