Facile synthesis of food-grade and size-controlled nanocarriers based on self-assembly of procyanidins and phycocyanin

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Table S1. Different concentrations of procyanidins, vanillin and phycocyanin for the fabrication of nanocarriers named NC-1~NC-8.

Sample name	Procyanidins (mg/mL)	Vanillin (mg/mL)	Phycocyanin (mg/mL)	Size (nm)	Polydispersity index (PDI)
NC-1	1.00	0.57	0.20	255	0.44
NC-2	5.00	0.57	0.20	208	0.48
NC-3	7.50	0.57	0.20	479	0.37
NC-4	5.00	0.19	0.20	405	0.56
NC-5	5.00	0.29	0.20	283	0.48
NC-6	5.00	0.76	0.20	745	0.54
NC-7	5.00	0.57	0.10	665	0.55
NC-8	5.00	0.57	0.50	138	0.42

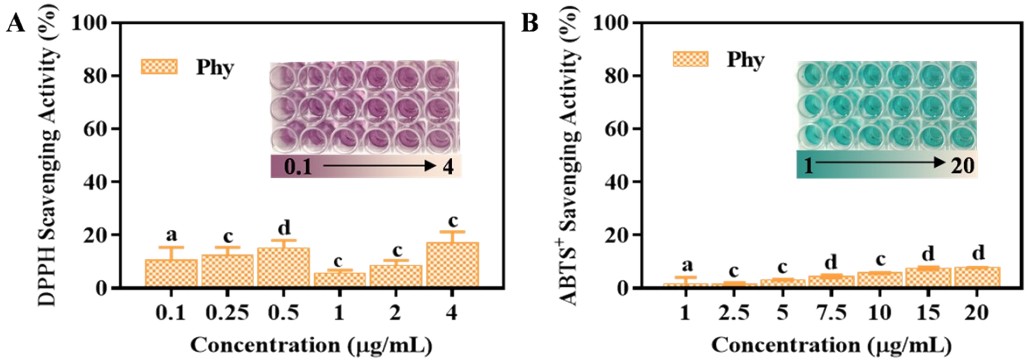

Figure S1. The optical images and histograms of (A) DPPH and (B) ABTS radical scavenging ability of phycocyanin (Phy). Different letters indicate significant differences ($p < 0.05$) within different samples at the same concentration.

