

## Supporting Information

**Electrospray biodegradable microcapsules loaded with curcumin for drug delivery systems with high bioactivity**

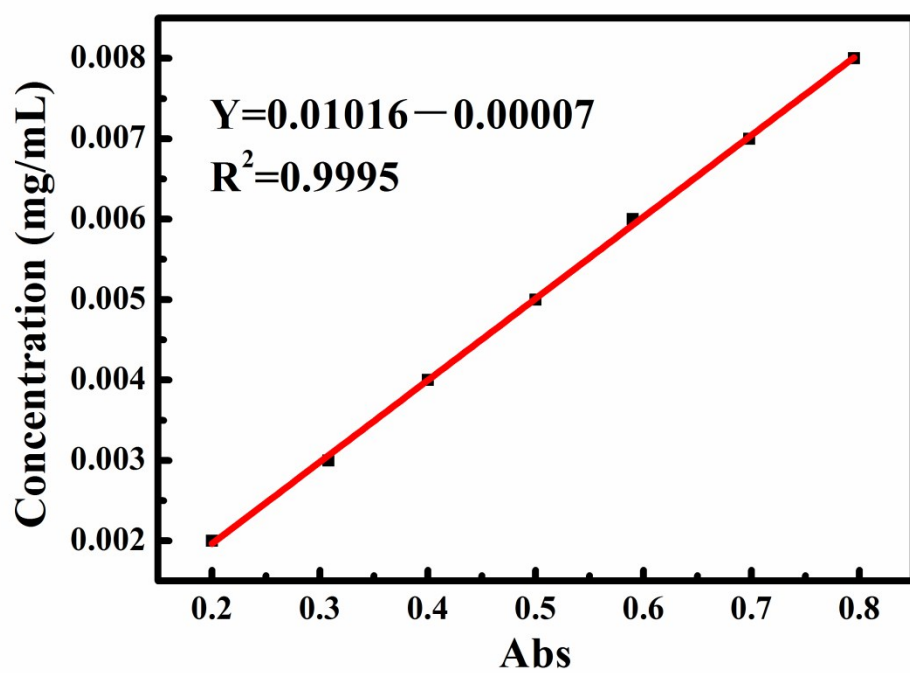
**Zhuoxian Mai,<sup>†a</sup> Jiali Chen,<sup>‡b</sup> Ting He,<sup>a</sup> Yang Hu,<sup>a</sup> Xianming Dong,<sup>a</sup>**

**Hongwu Zhang,<sup>b\*</sup> Wenhua Huang,<sup>b</sup> Frank Ko<sup>c\*</sup> and Wuyi Zhou<sup>a\*</sup>**

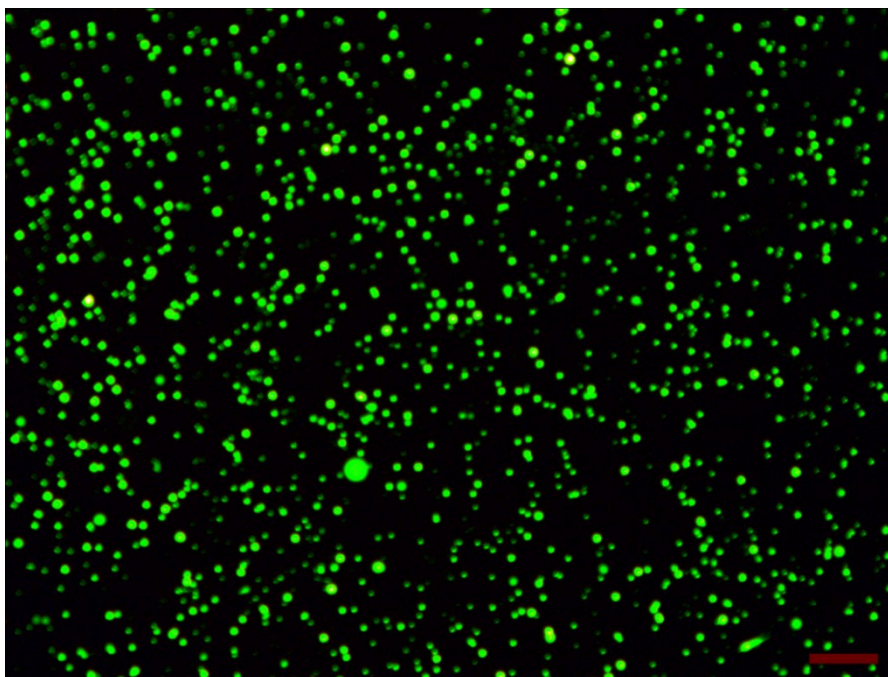
*<sup>a</sup> Institute of Biomaterials, College of Materials and Energy, South China Agricultural University, Guangzhou, 510642, China;*

