Non-invasive Photoacoustic and Fluorescence Sentinel Lymph Node Identification using Dye-loaded Perfluorocarbon Nanoparticles

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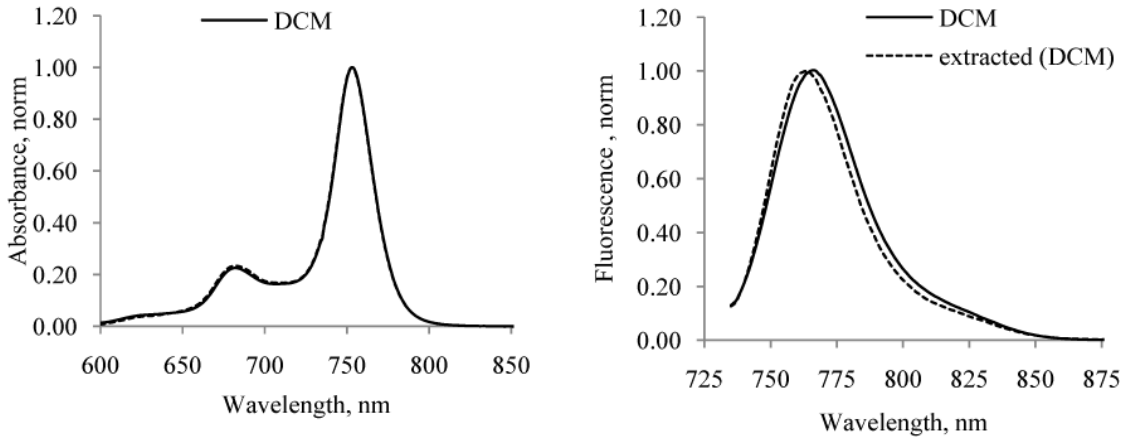

Figure S1. Absorbance and emission properties of PPCy-C8 free dye and after extraction of dye from PFC-based nanoparticles. The optical characteristics of PPCy-C8 extracted from nanoparticles were identical to that of the original dye.

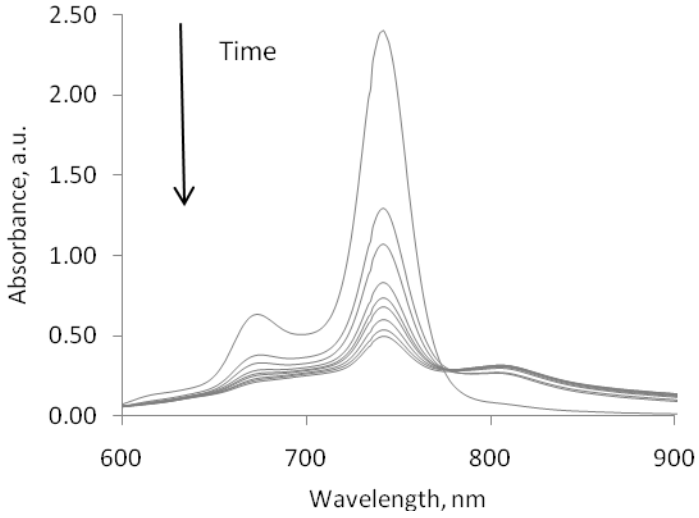

Figure S2. Alteration of absorbption spectra of PPCy-C8 in methanol over time from a spectrum similar to PPCy-C8 in DCM to that of PPCy-C8/PFC in water (Figure S3C).

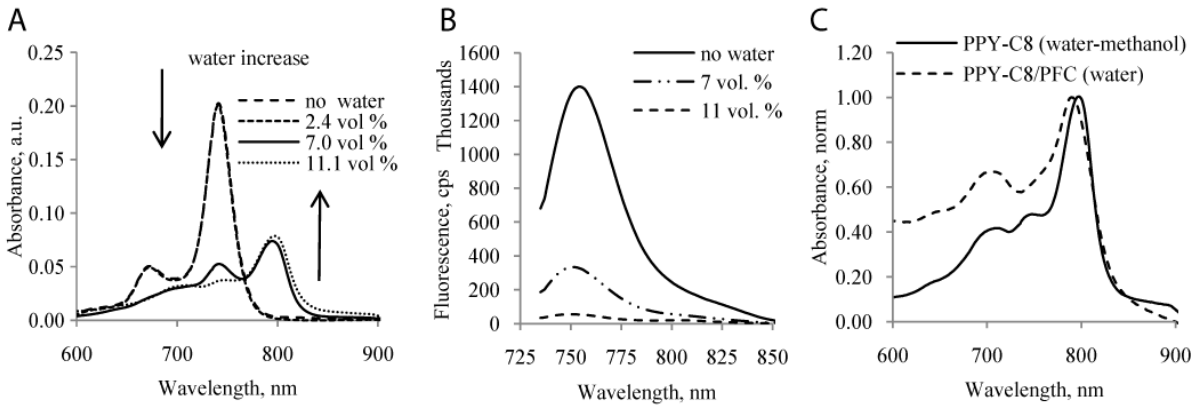

Figure S3. (A) Absorption spectra of PPCy-C8 in methanol titrated with water; (B) Emission spectra of PPCy-C8 in methanol titrated with water, ex. 720 nm; (C) comparison of absorption spectra of PPCy-C8 in 11 % water/methanol solution and PPCy-C8/PFC in water.

