Electronic Supplementary Information (ESI)

Development of Biocompatible PAMAM 'Dendrizyme' to Maintain Catalytic Activity in Biological Complex Medium

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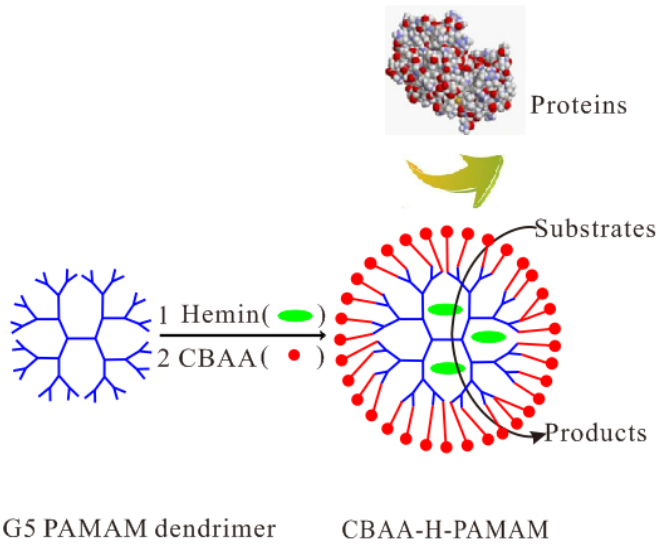
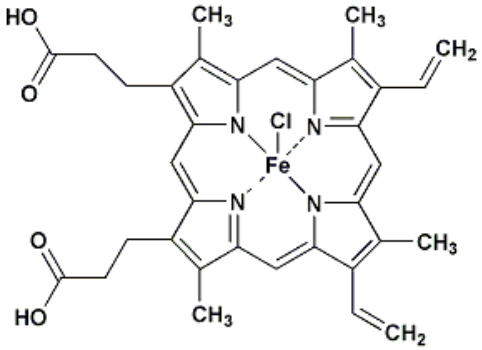
Supplementary Figures

