

Supplementary Information

Nanoscale, Biocompatible and Amphiphilic Prodrug of Cabazitaxel with Improved Anticancer Efficacy Against 3D Spheroids of Prostate Cancer Cells

Ashok Kumar Jangid^{a,†}, Deep Pooja^{b,†}, Poonam Jain^a, Sri Vishnu Kiran Rompicharla^c, Shwathy Ramesan^{d,*}, Hitesh Kulhari^{a,*}

^a*School of Nano Sciences, Central University of Gujarat, Gandhinagar-382030, Gujarat, India.*

^b*The Centre for Advanced Materials & Industrial Chemistry, ^dSchool of Engineering, School of Sciences, RMIT University, Melbourne-3000, Australia.*

^c*Synergia Biosciences, Bangalore, India 560001*

[†]*Authors contributed equally.*

**Authors for Correspondence: HK (hitesh.kulhari@cug.ac.in), SR (rameshshwathy@gmail.com)*

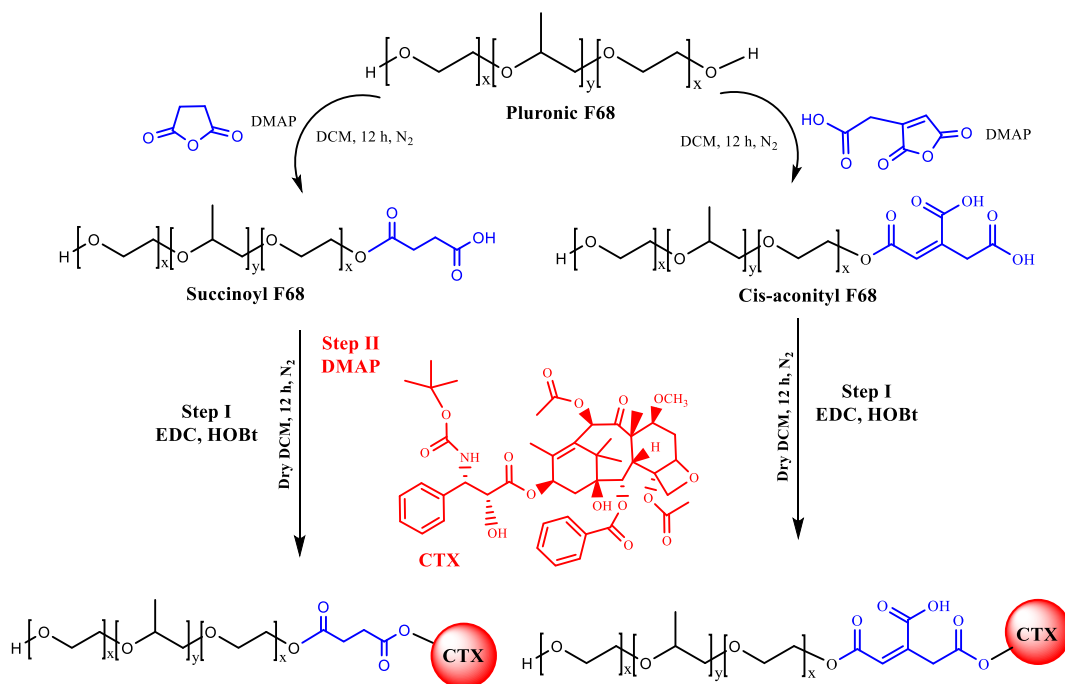


Figure S1. Scheme represent the conjugation mechanism of surfactant and cabazitaxel conjugates via succinoyl (F68-SA-CTX) and cis-aconityl (F68-CAA-CTX) redox sensitive linkers.

