

Supplementary Materials

Mutual Jellification of Two Bactericidal Cationic Polymers: Synthesis and Physicochemical Characterization of a New Two-Components Hydrogel

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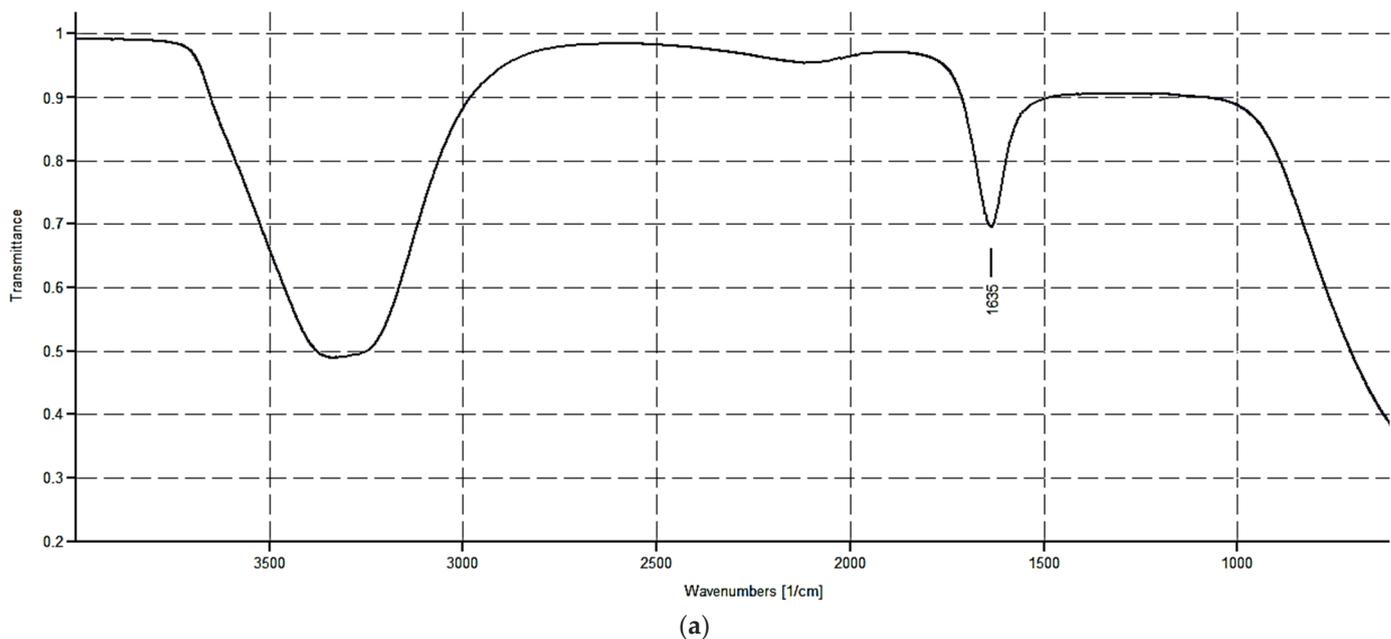
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Section S1



