

Figure S2: Drug sensitivity assay –dose response curves and IC<sub>50</sub> images

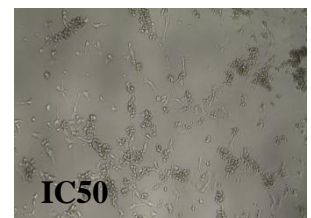
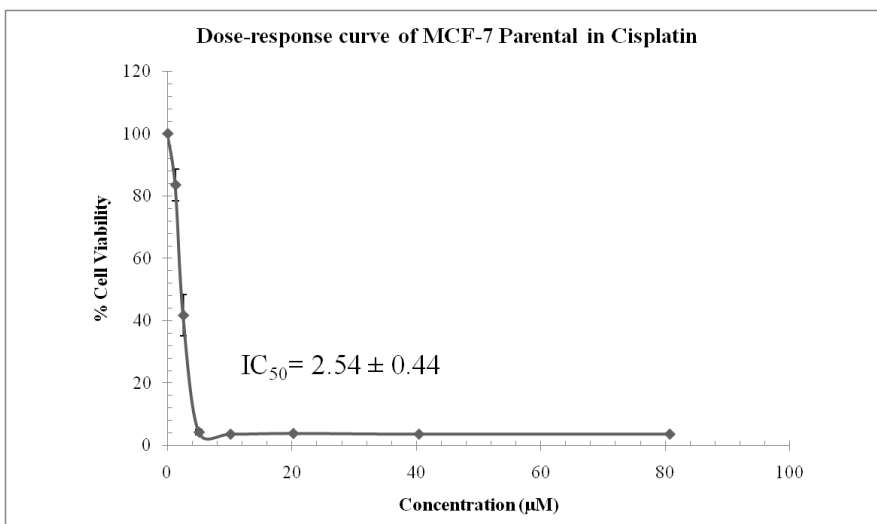
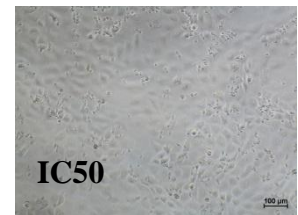
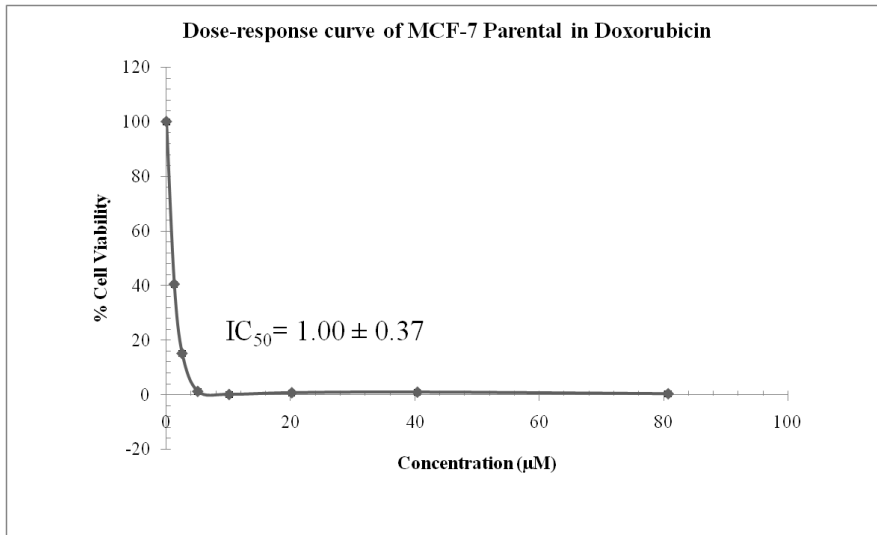
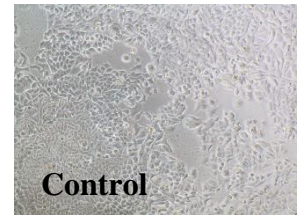
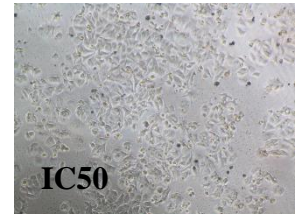
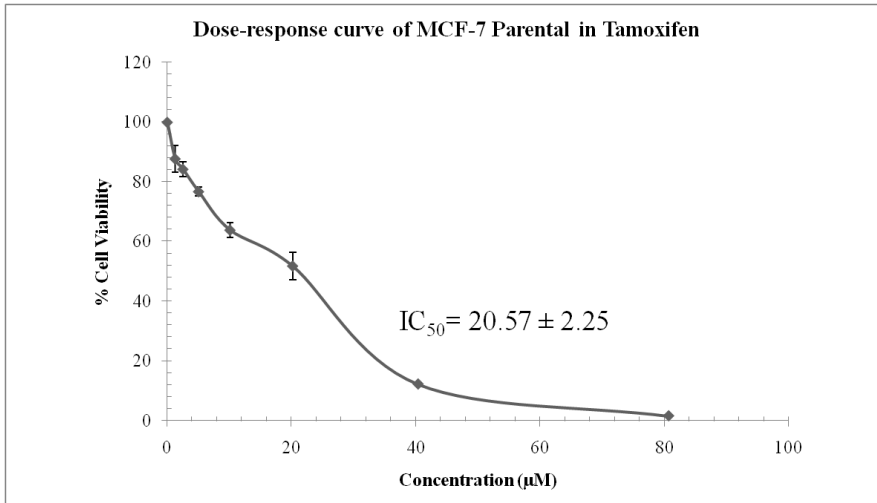
The measurement of drug sensitivity was repeated for the spheroid-derived cells in the same condition (2D) as the parental cells. Briefly, the spheroid cells were dissociated into single cells, filtered, cell count, and seeded at  $5 \times 10^3$  cells/well in a 96-well plate. Upon confluency at 80%, the wells were treated with different concentration of tamoxifen, cisplatin and doxorubicin for 96 hours (the same condition applied for the parental cells). The drug concentrations that caused inhibition of 50% cell viability (IC<sub>50</sub>) were determined from the dose-response curves. Experiments were carried out in triplicates. The table below shows the IC<sub>50</sub> values of the different drugs in the MCF-7 parental, MCF-7 derived spheroids (3D condition) and the MCF-7 derived spheroids (2D condition). Overall, the drug sensitivity of the spheroid regardless in 3D or 2D conditions was statistically higher when compared to the parental. The IC<sub>50</sub> values were comparable between the spheroid-derived cells in 3D and 2D condition. Taken together, the spheroids were enriched with CSCs accounted for the higher drug resistancy.