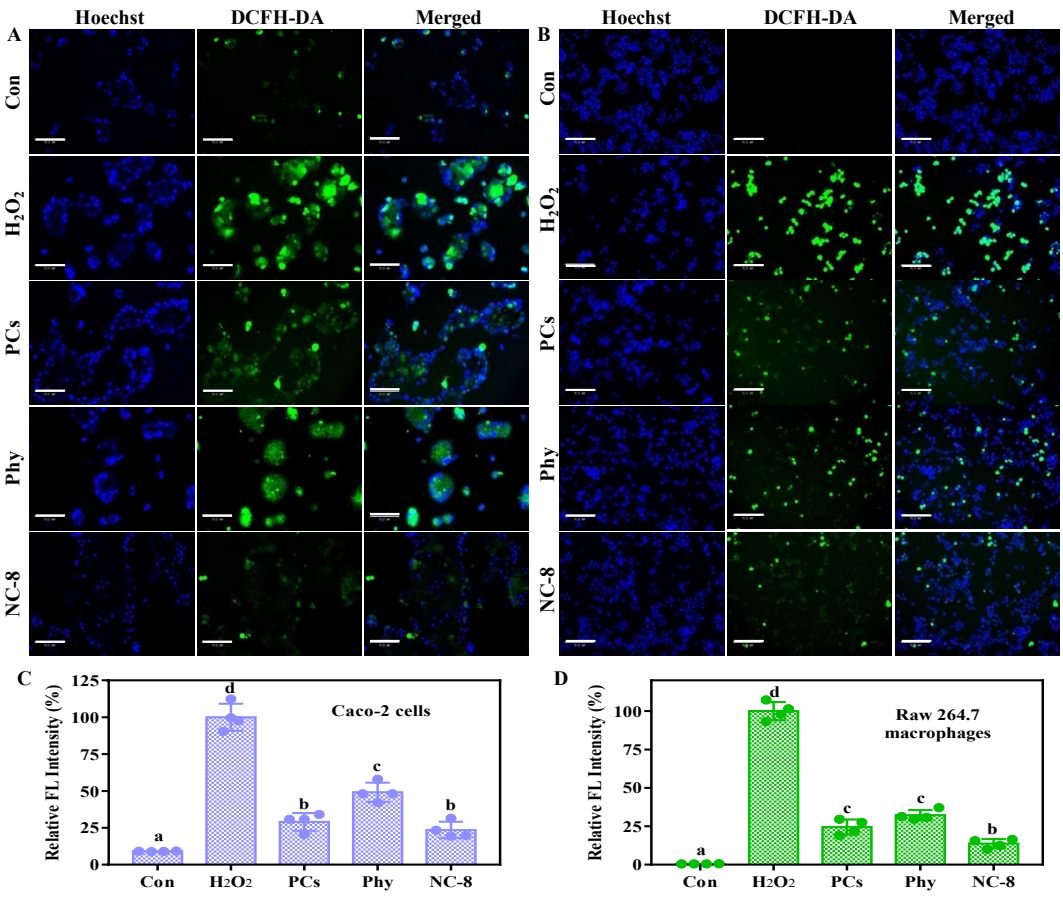

Figure S2. Effect of nanocarriers on reactive oxygen species production in cells induced by H_2O_2. Fluorescent images of H_2O_2-treated (A) Caco-2 cells and (B) RAW 264.7 macrophages stained with DCFH-DA. Scale bar = 130 μm. Relative fluorescent intensity of different treatment groups in (C) Caco-2 cells and (D) RAW 264.7 macrophages. Different letters indicate significant difference ($p < 0.05$).

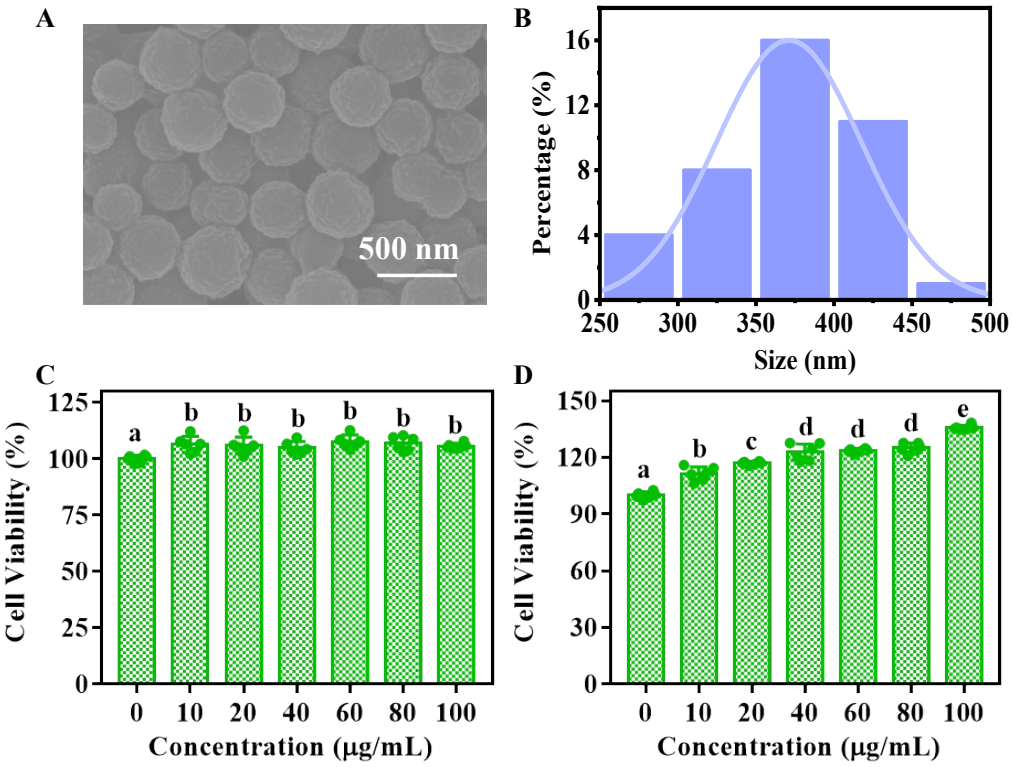

Figure S3. Characterization of lutein/NC-8 nanoparticles. (A) SEM image and (B) size distribution histogram of lutein/NC-8 nanoparticles. Cell viability of (C) lutein and (D) lutein/NC-8 nanoparticles in HCEC cells evaluated by MTT assay. Different letters indicate significant difference ($p < 0.05$).