Calcium carbonate microparticles show enhanced anti-cancer properties under the influence of magnetic field.

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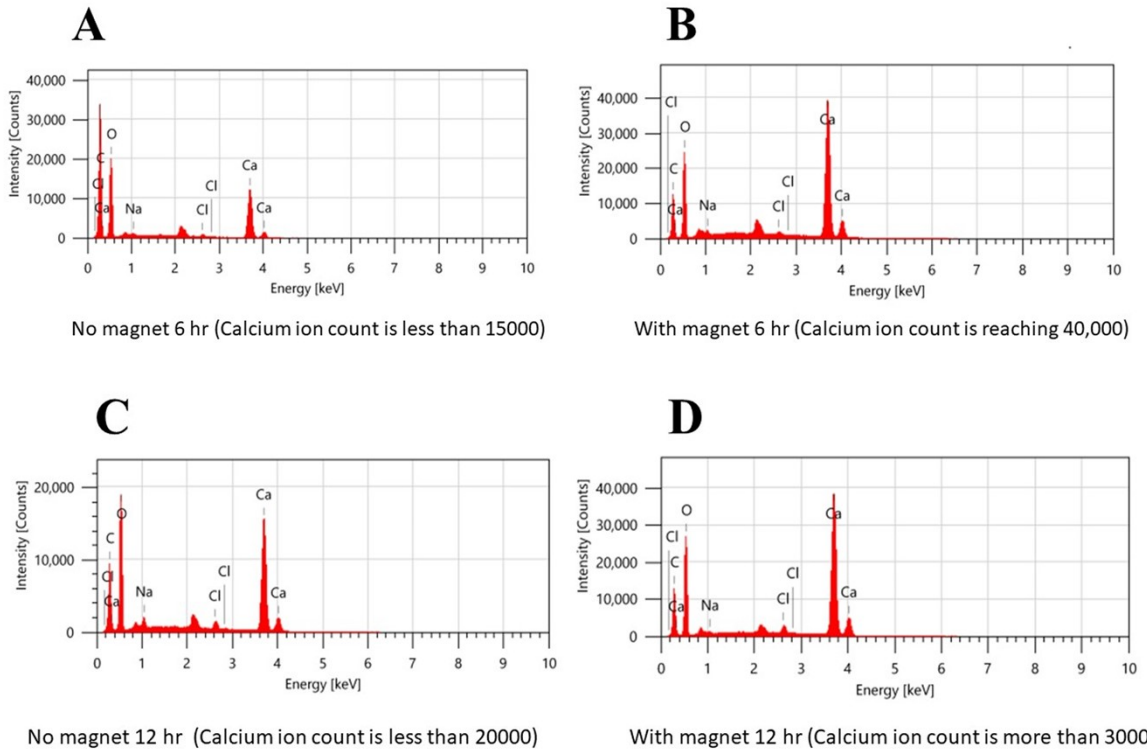
Supplementary information



Supplementary Figure 1. EDX spectrum of $CaCO_3$ microparticles with and without exposure to magnetic field at 6 and 12 hours (A- without magnetic field exposure at 6 h, B- when exposed to magnetic field for 6 h, C- without magnetic field exposure at 12 h, D- when exposed to magnetic field for 12 h)

Supplementary Table 1: Elemental analysis of $CaCO_3$ microparticles with and without exposure to magnetic field at 6 and 12 hours.

Elements present in $CaCO_3$ microparticles when exposed to magnetic field for 6 h

Element	Line	Mass%	Atom%
C	K	6.44±0.01	13.24±0.02
O	K	31.11±0.07	48.01±0.11
Na	K	0.48±0.01	0.51±0.01
Cl	K	0.64±0.01	0.44±0.01
Ca	K	61.34±0.12	37.79±0.07
Total		100.00	100.00
Spc_003			Fitting ratio 0.0249

Elements present in $CaCO_3$ microparticles in the absence of magnetic field at 6 h

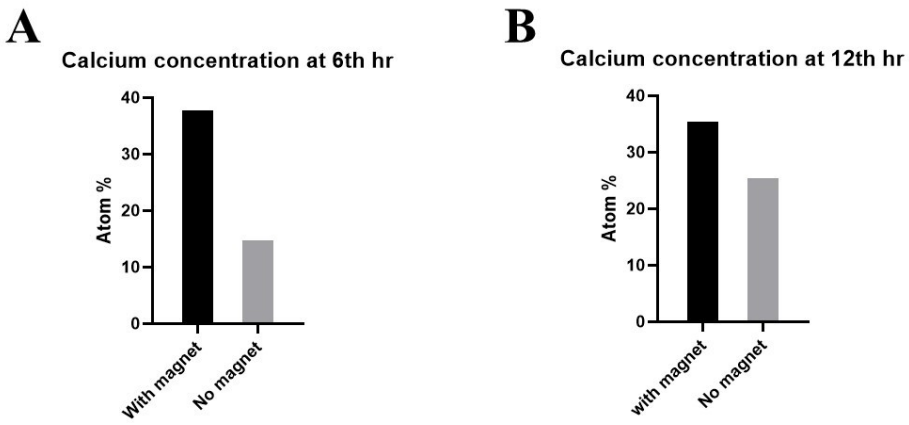
Element	Line	Mass%	Atom%
C	K	29.28±0.03	43.64±0.05
O	K	36.59±0.09	40.95±0.10
Na	K	0.36±0.01	0.28±0.01
Cl	K	0.77±0.02	0.39±0.01
Ca	K	33.00±0.11	14.74±0.05
Total		100.00	100.00
Spc_008			Fitting ratio 0.0211