*<sup>b</sup> Department of Anatomy, Guangdong Provincial Key Laboratory of Construction and Detection in Tissue Engineering, Southern Medical University, Guangzhou 510515, China;*

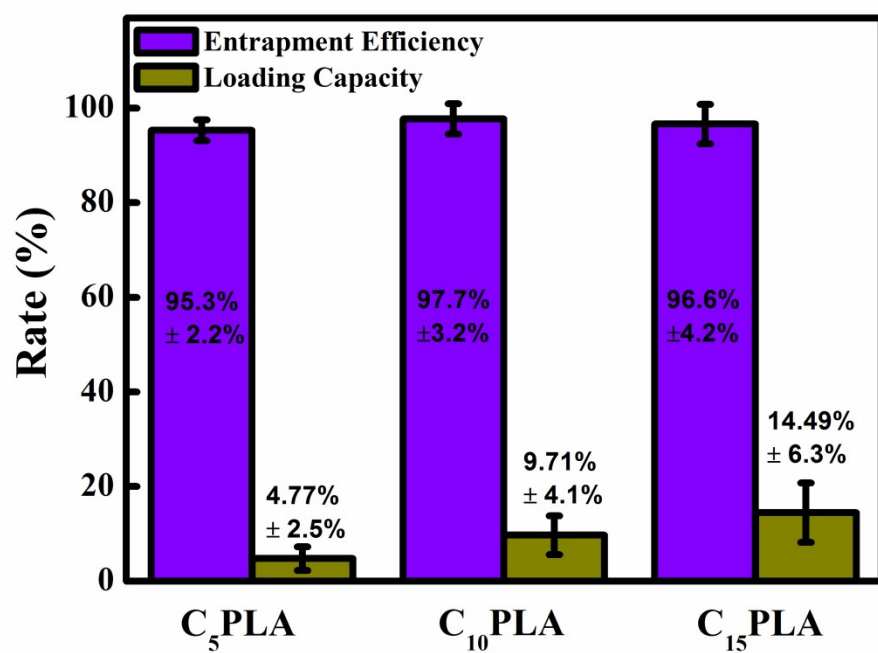
*<sup>c</sup> Department of Materials Engineering, the University of British Columbia, Vancouver, BC, Canada V6T 1Z4.*



**Fig. S1** The calibration curve of Cur by plotting the absorption intensity at 425 nm with respect to concentration of Cur.

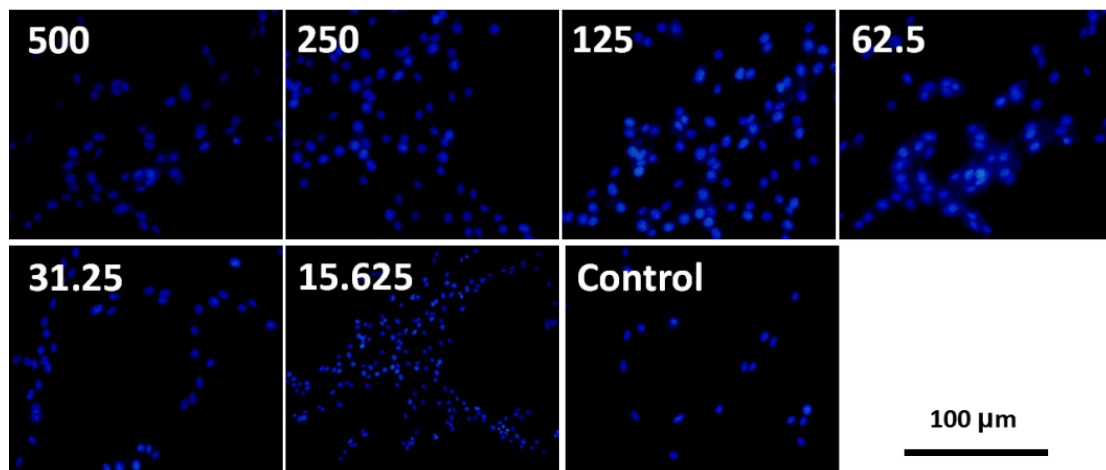


**Fig. S2** Fluorescent microscope image of C<sub>10</sub>PLA microcapsules with 488 nm fluorescence. (Scale bar = 20  $\mu$ m).

