

Indocyanine Green (ICG)-Coated Polycaprolactone (PCL) Micelles for Fluorescence Imaging of Tumors

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Author Contributions

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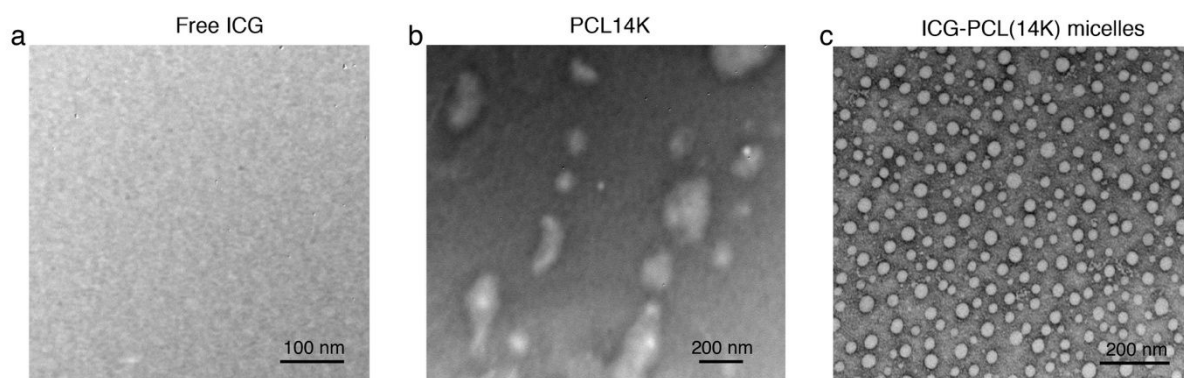


Figure S1. TEM images of (a) free ICG, (b) free PCL (MW 14K) and (c) ICG-PCL micelles. Condition: staining with 2% WPO_4 (pH=7.0). Neither free ICG nor free PCL can form micelles when using the same protocol that led to the formation of ICG-PCL micelles.

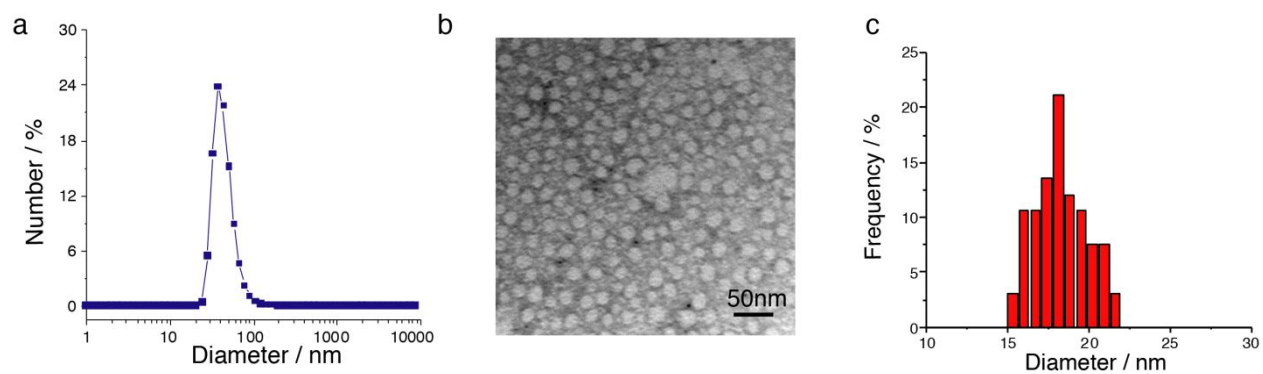


Figure S2. Characterization of ICG-PCL (MW: 5K) micelles. (a) Dynamic light scattering (DLS) of the ICG-PCL micelles. (b) Transmission electron microscopy (TEM) image of the ICG-PCL micelles. (c) Quantitative analysis of ICG-PCL micelle size, based on TEM images.

