Supporting Information

Iron Nitroprusside as Chemodynamic Agent and Inducer of Ferroptosis for Ovarian Cancer Therapy

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Figure S1. (a), (b) UV-Vis spectroscopic results of FeNP at different time points (day zero (D0), day one (D1), day two (D2), day three (D3), day five (D5) and 1 week (D7)) in physiological solution with 5% FBS at 37 °C with two different pH 7.4 & pH 5.5, respectively.



Figure S2. (a) Apoptosis evaluation. The SK-OV-3 cells were analyzed by FACS using Annexin V/7AAD double staining after treatment of FeCl₂, SNP (50 μ g/ml) for 6, 24 and 48h. (b) The corresponding results of quantitative analysis from a. (c) The corresponding results of quantitative analysis from a. (c) The corresponding results of quantitative analysis from a. (d) The corresponding results of quantitative analysis from a. (c) The corresponding results of quantitative analysis from a. (d) The corresponding results of quantitative analysis from a. (e) The corresponding results of quantitative analysis from a. (c) The corresponding results of quant



Figure S3. Immunofluorescence analysis of cytochrome c release of SK-OV-3 incubated with $FeCl_2$ and SNP (50 µg/ml) for 6,24 and 48h. Bar, 10µm

Figure S4. Hematoxylin & eosin staining and immunohistochemistry of (PAT A, B and C). CA-125 (cancer antigen 125), WT1 (Wilms' Tumor 1) and PAX8 (Paired box gene 8) markers of ovarian cancer.

Table S1. IC50 values of FeNP, FeCl₂, SNP and CisPt. Values are expressed as μ g/ml. The numbers represent the mean and standard deviation.

Cell lines	Drug	Average	Stdev	Ratio 1/(cis/FeNP)
SK-OV-3	FeNp	3.02	0.82	0.3
	FeCl ₂	5.94	1.86	0.1
	SNP	5.79	2.81	0.1
	cisplatin	0.9	0.14	1
	FeNp	0.12	0.03	54
	FeCl ₂	0.68	0.51	10
MDA-MB-	SNP	0.49	0.07	14
231	cisplatin	6.95	1.47	1
	FeNp	3.16	0.73	1.00
	FeCl ₂	11.3	1.82	0.2
	SNP	15.4	4.53	0.2
U-87 MG	cisplatin	3.20	0.34	1
	FeNp	1.62	0.37	0.06
	FeCl ₂	76.3	26.6	0.001
A2780	SNP	1.91	0.79	0.05
	cisplatin	0.10	0.04	1
	FeNp	0.83	0.47	5.6
A2780cis	FeCl ₂	7.81	3.25	0.6
	SNP	1.72	0.40	2.7
	cisplatin	4.70	1.94	1
	FeNp	0.05	0.02	34
	FeCl ₂	0.09	0.03	21
MCF-7	SNP	0.12	0.01	7.6
	cisplatin	2.01	0.04	1
	FeNp	21.5	10.7	0.07
	FeCl ₂	21.9	6.02	0.07
MRC-5	SNP	8.76	5.52	0.1
	cisplatin	1.61	0.23	1

Table S2: IC50 values (μ g/ml) of FeNP, FeCl₂, SNP and CisPt in cancer organoids derived from high grade tumor patients. Data were performed in triplicates. The numbers represent mean and standard error.

NPs	Mouse Liver	Patient A	Patient B	Patient C
FeNP	>200	0.3 ± 0.03	1.9 ± 0.3	2.7 ± 0.7
FeCl ₂	>200	0.86 ± 0.27	2.3 ± 0.6	>200
SNP	28.7 ± 7.2	0.49 ± 0.14	3.7 ± 0.7	9.4 ± 3.0
cisplatin	9.2 ± 1.9	0.74 ± 0.17	0.72 ± 0.04	0.3 ± 0.1