

1 *Supporting information*

2 **Metallocatanionic vesicles mediated enhanced singlet oxygen generation and**  
3 **photodynamic therapy of cancer cells**

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23 **Table S1.** List of the PDI value calculated for all fraction at 1 mM and 0.1 mM concentration

<b>FeCPC I:Na Ol</b>	<b>PDI (1 mM)</b>	<b>PDI (0.1 mM)</b>
<b>V19</b>	0.230	0.203
<b>V28</b>	0.206	0.263
<b>V37</b>	0.495	0.444
<b>V46</b>	0.355	0.384
<b>V55</b>	0.395	0.376
<b>V64</b>	0.333	0.347
<b>V73</b>	0.430	0.383
<b>V82</b>	0.501	0.544
<b>V91</b>	0.762	0.694

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25 **Table S2.** Metallocatanionic vesicles measured size and PDI value of V37 and V73 fraction  
26 till 1 month.

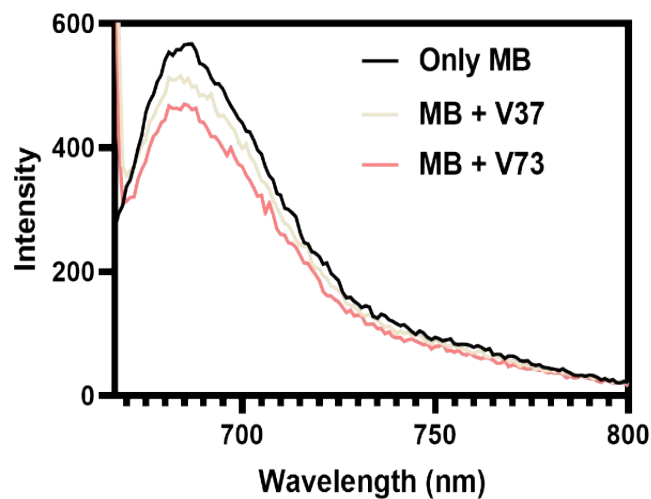
<b>Time</b>	<b>V37</b>		<b>V73</b>	
	<b>Size (nm)</b>	<b>PDI</b>	<b>Size (nm)</b>	<b>PDI</b>
<b>Fresh sample</b>	142.2	0.278	196.8	0.38
<b>1<sup>st</sup> Week</b>	236.6	0.456	214	0.45
<b>2<sup>nd</sup> Week</b>	277.8	0.470	182.3	0.43
<b>1 month</b>	253.8	0.480	204.8	0.36

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28 **Table S3.** Metallocatanionic vesicles measured size and PDI value of MB@V37 and  
29 MB@V73 fraction at different pH.

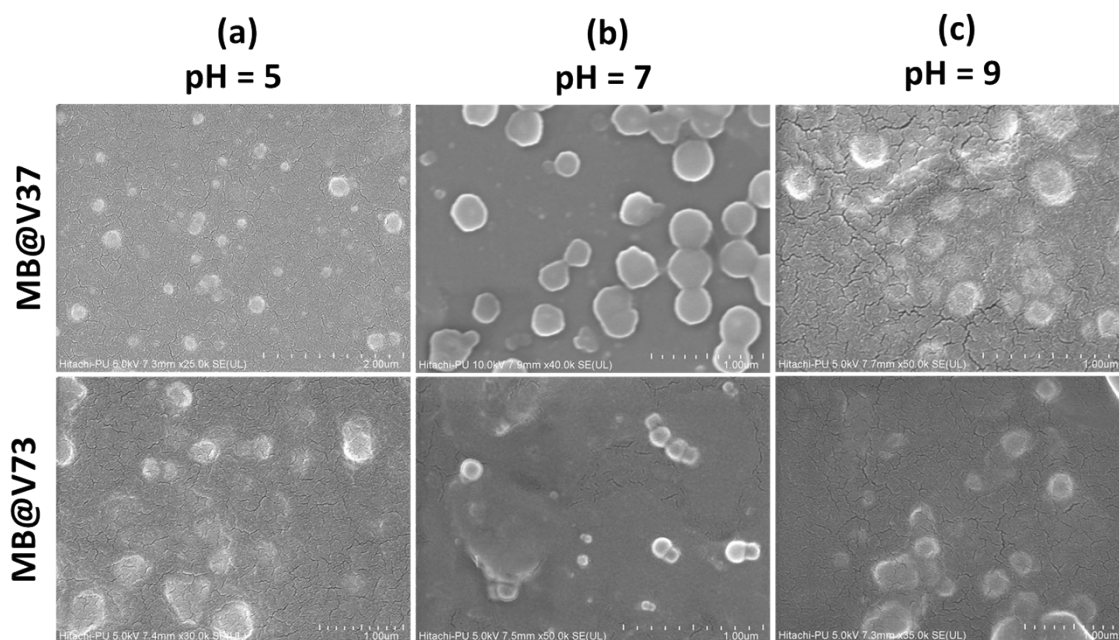
<b>Time</b>	<b>pH = 9</b>				<b>pH = 7</b>				<b>pH = 5</b>			
	<b>MB@V37</b>		<b>MB@V73</b>		<b>MB@V37</b>		<b>MB@V73</b>		<b>MB@V37</b>		<b>MB@V73</b>	
	<b>Size (nm)</b>	<b>PDI</b>	<b>Size (nm)</b>	<b>PDI</b>	<b>Size (nm)</b>	<b>PDI</b>	<b>Size (nm)</b>	<b>PDI</b>	<b>Size (nm)</b>	<b>PDI</b>	<b>Size (nm)</b>	<b>PDI</b>
<b>Fresh sample</b>	244	0.49	311	0.25	292	0.56	323	0.28	322	0.55	455	0.47
<b>1<sup>st</sup> Week</b>	260	0.64	370	0.36	292	0.63	444	0.31	366	0.59	445	0.60
<b>2<sup>nd</sup> Week</b>	439	0.76	458	0.74	516	0.74	405	0.60	344	0.80	302	0.70

