Table S1: Kinetic analysis for release of CXB-TES- carbopol 934 hydrogel.

	zero	First	Diffusion	Peppas	
a	4.464798	1.981193	-1.50307	0.850337	
b	0.933486	-0.00476	5.476695	2.253622	chosen "r"
r	0.97343	-0.98105	0.998015	0.853522	0.99801
k	0.933486	-0.01097	5.476695	2.253622	
t(1/2)	53.56266	-63.1547	83.34948		

Table S2: Kinetic analysis for release of CXB-TES- HPMC hydrogel.

	zero	First	Diffusion	Peppas	
a	6.833925	1.970335	-0.13182	0.850337	
b	1.042397	-0.00552	6.252248	2.253622	chosen "r"
r	0.94881	-0.96237	0.994499	0.853522	0.994499
k	1.042397	-0.01272	6.252248	2.253622	
t(1/2)	47.96635	-54.4955	63.95398		

Table S3: Korsmeyer-Peppas Kinetic analysis for release of CXB-TES- HPMC hydrogel.

0.5	**3.21**		0.506730618	-0.30103
1	5.41		0.73325471	0
2	9.01		0.954960288	0.30103
3	11.12		1.04595436	0.477121
4	13.35		1.125602814	0.60206
6	15.33		1.185559517	0.778151
12	22.70		1.356113896	1.079181
24	29.25		1.466198515	1.380211
		n	**0.568018281**	
		r	**0.991086837**	

Table S4: Korsmeyer-Peppas Kinetic analysis for release of CXB-TES- carbapol hydrogel.

0.5	**2.67**		0.426402661	-0.30103
1	3.90		0.591433759	0
2	6.20		0.792141842	0.30103
3	7.57		0.878899173	0.477121
4	9.83		0.99250386	0.60206
6	11.20		1.049179786	0.778151
12	18.27		1.261646219	1.079181
24	25.10		1.399617327	1.380211
		n	**0.589525475**	
		r	**0.998385892**	

Table S5: Visual score of DNA damage in normal skin cell lines treated with different CXB preparations.

Treatment	No. of cells			Class**				DNA damaged cells % (Mean±SEM)
	No of samples	Analyzed*	Comets	0	1	2	3	
Normal cells (-ve)	5	500	34	466	29	5	0	6.82±0.86^{c}
(-ve)+TES suspension	5	500	93	407	32	25	36	18.84±1.28^{b}
(-ve)+Blank HPMC gel	5	500	38	462	30	6	2	7.61±0.51^{c}
(-ve)+CXB gel	5	500	46	454	28	11	7	9.22±0.58^{c}
(-ve)+CXB-TES gel	5	500	87	413	31	23	33	17.44±1.03^{b}
(-ve)+ CXB powder	5	500	118	382	37	33	48	23.63±0.93^{a}
Normal cells + Doxorubicin (+ve)	5	500	107	393	34	29	44	21.41±0.75^{ab}

Table S6: Visual score of DNA damage in skin cancer cell lines treated with different CXB preparations.

Treatment	No. of cells			Class**				DNA damaged cells % (Mean±SEM)
	No of samples	Analyzed*	Comets	0	1	2	3	
Skin cancer (-ve)	5	500	56	444	28	13	15	11.21±0.87^{d}
(-ve)+TES suspension	5	500	117	383	39	33	45	23.43±0.93^{ab}
(-ve)+Blank HPMC gel	5	500	69	431	31	17	21	13.82±0.66^{cd}
(-ve)+CXB gel	5	500	81	419	35	20	26	16.23±1.07^{c}
(-ve)+CXB-TES gel	5	500	107	393	34	31	42	21.41±0.51^{b}
(-ve)+CXB powder	5	500	138	362	33	42	63	27.63±1.21^{a}
Skin cancer + Doxorubicin (+ve)	5	500	124	376	32	38	54	24.82±0.80^{ab}

*: Number of cells examined per a group, **: Class 0= no tail; 1= tail length < diameter of nucleus; 2= tail length between 1X and 2X the diameter of nucleus; and 3= tail length > 2X the diameter of nucleus. Data are presented as mean ± SD. $^{a,b,c:}$ Mean values within tissue with unlike superscript letters were significantly different ($p \leq 0.05$; ANOVA/Tukey).

Table S7: DNA fragmentation detected in normal skin cell lines.

Treatment	DNA Fragmentation (%) Mean ± SEM
Normal cells (-ve)	**8.1±0.24^{d}**
(-ve)+TES suspension	**20.6±0.56^{b}**
(-ve)+Blank HPMC gel	**15.2±0.30^{c}**
(-ve)+CXB gel	**17.1±0.23^{bc}**
(-ve)+CXB-TES gel	**19.4±0.48^{b}**
(-ve)+ CXB powder	**27.6±0.54^{a}**
Normal cells + Doxorubicin (+ve)	**21.7±0.66^{b}**

Means with different superscripts ($^{a, b, c, d}$) between treatments in the same column are significantly different at $p \leq 0.05$; ANOVA/Tukey.

Table S8: DNA fragmentation detected in cancer skin cell lines.

Treatment	DNA Fragmentation (%) Mean ± SEM
Skin cancer (-ve)	**13.7±0.45^{f}**
(-ve)+TES suspension	**35.5±0.58^{b}**
(-ve)+Blank HPMC gel	**17.9±0.15^{e}**
(-ve)+CXB gel	**21.2±0.66^{d}**
(-ve)+CXB-TES gel	**31.6±0.61^{c}**
(-ve)+CXB powder	**43.7±0.53^{a}**
Skin cancer + Doxorubicin (+ve)	**33.8±0.48^{bc}**

Means with different superscripts ($^{a, b, c, d, e, f}$) between treatments in the same column are significantly different at $p \leq 0.05$; ANOVA/Tukey.