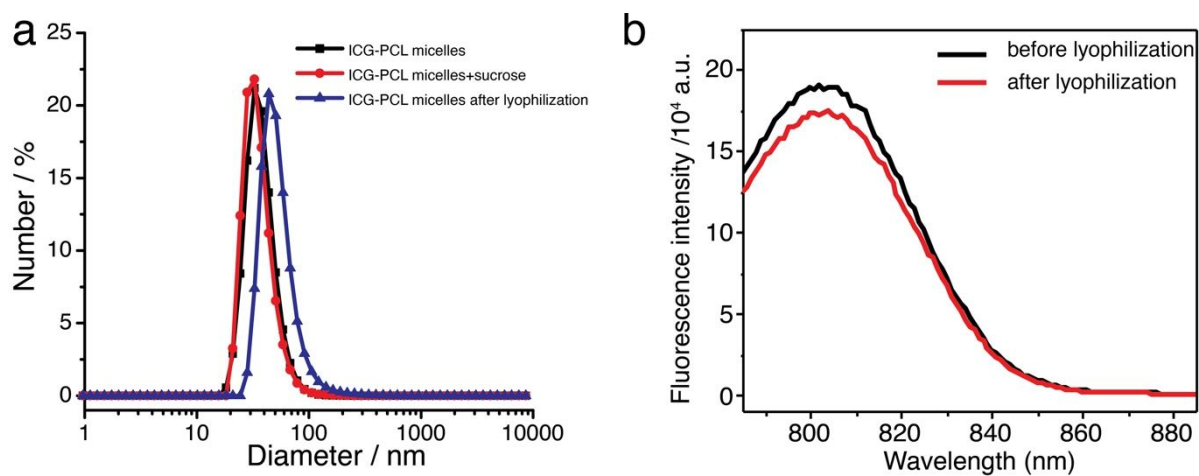


Figure S3. Effect of lyophilization on ICG-PCL micelles size (a) and fluorescence property (b). All measurements were performed in water.

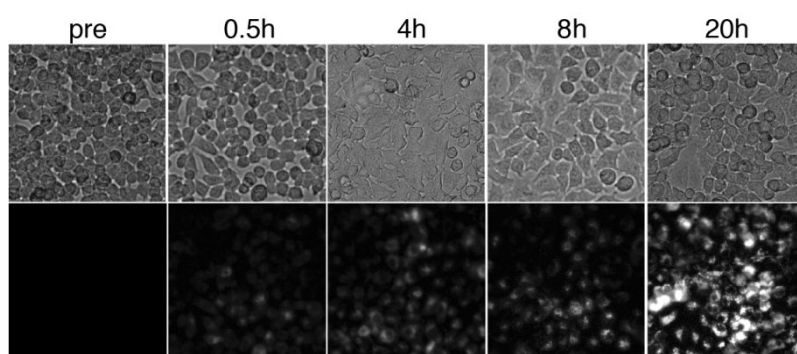


Figure S4. Phase contrast (top row) and fluorescence microscopy (bottom row) images of A549 cells incubated with ICG-PCL micelles. Images were acquired prior to addition of the micelles and at various times after the addition of micelles.

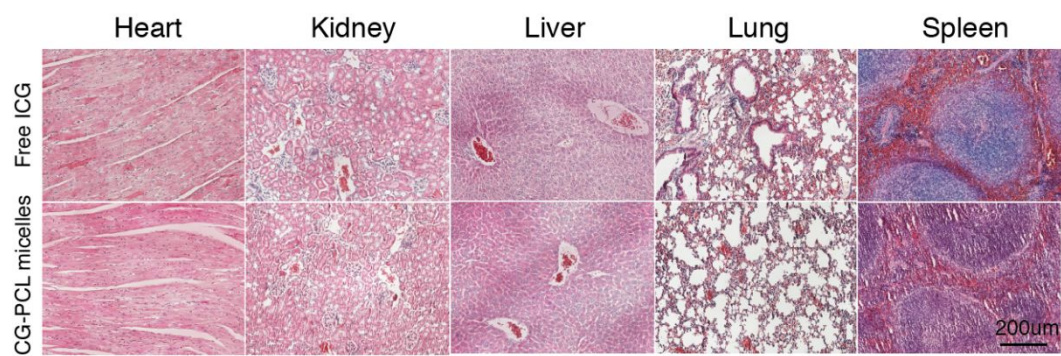


Figure S5. H&E stained organ sections. Organs were excised from A549 tumor bearing mice 24 h post-administration of free ICG (upper) and ICG-PCL micelles (bottom). The images were obtained using a Zeiss microscope at low magnification (20x).

Table S1. Physical-chemical properties of ICG-PCL.

Starting ICG:PCL Ratio (w/w)	PCL 5K			PCL 14K			PCL 45K		
	1:1	1:2	1:4	1:1	1:2	1:4	1:1	1:2	1:4
Encapsulation Efficiency (%)	54.70	22.29	2.97	52.80	15.78	8.50	42.15	38.43	7.97
Loading Efficiency (%)	27.35	7.43	0.59	26.40	5.26	1.70	21.07	12.81	1.60
Hydrodynamic Diameter (nm)	43.76	57.42	71.02	42.41	55.72	72.56	62.77	88.89	103.7
PDI	0.199	0.108	0.134	0.184	0.112	0.132	0.171	0.219	0.175