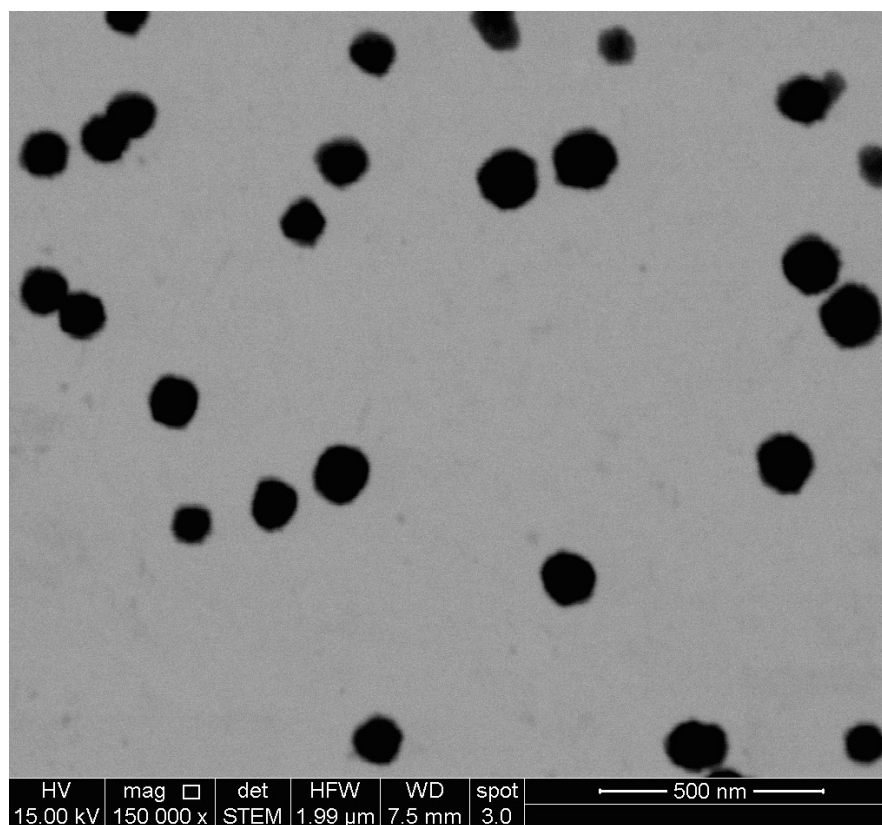
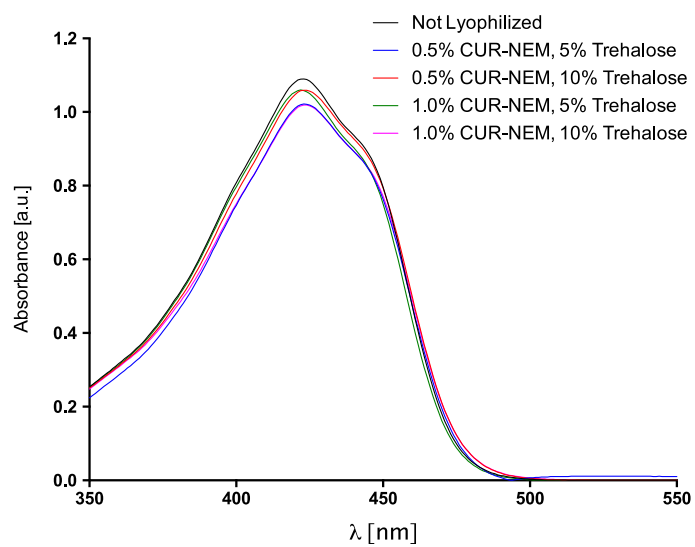


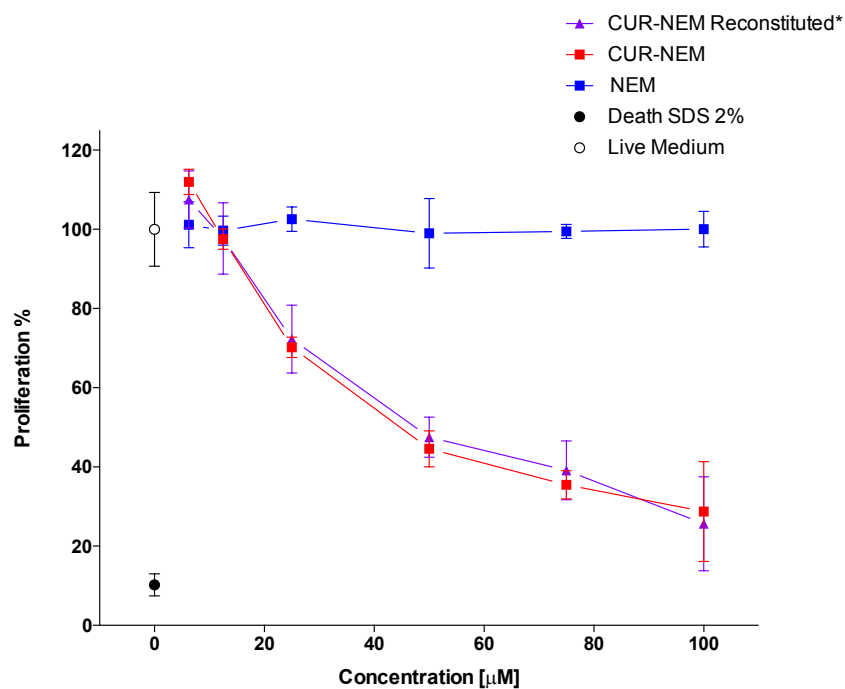
Supplementary information section:



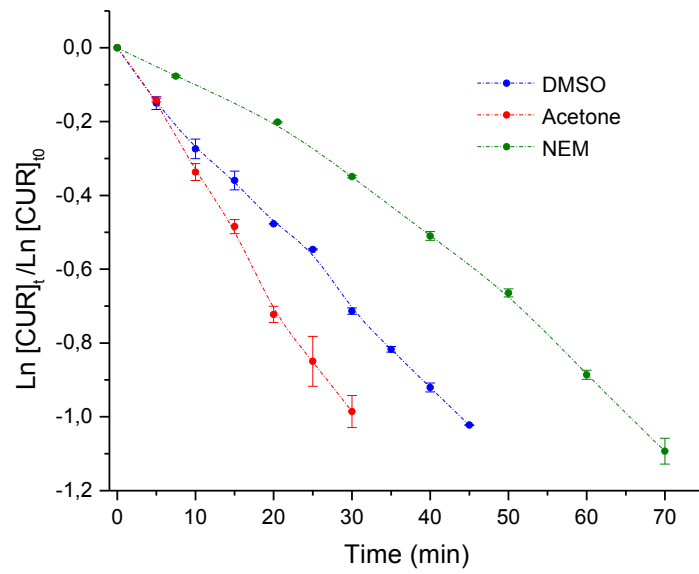
**Figure S1:** Electron microscopy image (STEM) of reconstituted CUR-NEM formulations (0.5% of CUR-NEM and 5% of trehalose).



**Figure S2:** Spectra of CUR before and after the freeze-drying of CUR-NEM.



**Figure S3:** Cell viability after applying the reconstituted formulations (0.5% of CUR-NEM and 5% of trehalose): Viability evaluated using the MTS assay of B16F10 cells after treatment with NEM, CUR-NEM or reconstituted CUR-NEM for 24 h (n=3).



**Figure S4.** Comparison of the curcumin stability when prepared in acetone, DMSO or as CUR-NEM after exposure to UV radiation with a mercury lamp ( $\lambda=254\text{nm}$ ) ( $n=3$ ).

Table S1. Essential systemic metabolites.

<b>Samples</b>	<b>GLu mg/dL</b> <b>98-152</b>	<b>Lact mmol/L</b>	<b>Creatinine mg/dL</b> <b>0.4 a 1.5 mg/dL</b>
Mouse 1	100	2.88	1.58
Mouse 2	110	3.23	1.20
Mouse 3	118	2.67	0.36
Mouse 4	140	1.88	0.58
Mouse 5	157	1.91	0.56

Table S2. Elements: Metabolic chemistry in plasma.

<b>Samples</b>	<b>Na</b> <b>140-156</b> <b>mmol/L</b>	<b>K</b> <b>4,3-5,2</b> <b>mmol/L</b>	<b>Ca</b> <b>0.2-0.4</b> <b>mmol/L</b>	<b>Cl</b> <b>100-106</b> <b>mmol/L</b>	<b>cTCO2</b> <b>mmol/L</b>	<b>Hct</b> <b>10-</b> <b>75 %</b>	<b>cHgb</b> <b>3-25</b> <b>g/dL</b>	<b>BE(b)</b> <b>mmol/L</b>
Mouse 1	139	4.2	0.33	103	13.6	10	Cnc	-11.4
Mouse 2	129	4.4	0.31	102	13.2	9.6	cnc	-12.5
Mouse 3	102	4.9	0.20	104	12.5	25	22	-13
Mouse 4	111	4.8	0.28	100	15	11	Cnc	-11
Mouse 5	125	4.7	0.27	106	12	12	cnc	-12.0

Table S3. Measures of plasma gases in plasma samples.

<b>Samples</b>	<b>pH</b>	<b>pCO<sub>2</sub></b>	<b>pO<sub>2</sub></b>	<b>pH</b>	<b>pCO<sub>2</sub>(T)</b>	<b>pO<sub>2</sub>(T)</b>	<b>cHCO<sub>3</sub><sup>-</sup></b>	<b>BE(ecf)</b>	<b>cSO<sub>2</sub></b>
	<b>7.2-7.5</b>	<b>32-41 mmHg</b>	<b>mmHg</b>	<b>(T)</b>	<b>15-85 mmHg</b>	<b>mmHg</b>	<b>14-24 mmol/L</b>	<b>-30 a 30</b>	<b>0-100 %</b>
Mouse 1	7.2	43.2	34	7.21	31	21	21	9	76
Mouse 2	7.02	32.9	42	7.12	28	20	15	3	75
Mouse 3	7.1	38.1	31	7.23	29	10	17	10	62
Mouse 4	7.1	53.3	51.8	7.299	31.5	22.4	18.2	-10.7	74.7
Mouse 5	7.2	42.5	45.6	7.333	29	21.0	21	-12	70.4

Glu: glucose; Lact: lactate; cTCO<sub>2</sub>: total carbon dioxide; Hct: hematocrit; cHgb: hemoglobin; BE(b): base excess of blood; pCO<sub>2</sub>: carbon dioxide, partial pressure; pO<sub>2</sub>: oxygen, partial pressure, cHCO<sub>3</sub><sup>-</sup>: actual bicarbonate; BE(ecf): base excess of extra cellular fluid.