

Supplementary Materials

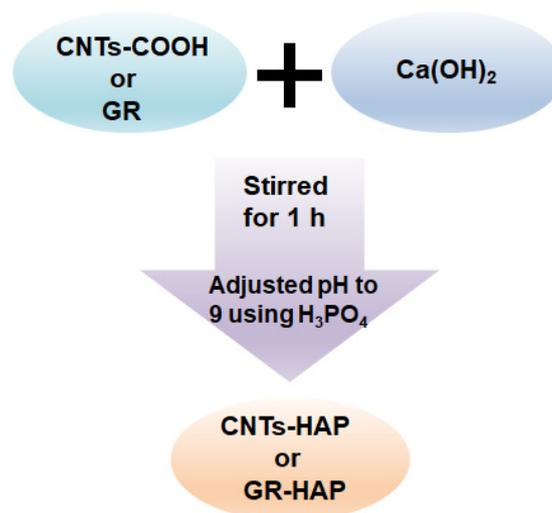
The Cytotoxicity of Carbon Nanotubes and Hydroxyapatite, and Graphene and Hydroxyapatite Nanocomposites Against Breast Cancer Cells

Tristan Nguyen ¹, Anuj Maniyar ¹, Mrinmoy Sarkar ¹, Tapasree Roy Sarkar ^{1,*} and Gururaj M. Neelgund ^{2,*}

¹ Department of Biology, Texas A&M University, College Station, TX 77843, USA

² Department of Chemistry, Prairie View A&M University, Prairie View, TX 77446, USA

* Correspondence: tsarkar@bio.tamu.edu (T.R.S.); gmneelgund@pvamu.edu (G.M.N.)



Scheme S1. Schematic representation of grafting of HAP over CNTs and GR.

Table S1. demonstrates the cytotoxicity of CNT-HAP on MCF7 cells.

	Control	5 µg/mL	25 µg/mL	50 µg/mL
24 h	100.00 ± 0.00	98.21 ± 2.83	67.91 ± 0.58***	24.51 ± 1.64***
48 h	100.00 ± 0.00	112.85 ± 29.44	59.58 ± 3.39***#	19.29 ± 0.49***#

*** $p < 0.001$ indicates significant difference compared to control, whereas # $p < 0.05$ indicates significant difference compared to 24 h data.

Table S2. demonstrates the cytotoxicity of GR-HAP on MCF7 cells.

	Control	5 µg/mL	25 µg/mL	50 µg/mL
24 h	100.00 ± 0.00	106.96 ± 8.32	84.36 ± 4.70	44.77 ± 5.80***
48 h	100.00 ± 0.00	105.41 ± 6.88	66.10 ± 3.28***#	14.83 ± 2.57***#

*** $p < 0.001$ indicates significant difference compared to control, whereas # $p < 0.05$ indicates significant difference compared to 24 h data.

Table S3. demonstrates the cytotoxicity of CNT-HAP on SUM-159 cells.

	Control	5 µg/mL	25 µg/mL	50 µg/mL
24 h	100.00 ± 0.00	85.93 ± 0.78***	45.53 ± 3.28***	17.90 ± 1.31***
48 h	100.00 ± 0.00	90.23 ± 3.91*	43.89 ± 2.38***	16.21 ± 2.78***

*** $p < 0.001$ and * $p < 0.05$ indicates significant difference compared to control.

Table S4. demonstrates the cytotoxicity of GR-HAP on SUM-159 cells.

	Control	5 µg/mL	25 µg/mL	50 µg/mL
24 h	100.00 ± 0.00	88.06 ± 5.74**	41.16 ± 4.18***	30.46 ± 2.34***
48 h	100.00 ± 0.00	103.06 ± 8.45	56.98 ± 4.91***	22.77 ± 1.00***

*** $p < 0.001$ and ** $p < 0.01$ indicates significant difference compared to control, whereas # $p < 0.05$ indicates significant difference compared to 24 h data.