

Supplementary materials

Preparation of self-assembled curcumin loaded nano-micelles using quarternized chitosan-vanillin imine (QCS-Vani imine) conjugate and evaluation of synergistic anticancer effect with Cisplatin

Figures:

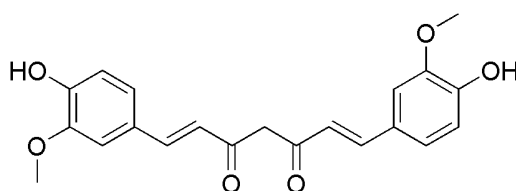


Figure S1: Chemical structure of curcumin.

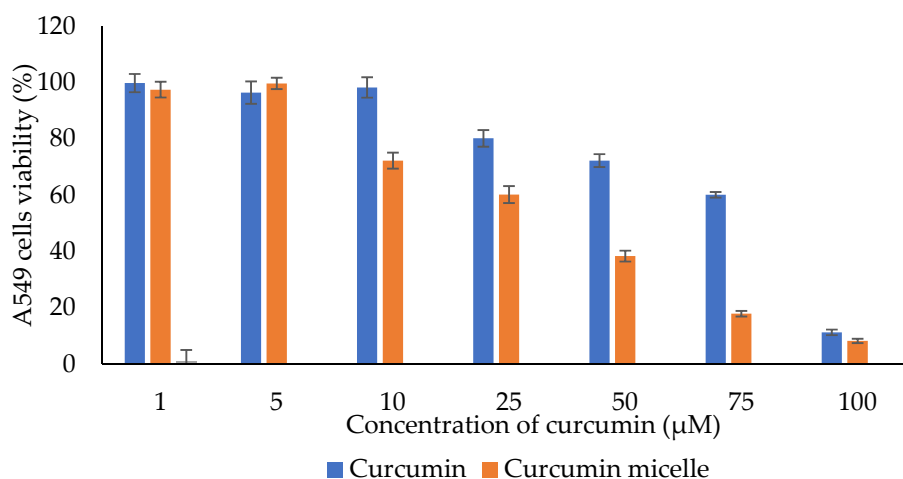


Figure S2: Cell viability of human non-small cell lung cancer cell line (A549) after 24 h treatment with various concentrations of curcumin and curcumin loaded QCS-Vani imine nano-micelles. All the values are expressed as mean \pm standard deviation ($n = 3$) of curcumin concentrations.

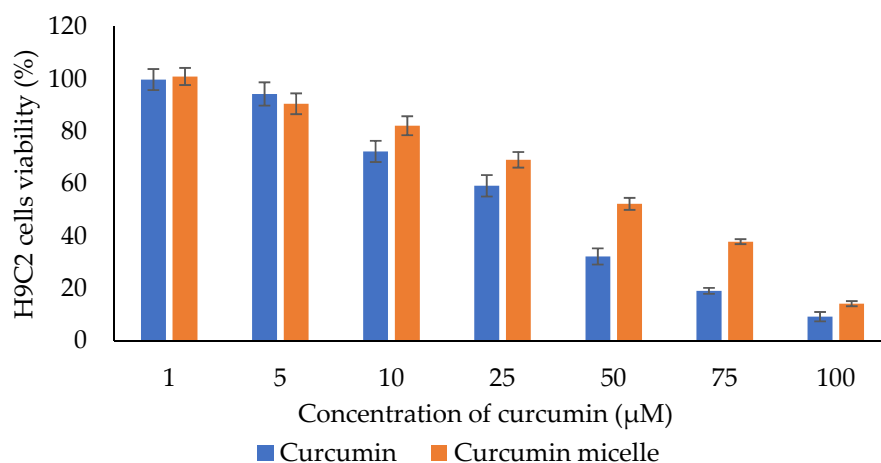


Figure S3: Cell viability of rat cardiomyocytes cell line (H9C2) after 24 h treatment with various concentrations of curcumin and curcumin loaded QCS-Vani imine nano-micelles. All the values are expressed as mean \pm standard deviation ($n = 3$) of curcumin concentrations.