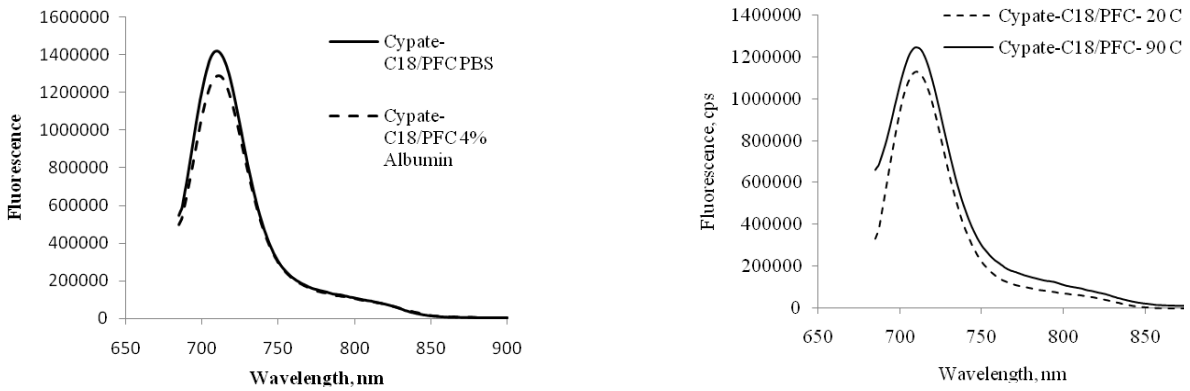

Figure S4. Fluorescence emission of cypate-C18/PFC nanoparticles in PBS or albumin solution (left) and at room temperature (20 C) or after heating to 90 C (right). The spectral properties changed little, demonstrating stable incorporation of the dye within the nanoparticles.

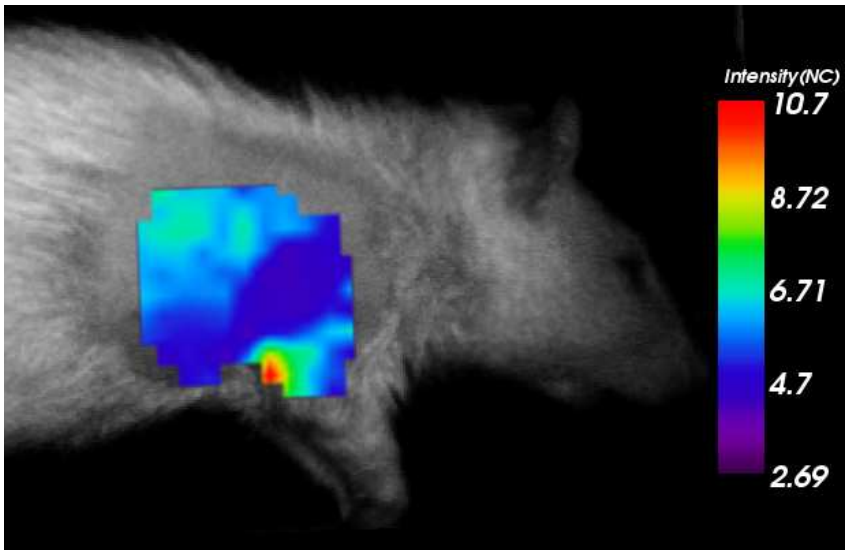

Figure S5. Fluorescence intensity map of lymph node region prior to contrast agent injection. Fluorescence intensity values are near zero relative to post-injection values.

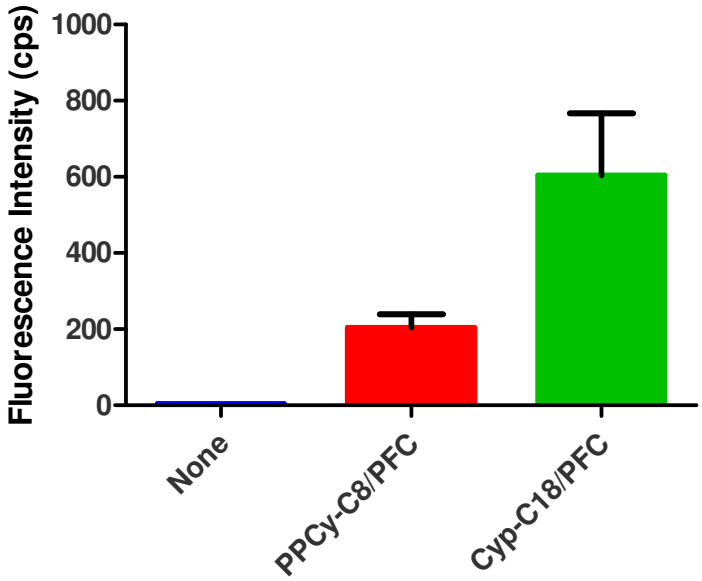

Figure S6. In vivo fluorescence intensity values for lymph node ROIs in Figure 7 demonstrating the greater fluorescence intensity of Cyp-C18/PFC over PPCy-C8/PFC nanoparticles.