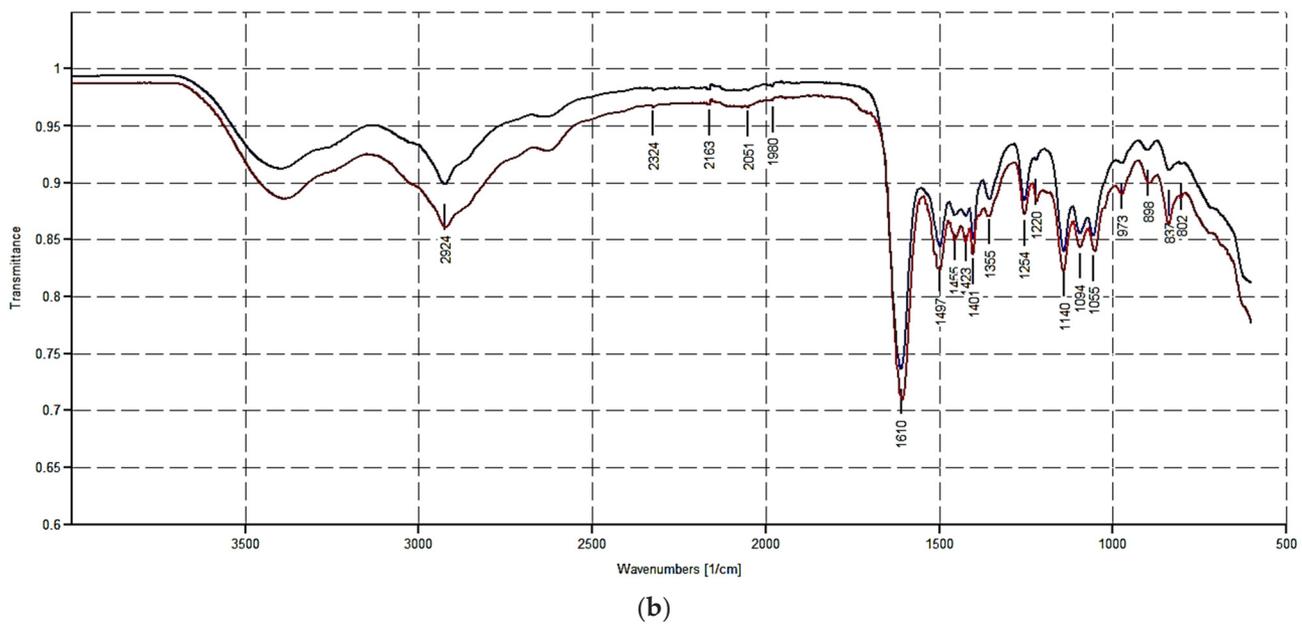


Figure S1. ATR-FTIR spectra of soaked CP1_1.1-Hgel (a) and of dried CP1_1.1-Hgel (dark-blue line) compared with the spectrum of CP1 (red line) (b).

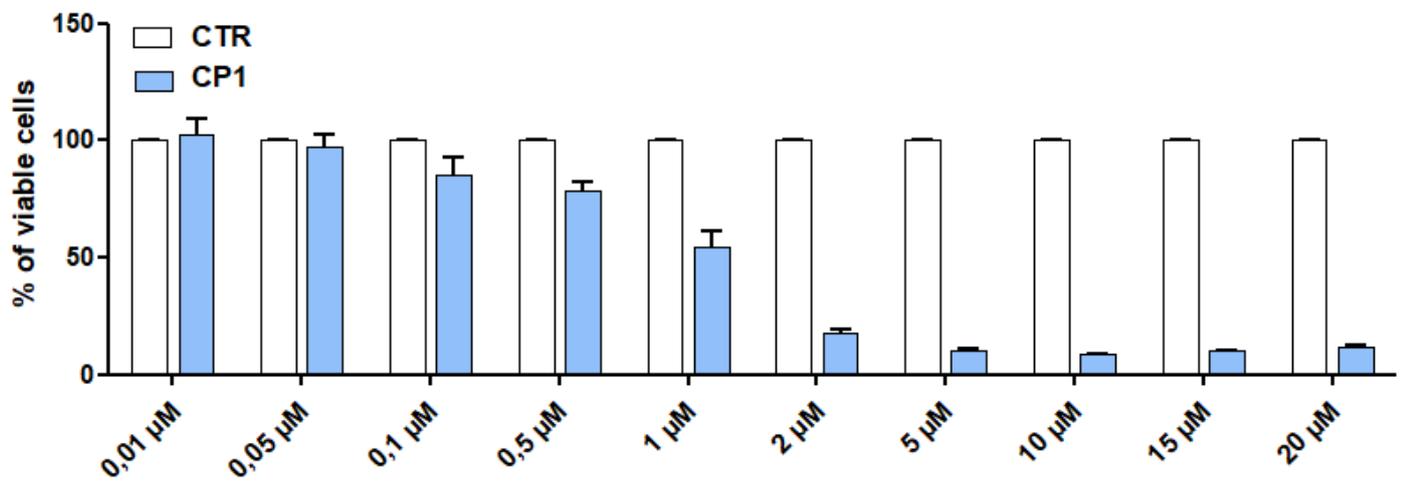


Figure S2. Results from dose-dependent cytotoxicity experiments carried out on MAIL-2 human cells at 4 hours exposure to CP1.

