Supporting Information

Figure S1 in the supplementary data shows the effect of increasing the concentration of C6 ceramide (0 to 20 wt %) on cell cytotoxicity at 10 µg of curcumin/ml. The cell viability was found to decrease for C6-curcumin liposomes from 41% to 1.9% as the ceramide concentration increased from 0 to 20%. Increasing the ceramide concentration substantially above 20% was found to destabilize the liposome structure; hence this level was selected for further characterization and *in vivo* study.

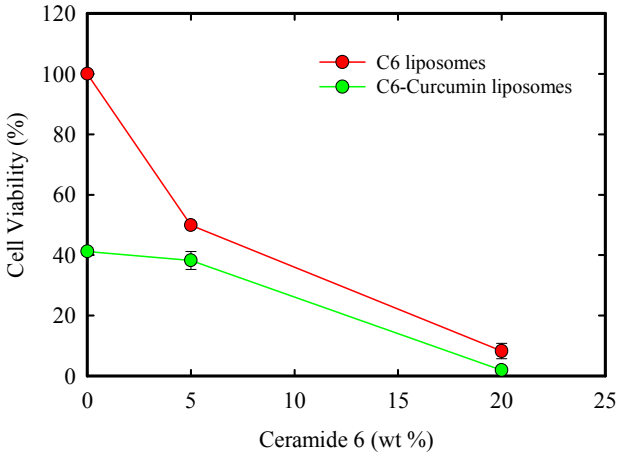

Figure S1. Effect of C6 Ceramide wt% at 10 µg of curcumin/mL on KHOS.

Table S1. Analysis of the cell cycle arrest induced by different liposomal formulations - 12 hours data. Results are expressed as % of the total cell population.

%	Untreated	Empty liposomes	Curcumin liposomes	C6 liposomes	C6-curcumin liposomes	C6-curcumin-FA liposomes
G_1	41.6 ± 3.9	43.8 ± 2.3	4.3 ± 0.4	54.9 ± 0.7	23.9 ± 2.4	20.9 ± 0.9
S	54.6 ± 2.7	53.6 ± 0.6	42.7 ± 0.1	24.7 ± 0.2	48.9 ± 1.8	45.4 ± 2.0
G_2	3.7 ± 1.2	2.5 ± 1.7	52.9 ± 0.5	20.2 ± 0.5	27.1 ± 0.6	33.6 ± 1.1

Table S2. Analysis of the cell cycle arrest induced by different liposomal formulations - 24 hours data. Results are expressed as % of the total cell population.

%	Untreated	Empty liposomes	Curcumin liposomes	C6 liposomes	C6-curcumin liposomes	C6-curcumin-FA liposomes
G_1	42.6 ± 1.9	43.0 ± 2.1	7.5 ± 0.1	75.0 ± 1.3	27.7 ± 1.0	36.5 ± 1.0
S	54.4 ± 2.7	55.7 ± 1.5	20.3 ± 0.1	7.7 ± 0.2	28.0 ± 1.6	34.0 ± 1.8
G_2	2.8 ± 0.7	1.1 ± 0.6	72.0 ± 0.1	17.1 ± 1.6	44.1 ± 0.6	29.4 ± 0.8

Generation of GFP expressing KHOS

KHOS cells (10^3 cells/cm^2) were infected with GFP lentivirus (MOI: 40) supplemented with 7μg/ml Polybrene (Millipore, MA). The vector pNL-EGFP/CMV-WPREdU3, was kindly obtained from Dr. Robert Kutner at the Louisiana State University Vector Core Facility. Two days after infection, GFP expressing cells were sorted by FACS to obtain a population of >98% GFP positive KHOS cells.