Table 1:-

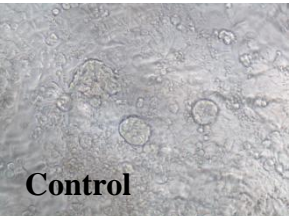
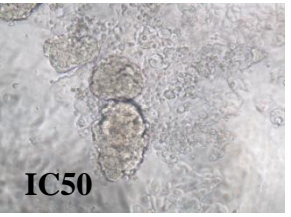
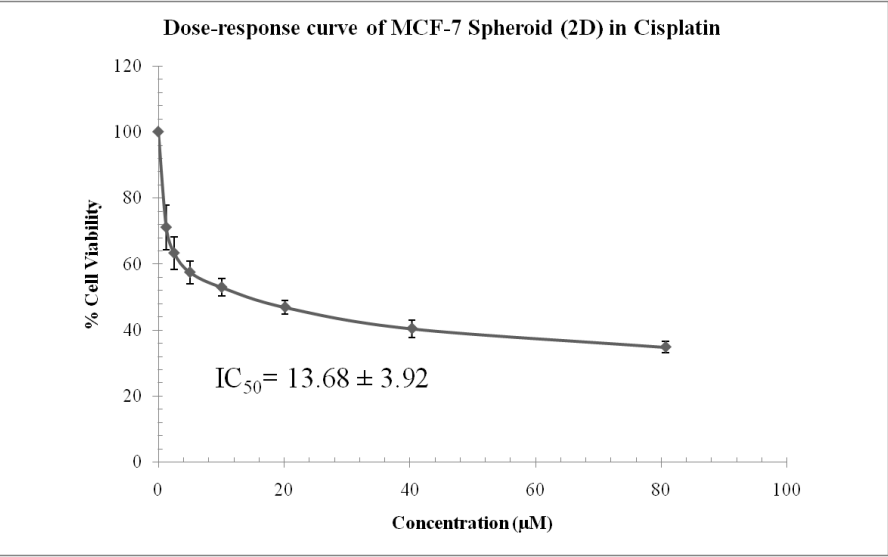
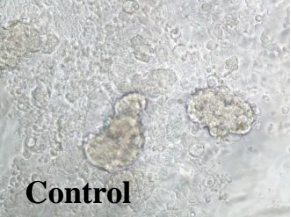
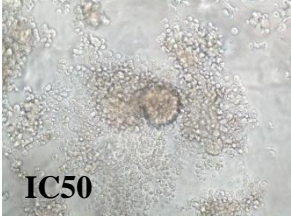
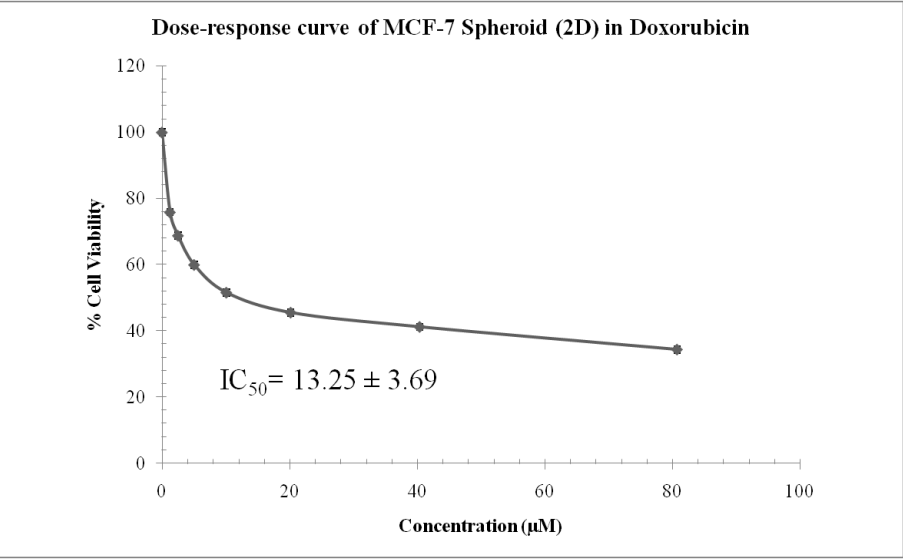
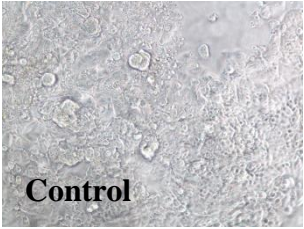
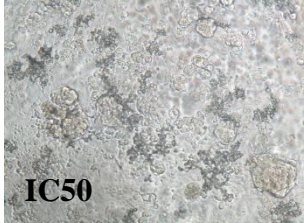
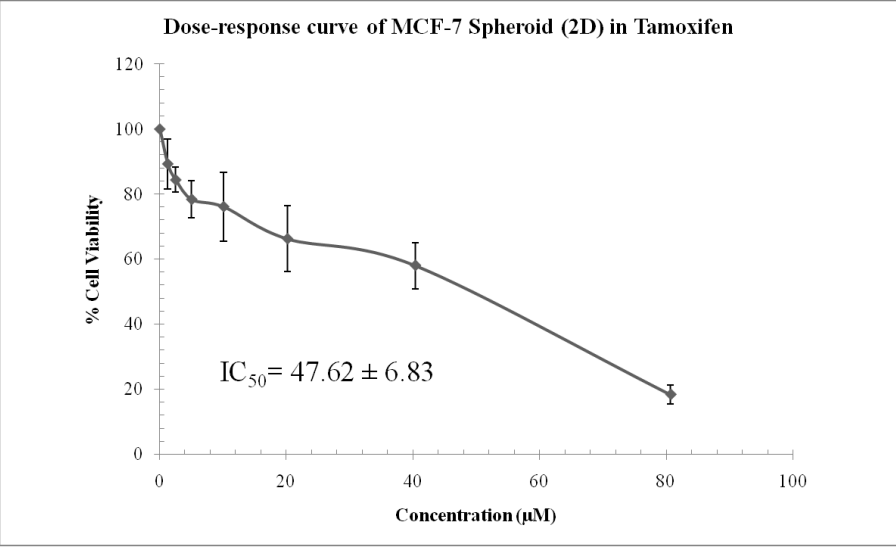
	IC <sub>50</sub> ( $\mu$ M)		
	Tamoxifen	Doxorubicin	Cisplatin
MCF-7 Parental	20.57 $\pm$ 2.25	1.00 $\pm$ 0.37	2.54 $\pm$ 0.44
MCF-7 Spheroid (3D)	60.73 $\pm$ 7.39*	18.82 $\pm$ 3.05*	13.61 $\pm$ 3.54*
MCF-7 Spheroid (2D)	47.62 $\pm$ 6.83*	13.25 $\pm$ 3.69*	13.68 $\pm$ 3.92*

- P<0.05 compared to the parental group

# Dose-response curve of MCF-7 Monolayer of three different drugs



Dose-response curve of MCF-7 Spheroid in 2D format of three different drugs



## Dose-response curve of MCF-7 Spheroid in 3D format of three different drugs