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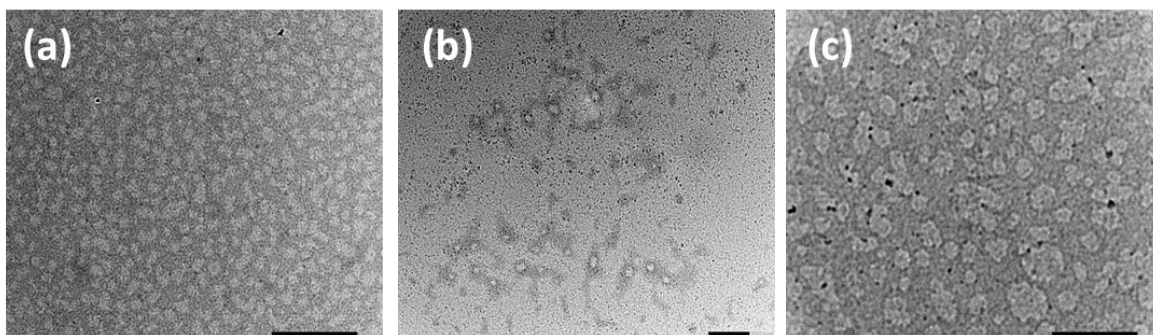
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**Fig. S1** Fluorescence emission spectra of free MB and MB containing vesicles.



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**Fig. S2** MB@MCVs morphology characterization images, FE-SEM images of MB with V37 and V73 fractions at pH (a) 5, (b) 7 and (c) 9.

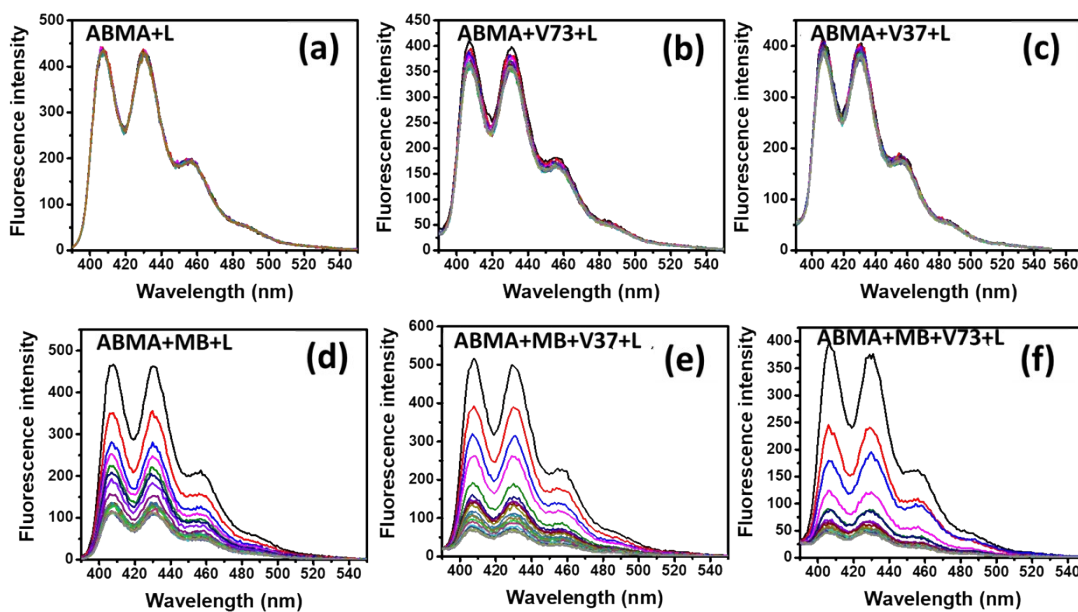


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40 **Fig. S3 MB@MCVs morphology characterization images, HR-TEM images of MB with**  
 41 **V73 at pH (a) 5, (b) 7 and (c) 9. (size bar 1 μm).**

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45 **Fig. S4 Fluorescence emission spectra of ABMA after different treatments (a) only Laser (L)**  
 46 **(b) only V73+L (c) V37+L (d) MB + L (e) MB+V37+L (f) MB+V73+L.**