Elements present in $CaCO_3$ microparticles when exposed to magnetic field for 12 h

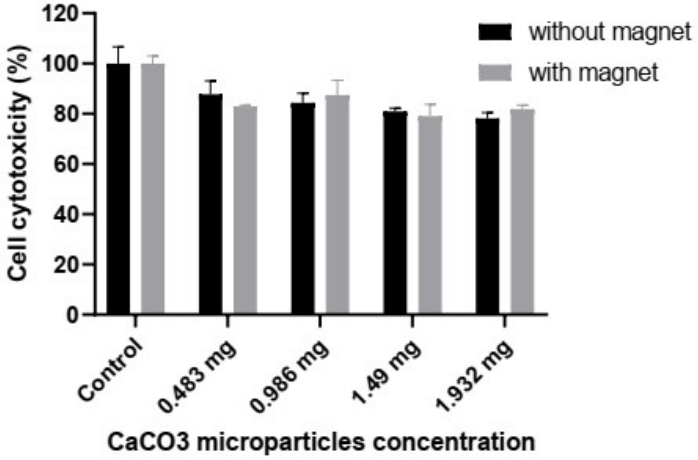
Element	Line	Mass%	Atom%
C	K	6.77±0.01	13.65±0.03
O	K	32.70±0.07	49.53±0.11
Na	K	0.23±0.01	0.25±0.01
Cl	K	1.59±0.01	1.09±0.01
Ca	K	58.70±0.11	35.49±0.07
Total		100.00	100.00
Spc_005			Fitting ratio 0.0149

Elements present in $CaCO_3$ microparticles in the absence of magnetic field at 12 h

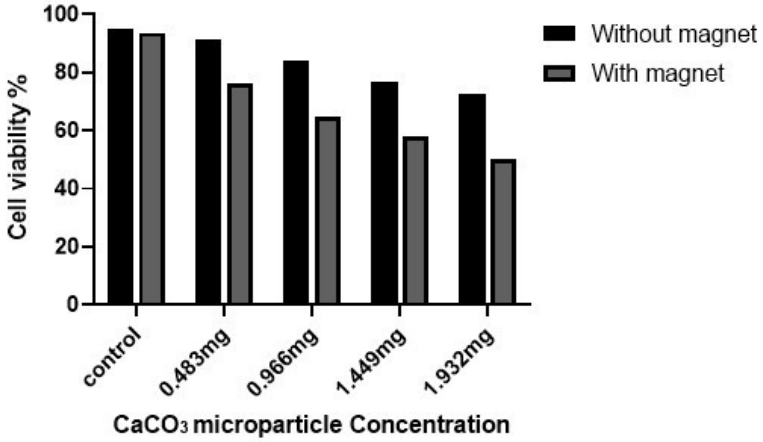
Element	Line	Mass%	Atom%
C	K	9.90±0.02	17.88±0.04
O	K	40.19±0.10	54.51±0.14
Na	K	1.13±0.02	1.06±0.02
Cl	K	1.73±0.02	1.06±0.01
Ca	K	47.06±0.14	25.48±0.08
Total		100.00	100.00
Spc_006			Fitting ratio 0.0218