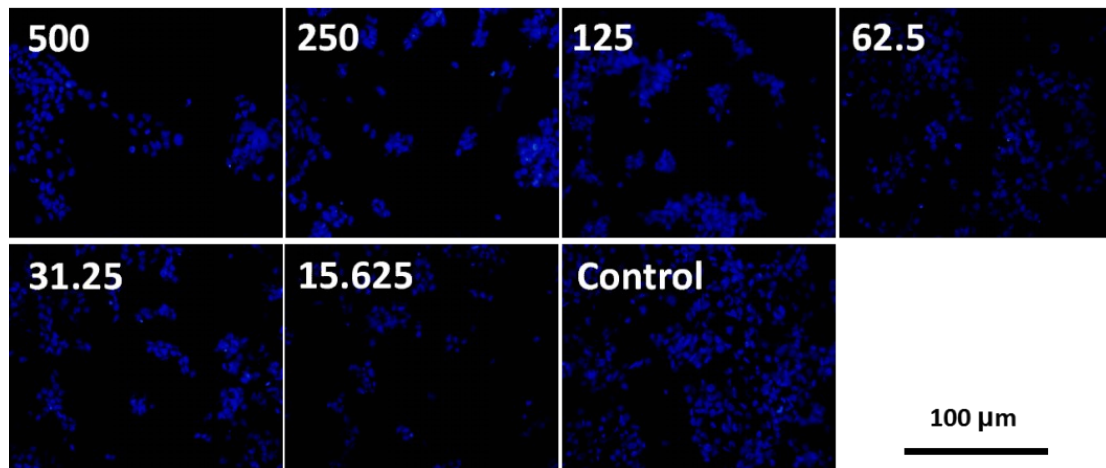


**Fig. S3** The LC (%) and EE (%) of C<sub>5</sub>PLA, C<sub>10</sub>PLA and C<sub>15</sub>PLA fabricated by ES process, respectively.

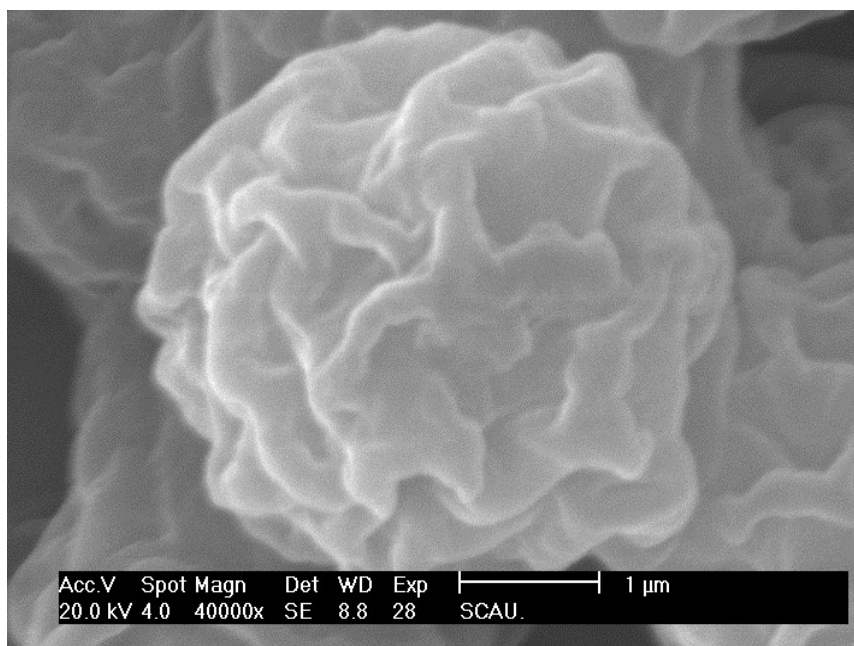
## PC12



## 293T



**Fig. S4** Immunofluorescence microscopy analysis of apoptosis in PC12 cells and 293T cells induced by C<sub>0</sub>PLA at different curcumin concentrations (ranging from 15.625 to 500  $\mu\text{g}/\text{mL}$ ).



**Fig. S5** SEM of C<sub>10</sub>PLA microcapsule surface with high magnitude.