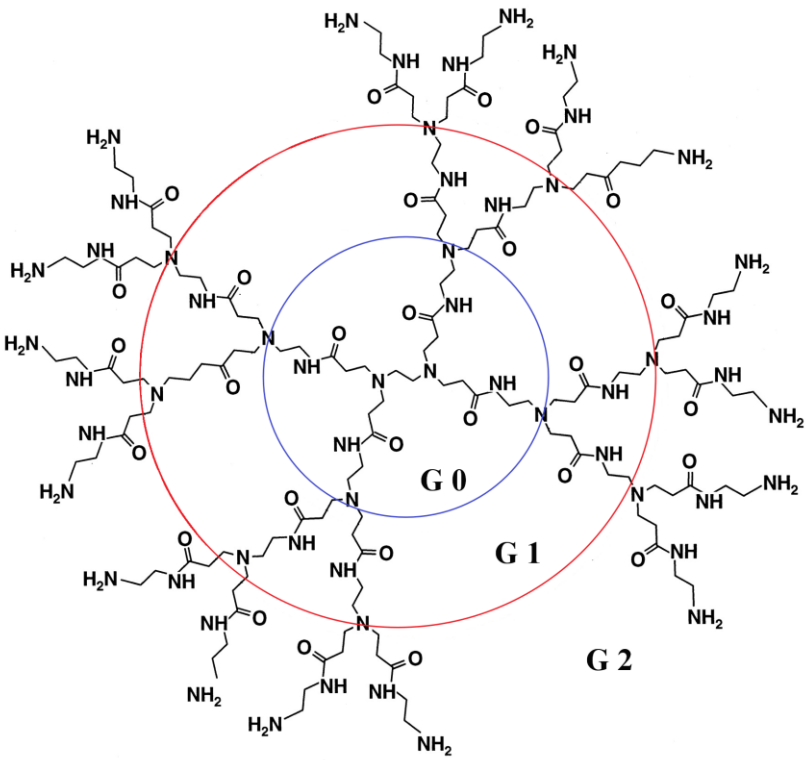
TOC





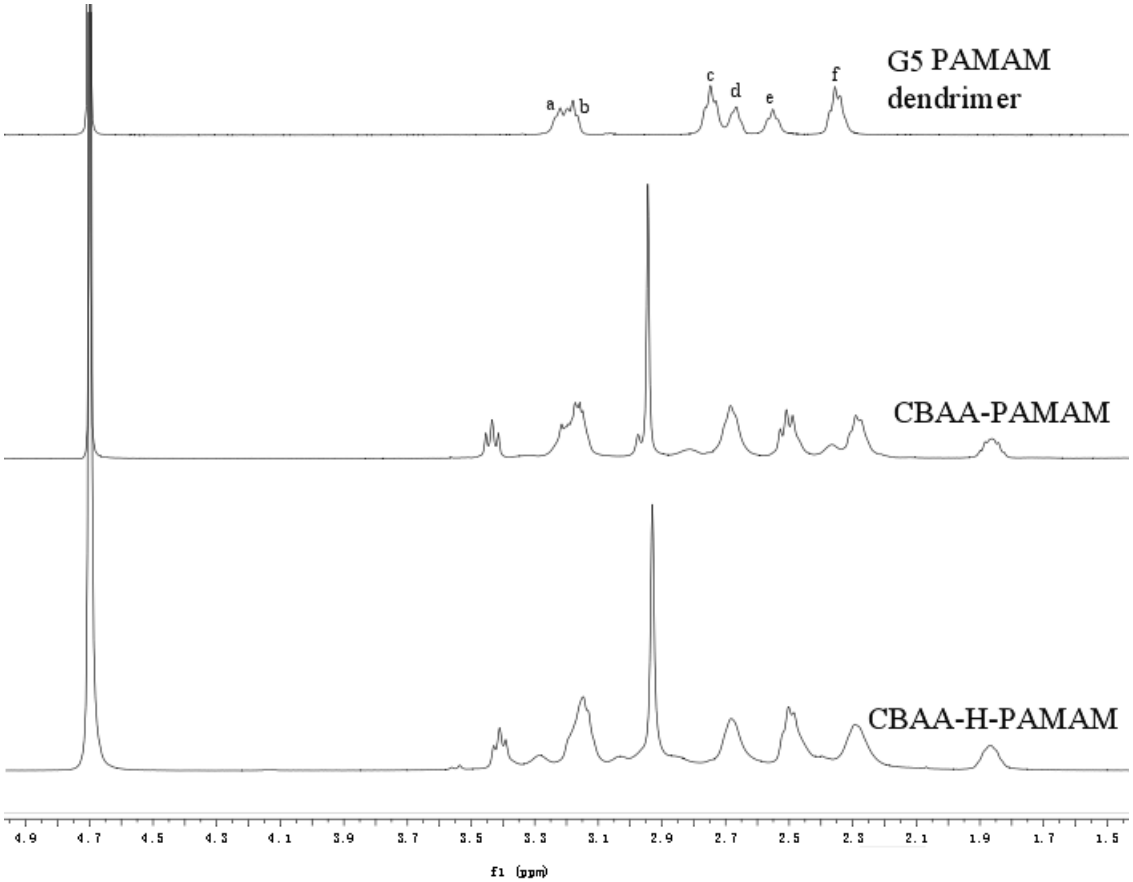
hemin

a



b

Figure S1. Molecular structure of heimin(a) and PAMAM dendrimers (generation =5)(b).



a e b d c f

-CO-NH-CH_2-CH_2-NR_2 -CO-NH-CH_2-CH_2-NH_2 =N-CH_2-CH_2-CO-NH-

Figure S2. ^{1}H-NMR spectra of Generation 5 PAMAM dendrimer, the Generation 5 PAMAM dendrimer capped by CBAA without hemin (CBAA-PAMAM) and with hemin (CBAA-H-PAMAM, 3:1). CBAA-H-PAMAMs with different amounts of hemin show similar ^{1}H-NMR spectra. The characteristic peak at 1.86 ppm indicates the successful modification of CBAA groups on Generation 5 PAMAM dendrimer.