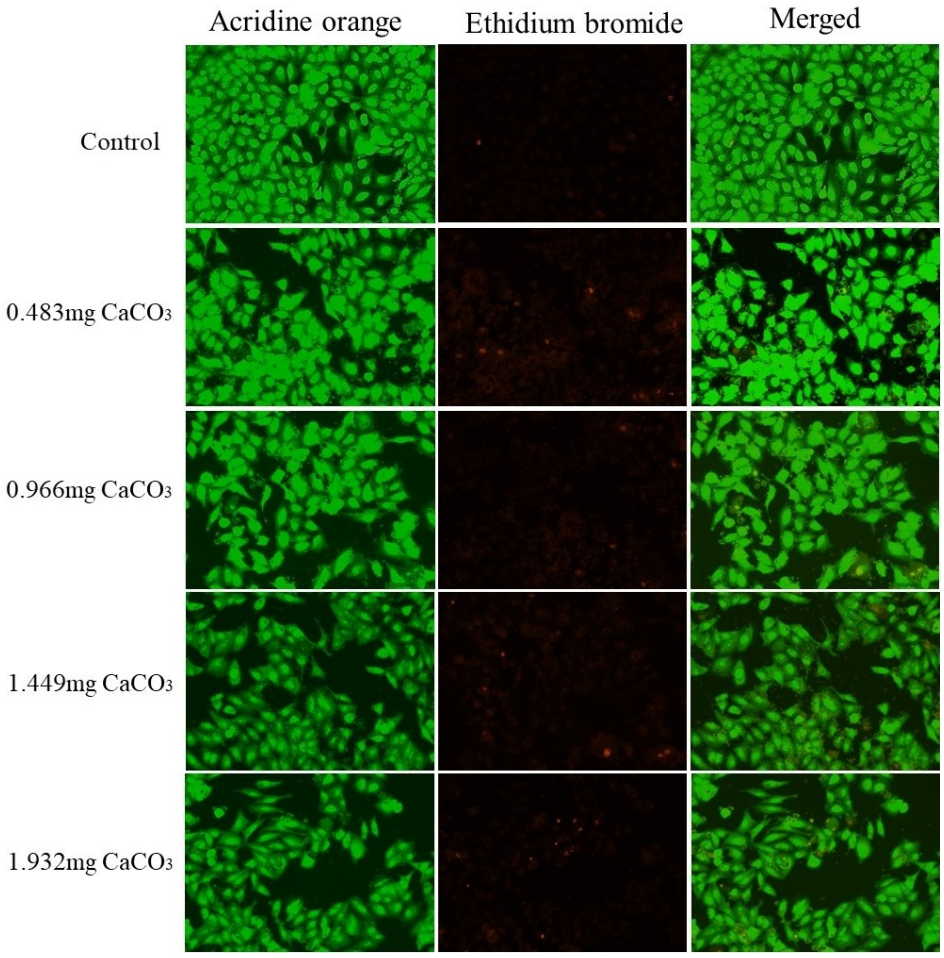
Supplementary Figure 2. Atom % of calcium with and without exposure to magnetic field.



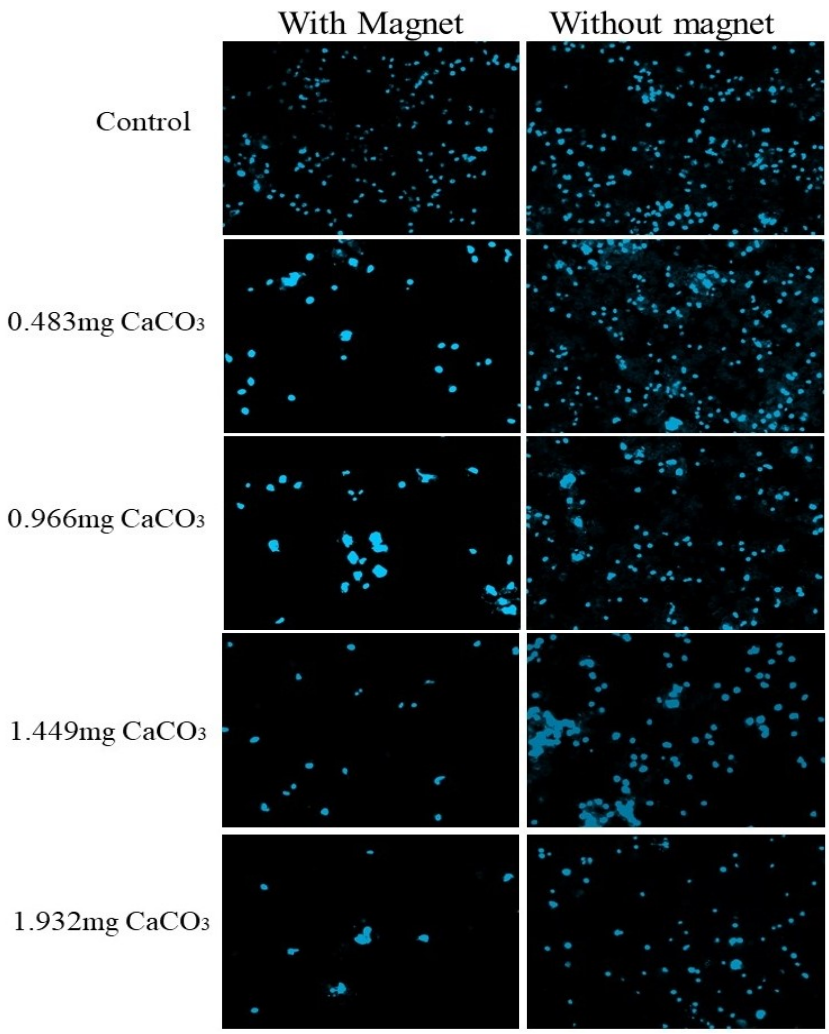
Supplementary Figure 3. MTT assay for measuring cytotoxicity of $CaCO_3$ microparticles after 6 h of exposure to magnetic field.



Supplementary Figure 4: Cell viability analysis by trypan blue dye exclusion assay (cells treated for 24hr).



Supplementary Figure 5. Acridine Orange/Ethidium Bromide dual staining of HeLa cells treated with various concentrations of calcium carbonate microparticles in the absence of magnetic field.



Supplementary Figure 6. DAPI staining of HeLa cells treated with different concentration of calcium carbonate microparticles in the presence and absence of magnetic field.