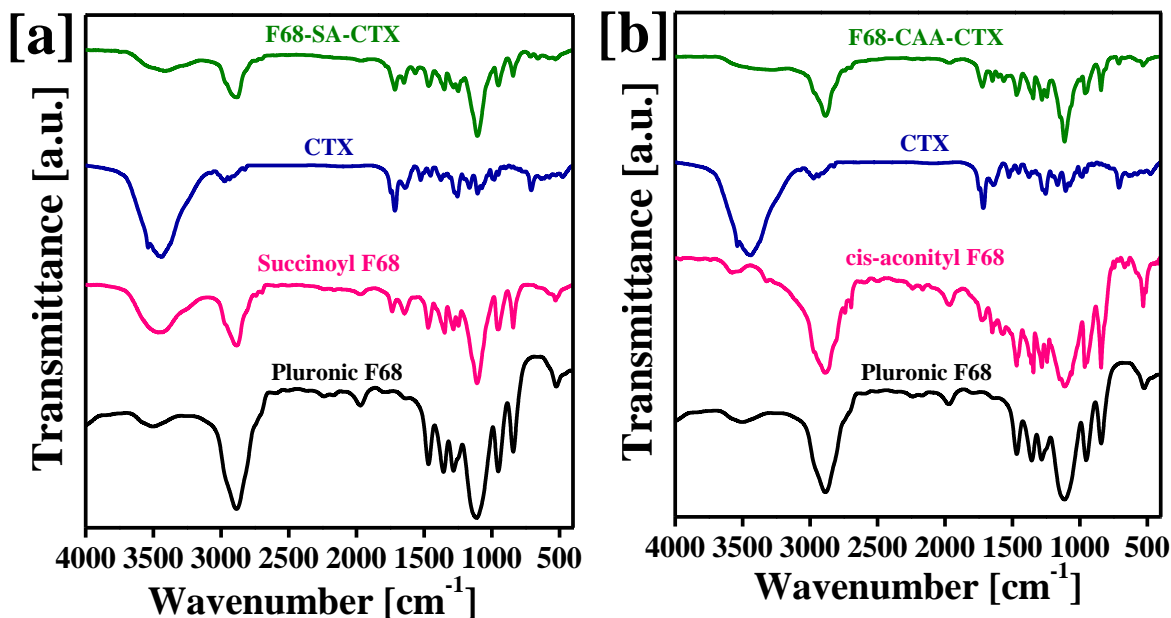


Figure S2. FTIR spectra of pure pluronic F68, succinoyl F68, cis-aconityl F68, pure cabazitaxel, pluronic F68- cabazitaxel conjugate via succinoyl linkage (F68-SA-CTX), and pluronic F68-cabazitaxel conjugate via cis-aconitinoyl linkage (F68-CAA-CTX).

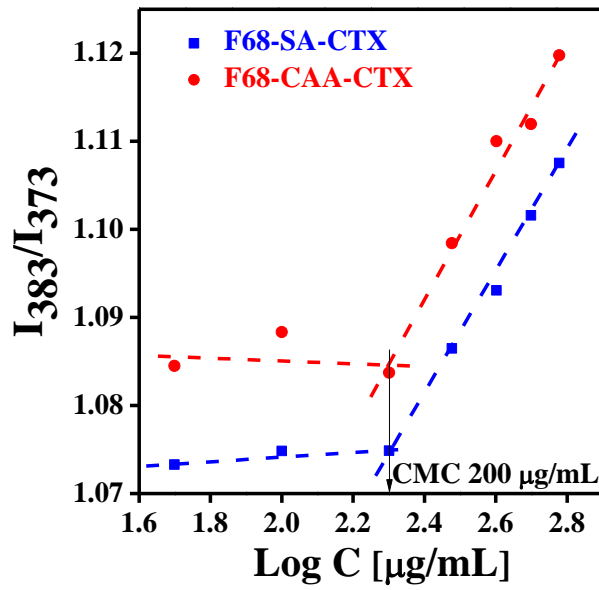


Figure S3. Critical micelle concentration (CMC) of pluronic F68-CTX conjugates synthesized via succinoyl (F68-SA-CTX) linker and cis-aconitinyll (F68-CAA-CTX) linker.