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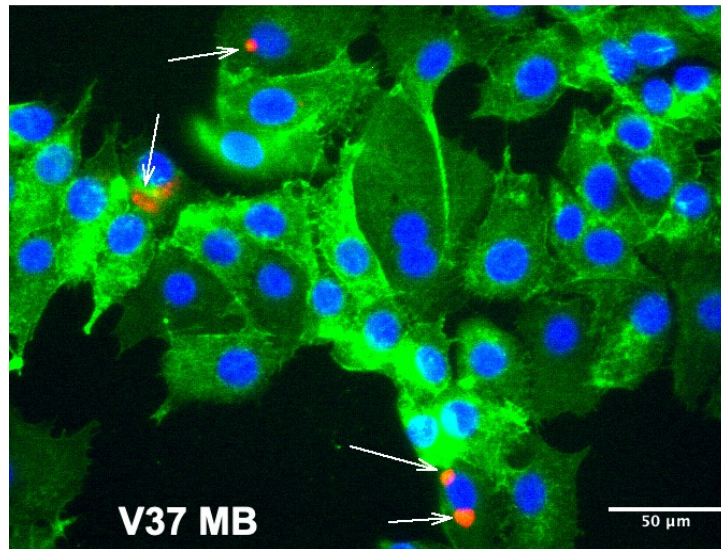
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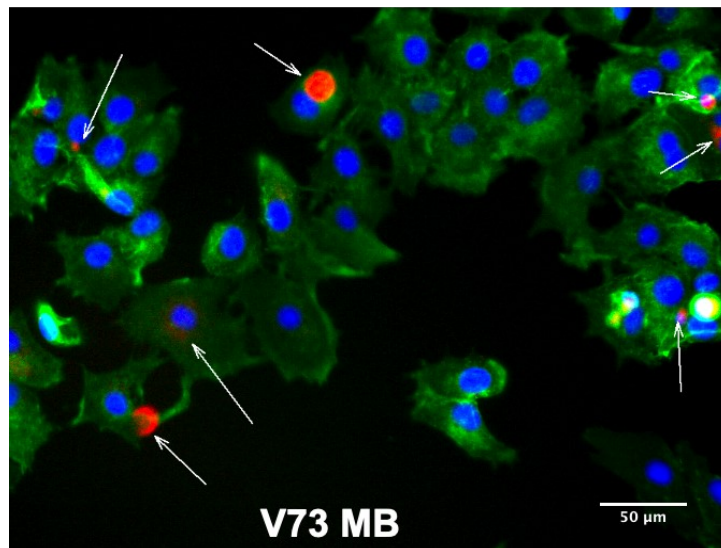
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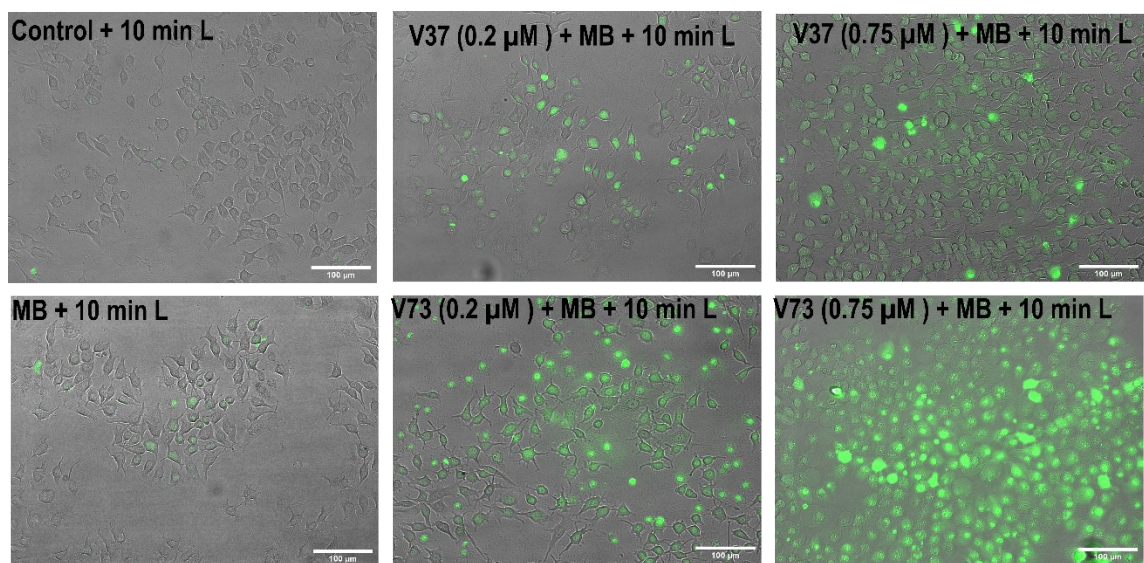
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**Fig. S5** Zoomed images of cellular uptake of MB-loaded MCVs.

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81 **Fig. S6** Intracellular singlet oxygen generation in MCF-7 cells treated with MB-loaded MCVs  
82 upon irradiation with 650 nm laser for 10 min. Overlay images (fluorescent microscopy +  
83 Bright field) showing  $^1\text{O}_2$  generation from different MCVs. Scale bars = 100  $\mu\text{m}$ .