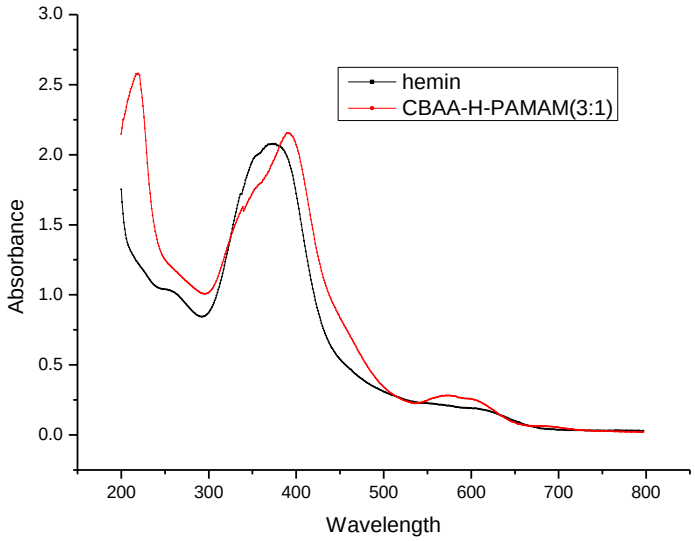
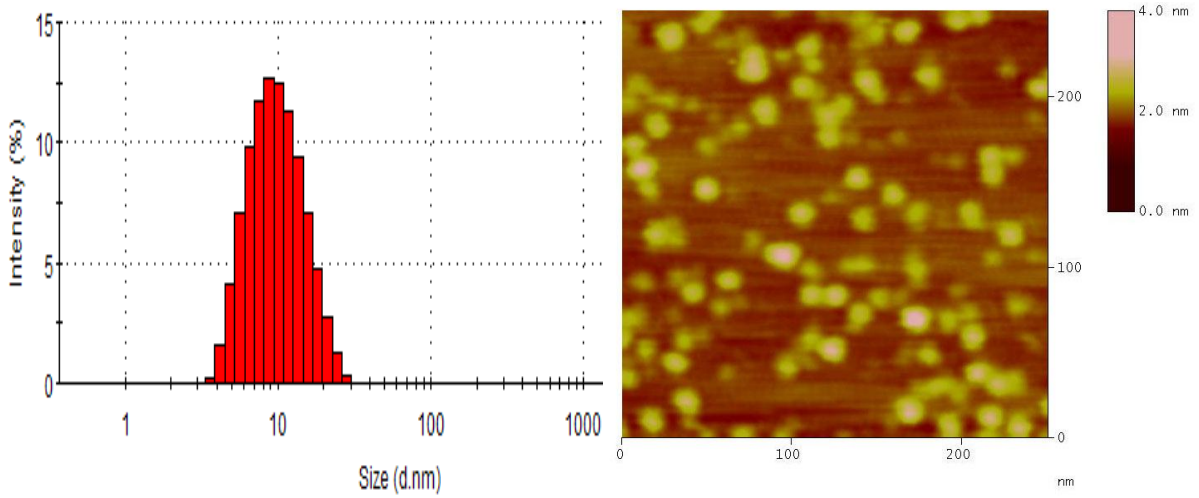


Figure S3. UV/Vis spectra of hemin(10^{-4} M) and CBAA-H-PAMAM(3:1, 10^{-4} M, scaled to the number of porphyrins per dendrizyme in PBS). The red shift of the Soret band from 380 to 392 nm indicates the presence of hemin in the slightly alkaline core of CBAA-H-PAMAM.



a **b**

Figure S4. The size distribution histogram of CBAA-H-PAMAM(1.3 mg ml^{-1}) in PBS determined by dynamic light scattering (DLS) (a) and tapping mode AFM image of CBAA-H-PAMAM on a mica surface at the concentration of 10^{-4} mg mL^{-1} (b). Both results showed that CBAA-H-PAMAM is monodispersed in the aqueous solution.