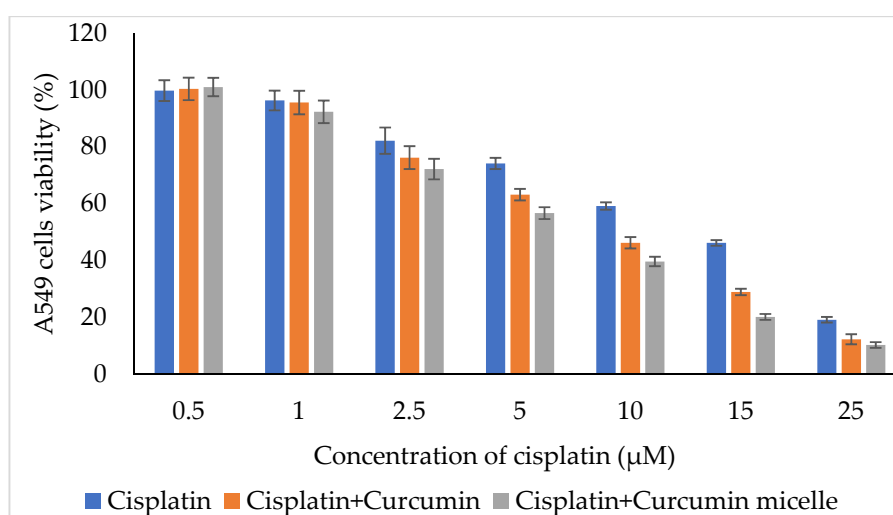


Figure S4: Cell viability of human non-small cell lung cancer cell line (A549) after 24 h treatment with various concentrations of cisplatin (in blue), cisplatin co-treatment with curcumin at 5 μ M (IC_5) (in orange), cisplatin co-treatment with curcumin loaded QCS-Vani imine at 5 μ M (IC_5) (in grey). All the values are expressed as mean \pm standard deviation ($n = 3$) of cisplatin concentrations (μ M).

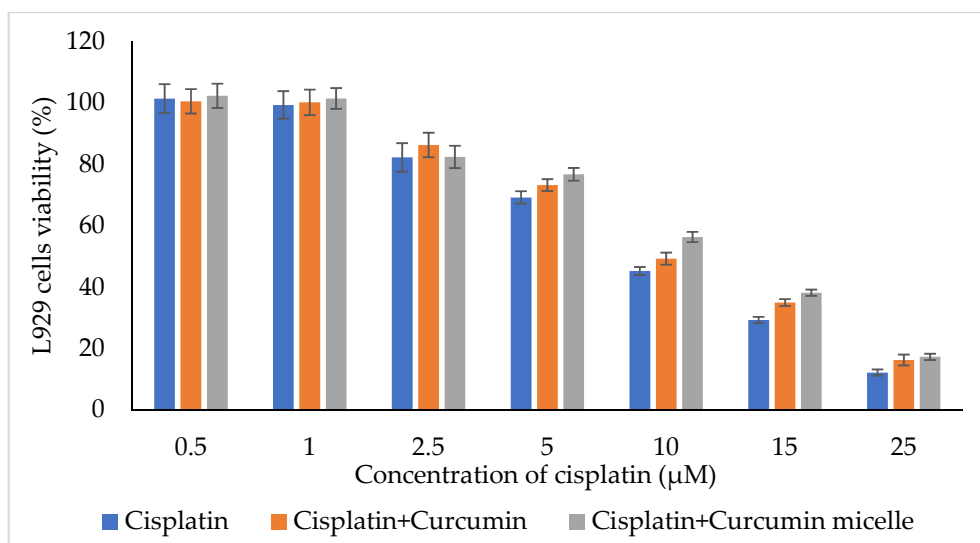


Figure S5: Cell viability of mouse fibroblast cell line (L929) after 24 h treatment with various concentrations of cisplatin (in blue), cisplatin co-treatment with curcumin at 5 μ M (IC_5) (in orange), cisplatin co-treatment with curcumin loaded QCS-Vani imine at 5 μ M (IC_5) (in grey). All the values are expressed as mean \pm standard deviation (n = 3) of cisplatin concentrations (μ M).

Tables

Table S1. Concentration ratios of cisplatin to curcumin when various concentrations of cisplatin co-treatment with curcumin at 5 μ M (IC_5) and with curcumin loaded QCS-Vani imine at 5 μ M (IC_5).

Concentration of cisplatin (μ M)	Concentration of pure curcumin (μ M)	Conc. of curcumin in micelles (μ M)	Concentration ratios	
			Cisplatin to pure curcumin	Cisplatin to curcumin in micelles
0.5	5	5	0.1	0.1
1	5	5	0.2	0.2
2.5	5	5	0.5	0.5
5	5	5	1	1
10	5	5	2	2
15	5	5	3	3
25	5	5	5	5