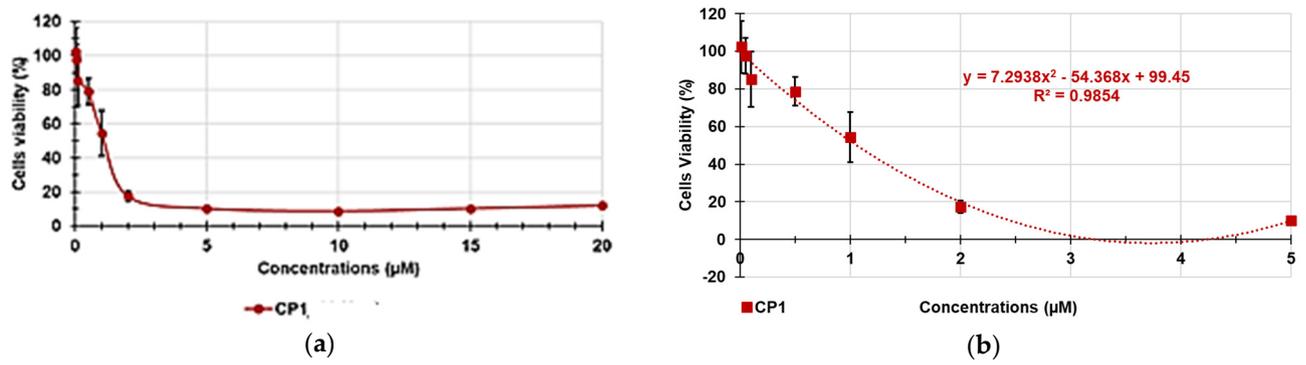


Figure S3. Curves of viability (%) of MAIL-2 cells at 4 hours of exposure vs. concentrations (0.01-20 μM) of CP1 (a); polynomial tendency line fitting the dispersion graphs obtained reporting in graph the cell viability % vs. the concentration of the sample at 4 hours of exposure (b).

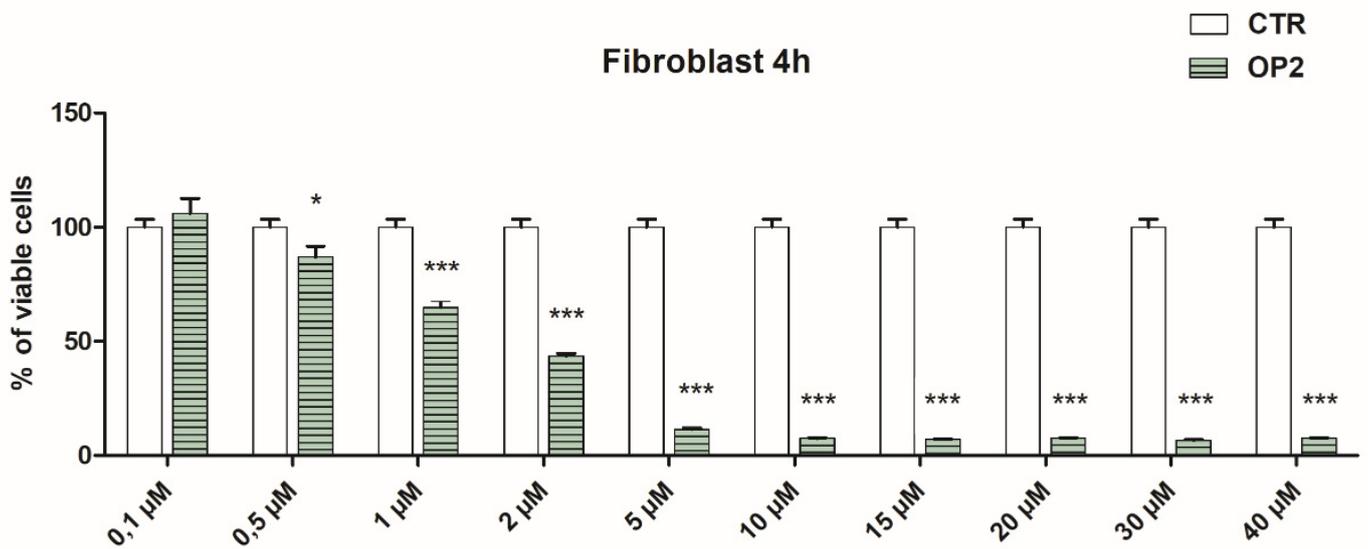
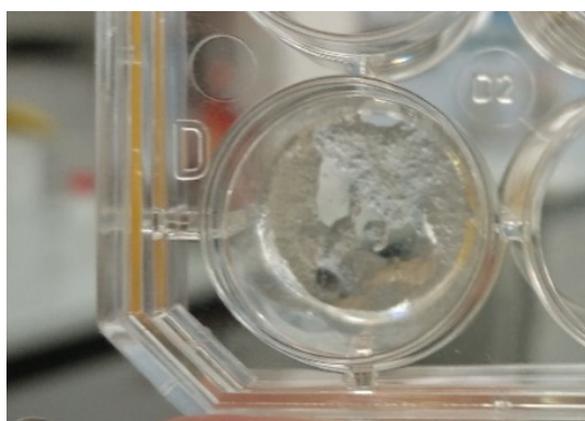


