Electronic Supplementary Material (ESI) for RSC Advances.

SUPPORTING INFORMATION

Unique Catanionic Vesicles as a Potential "Nano-Taxi" for Drug Delivery System. *In Vitro* and *In Vivo* Biocompatibility Evaluation

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Table S1. Raw Data for the Hemolytic Activity Experiments

Concentration µg/mL	Abs	%Hemolysis
control	0.018	0.80
0.0125	0.029	1.3
0.025	0.033	1.5
0.05	0.033	1.5
0.1	0.026	1.2
0.5	0.035	1.6
1	0.042	1.9
2	0.241	10.8

Abs at 541 nm is the average absorbance value of 6 experiments; % Hemolysis were calculated using the following equation: $\%\ hemolysis = \ (Abs * 100) / \ Abs\ positive\ control$

The Abs of the positive control = 2.24

Table S2- Raw Data for the Trypan Blue Exclusion Method Experiments

Concentration mg/mL	Cellular count	Number of Live Cells	Number of Death Cells	%viability
Negative Control	753	690	63	91.6
0.025	813	727	86	89.4
0.05	689	590	99	85.6
1	915	585	330	63.9
2	898	418	480	46.5

Table S3- Raw Data for the Fibroblasts Mitochondrial Enzyme Activity Evaluation (MTT assay)

Concentration µg/mL	**System**	**Abs**	**%viability**
control	CONTROL	1.36	100
50	AOT-BHD	1.099	80.87
25	AOT-BHD	1.31	96.75
2.5	AOT-BHD	1.54	113.62
0.025	AOT-BHD	1.32	97.25
$2.5x10^{-5}$	AOT-BHD	1.57	115.75
50	DOPC	1.22	90.00
25	DOPC	1.41	103.62
2.5	DOPC	1.56	114.62
0.025	DOPC	1.56	114.62
$2.5x10^{-5}$	DOPC	1.60	117.50

Abs at 540 nm is the average absorbance value of 8 experiments; Viability percentage were calculated using the following equation: $\%\ viability = \ (Abs * 100)/\ Abs\ control$

Table S4- Raw Data for the Dose Lethal 50 experiments

Log concentration	N	R	% Mortality	% Mortality Corrected
0	12	0	0	4.16
0.53	12	0	0	4.16
1.14	12	0	0	4.16
1.53	12	0	0	4.16
1.8	12	0	0	4.16
2.01	12	0	0	4.16
2.04	12	3	25	25
2.07	7	4	57.14	57.14
2.09	12	6	50	50
2.14	12	12	100	97.72

N is the total number of individuals; R is the number of dead or affected organism; Mortality % = $\left(\frac{R}{N}\right) * 100$; %Mortality corrected is the value corrected using the data fitted with the Statistica V.7 software.

Table S5. Raw Data for the Chronic Study: Enzymatic Activity.

Transaminases GPT and GOT

Concentration mg/Kg	Abs	GPT UI/L	GOT UI/L
control	0.203	29.13 ± 3.8	5.8 ± 0.6
3.4	0.198	28.2 ± 4.5	5.7 ± 0.7
13.8	0.184	25.3 ±3.3	5.2 ± 0.5

Abs at 505 nm is the average absorbance value of 8 experiments. GPT and GOT values were obtained using the calibration curve according to the following equation

$$Abs = a * Enzyme\ Concetration\ (\frac{UI}{L}) + b$$

GTP: **b**: 0.0638; **a**: 0.0047;

GOT: b: 0.03501**; a:** 0.0029

Alkaline phosphatase AP

Concentration mg/Kg	Abs	AP UI/L
control	0.4733	520.96 ± 47.2
3.4	0.5255	578.4 ±35.7
13.8	0.5080	559.2 ±28.8

Abs at 520 nm is the average absorbance value of 8 experiments. AP values were obtained using $AP\ UI/L = F * Abs$ with $F = (200\ UI/L)/Abs\ st$. Abs st represents the absorbance value of the standard provided by the Kit and the value is 0.1817

Lactate Deshidrogenase LDH

Concentration mg/Kg	Abs	LDH UI/L
control	0.023	222.9 ± 47.2
3.4	0.0206	199.79 ±35.7
13.8	0.0219	212.85 ±28.8

Abs at 340 nm is the average absorbance value obtained after 8 experiments. $LDH(UI/L) = (Abs) * F$ with F = 9683 at 37°C and λ = 340 nm