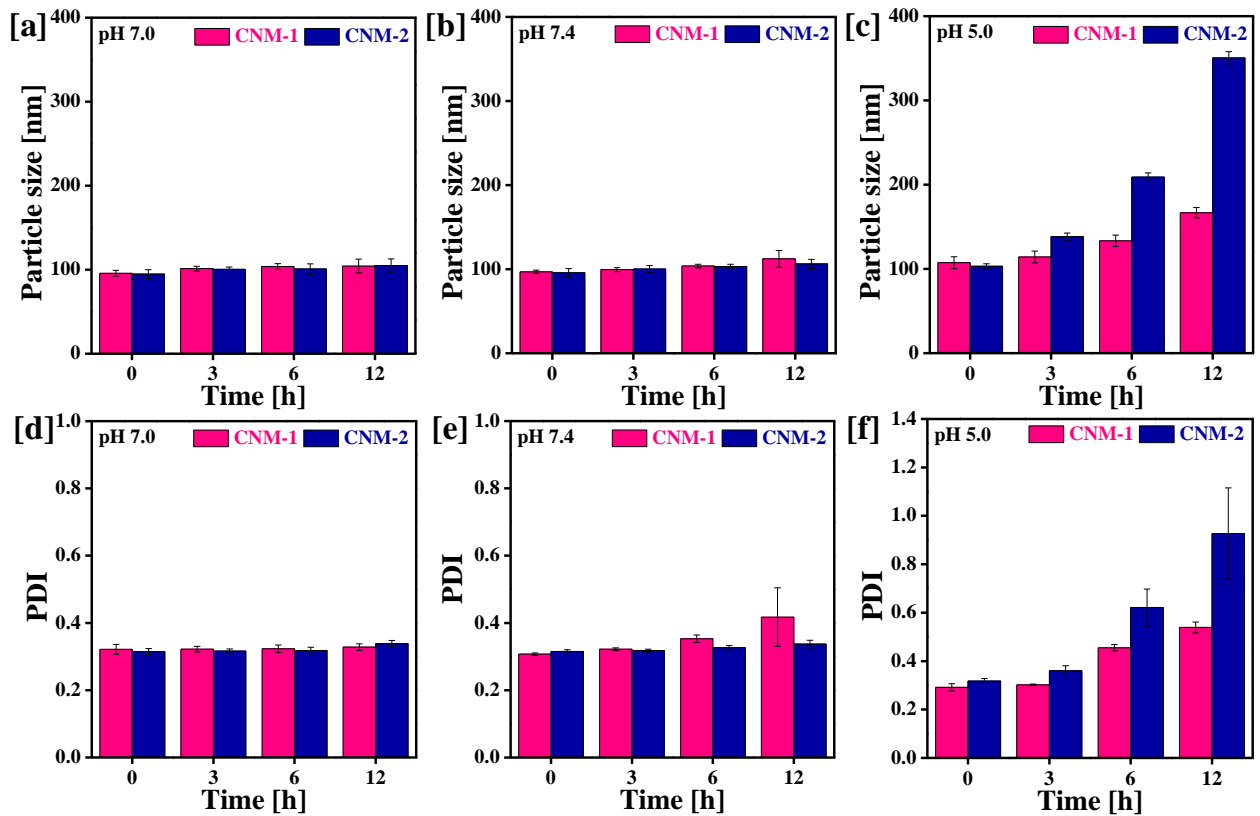


Figure S4. Particle size (nm) and polydispersity index (PDI) of F68-SA-CTX conjugate nanomicelles (CNM-1) and F68-CAA-CTX conjugate nanomicelles (CNM-2).

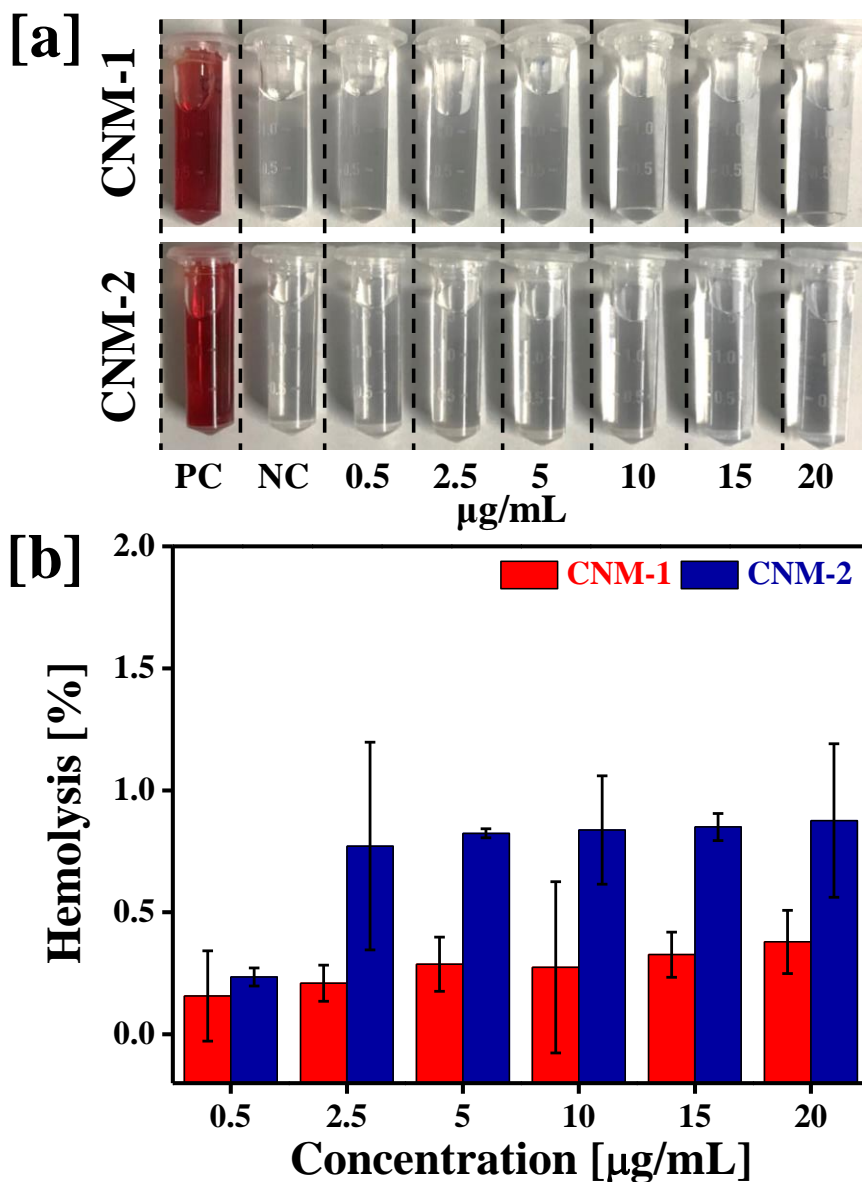


Figure S5. (a) Digital images of supernatant after centrifugation of red blood cells (RBCs) treated with F68-SA-CTX conjugate-based nanomicelles (CNM-1) and F68-CAA-CTX conjugate-based nanomicelles (CNM-2). (b) Percentage of hemolysis after incubation of RBCs with CNM-1 and CNM-2. Data was represented in mean \pm SD.