Figure S4. Results from dose-dependent cytotoxicity experiments carried out on MAIL-2 human cells at 4 hours exposure to OP2.



Figure S5. CP1OP2-Hgel obtained as described in Section 2.4 of the associated article, whose volume and weight corresponded to those of gel at its max swelling capability.



(a)



(b)

Figure S6. Appearance of CP1OP2-Hgel at the time t_0 of the experiments carried out to monitor the water loss in time (a); appearance of the fully dried sample (time t_{10}) (b).

Table S1. Weights of gel at times T_0 - T_{10} , and the computed cumulative weight loss ratio percentages.

	Time (h)		Gel (mg)	Weight loss (%)
	T_0	0	198.4	0
	T_1	0.5	191.5	3.5
	T_2	1	164.7	17
	T_3	1.5	164.3	17.2
	T_4	2.5	142.5	28.2
	T_5	3	135.4	31.8
	T_6	4	122.0	38.5
	T_7	6	84.6	57.4
	T_8	7	65.0	67.2
	T_9	8	52.9	73.3

T₁₀

24

10.9

94.5

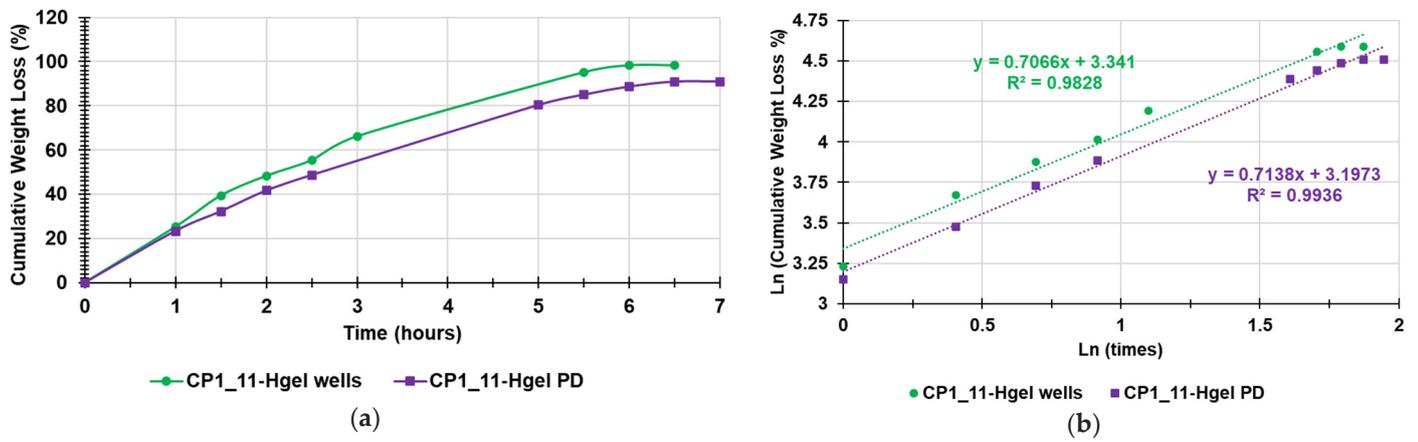


Figure S7. Cumulative weight loss percentage curves of gel into Ws (green line) and of that into the PD (purple line) (a); Korsmeyer-peppas kinetic models fitting data of cumulative weight loss curves (b).

Table S2. Values of coefficients of determination obtained for all the kinetic models used.

Kinetic model	R ² Hydrogel in Ws	R ² Hydrogel in PD
Zero order	0.9525	0.9667
First Order	0.9549	0.9906
Hixson-Crowel	0.9525	0.9667
Higuchi	0.9780	0.9777
Korsmeyer-peppas	0.9828	0.9936