Supplementary information

Table 1 Summary of the parameters from the mass spectrometer of each compound. The scan time was 0.10 sec in each case.

Compound	Selected Ions Q1,Q3		MS-MS conditions	
	Precursor ion m/z (Q1)	Product ion m/z (Q3)	Collision energy (eV)	Cone (eV)
Sparfloxacin	392.85	291.86+348.92	22	40
Dacarbazine	182.83	165.89	11	34
Chlorpromazine	318.73	86.09	19	40
Promazine	284.81	211.82+86.13	18	32
8-Methoxypsoralen	216.69	173.81+201.84	24	48
BJX482	358.87	245.86	29[1)] /30[2)]	48[1)] /40[2)]

[1)]8-methoxypsoralen, dacarbazine, promazine; [2)]chlorpromazine, sparfloxacin

Selected Ions Q1, Q3: precursor and product ions selected by the first and third quadrupole mass analyzer, respectively

MS-MS: tandem mass spectrometer (in this case a triple quadrupole tandem mass spectrometer)

m/z: mass-to-charge ratio

Table 2 Relative viability of cells from the epidermis following the isolation with thermolysine and trypsin, determined by trypan blue

Treatment	Relative viability (%)	
	Skin dorsal area	Skin ear
Sparfloxacin		
1% CMC;7.2 J/cm^2	88±4.7˙	86±1.7˙
1000 mg/kg; no UVA	87±3.8˙	91±4.2˙
1000 mg/kg;7.2 J/cm^2	86±2.4˙	96±1.2˙
Dacarbazine		
1% CMC;7.2 J/cm^2	92±4.7¨	95±3.1¨
250 mg/kg; no UVA	86±3.4˙	97±1.2˙
250 mg/kg;7.2 J/cm^2	85±3.2˙	93±2.2˙
Chlorpromazine		
1% CMC;7.2 J/cm^2	81±4.1¨	91±3.2¨
75 mg/kg; no UVA	88±6.0˙	93±2.9˙
75 mg/kg;7.2 J/cm^2	88±7.0˙	92±3.8˙
Promazine		
1%CMC;7.2 J/cm^2	74±9.5¨	97±1.0¨
75 mg/kg; no UVA	87±3.6˙	93±1.4˙
75 mg/kg;7.2 J/cm^2	87±3.8˙	88±3.5˙
8-Methoxypsoralen		
1%CMC;7.2 J/cm^2	83±7.2¨	93±2.3¨
300 mg/kg; no UVA	90±3.4˙	92±4.0˙
300 mg/kg;7.2 J/cm^2	91±1.8˙	95±1.9˙

mean±standard derivation of ˙6 or ¨4 animals

Table 3 Comet Assay analysis of cornea, retina and the skin of the dorsal area and ears shown for each animal and as mean value ±SD of each treatment group.

Sparfloxacin			Dacarbazine			Chlorpromazine			Promazine			8-Methoxypsoralen		
1%CMC; 7 J/cm^2	1000mg/kg; no UVA	1000mg/kg; 7 J/cm^2	1%CMC; 7 J/cm^2	250mg/kg; no UVA	250mg/kg; 7 J/cm^2	1%CMC; 7 J/cm^2	75mg/kg; no UVA	75mg/kg; 7 J/cm^2	1%CMC; 7 J/cm^2	75mg/kg; no UVA	75mg/kg; 7 J/cm^2	1%CMC; 7 J/cm^2	300mg/kg; no UVA	300mg/kg; 7 J/cm^2
Cornea			*Cornea*			*Cornea*			*Cornea*			*Cornea*		
0.86	0.21	2.22	n.a.	0.58	1.25	0.20	0.46	0.37	0.43	0.56	0.26	0.49	0.59	1.12
0.06	0.31	6.20	0.81	0.49	2.17	0.24	0.29	0.36	0.39	0.32	0.30	0.59	0.23	0.95
0.40	0.10	1.04	0.43	0.91	1.04	0.22	0.35	0.34	0.32	0.16	0.19	0.66	0.43	0.46
0.14	0.85	13.27	0.40	0.78	1.43	0.26	0.29	0.40	0.56	0.22	0.31	0.80	0.53	0.70
0.14	0.74	1.17		0.60	0.82		0.18	0.23		0.31	0.54		0.33	0.18
0.15	0.93	0.29		1.21	n.a.		0.20	0.24		0.40	0.42		0.40	0.30
0.29±0.30	0.52±0.36	4.03±4.99	0.55±0.22	0.76±0.27	1.34±0.52*	0.23±0.03	0.30±0.10	0.32±0.07	0.42±0.10	0.33±0.14	0.34±0.12	063±0.13	0.42±0.13	0.62±0.37
Retina			*Retina*			*Retina*			*Retina*			*Retina*		
0.20	0.19	0.50	0.33	0.38	0.48	0.19	0.27	0.29	0.24	0.13	0.10	0.27	0.34	0.38
0.13	0.21	0.81	0.37	0.36	0.45	0.25	0.21	0.17	0.13	0.15	0.15	0.25	0.35	0.47
0.18	0.24	0.53	0.54	0.43	0.40	0.17	0.13	0.22	0.15	0.14	0.13	0.27	0.29	0.27
0.23	0.44	0.43	0.43	0.36	0.39	0.23	0.15	0.23	0.15	0.16	0.13	0.23	0.32	0.33
0.12	0.21	0.33		0.39	0.49		0.16	0.22		0.15	0.20		0.34	0.24
0.13	0.22	0.27		0.27	0.39		0.15	0.15		0.12	0.25		0.32	0.26
0.17±0.04	0.25±0.10	0.48±0.19**	0.42±0.09	0.36±0.05	0.43±0.04	0.21±0.04	0.18±0.05	0.21±0.05	0.17±0.05	0.14±0.01	0.16±0.06	0.25±0.02	0.32±0.02	0.33±0.09
Skin dorsal area			*Skin dorsal area*			*Skin dorsal area*			*Skin dorsal area*			*Skin dorsal area*		
1.85	0.74	24.31	n.a.	1.24	11.52	1.62	1.39	5.00	n.a.	0.42	0.23	1.49	1.25	0.23
1.05	0.41	23.18	0.35	1.84	12.50	2.32	0.99	6.06	0.68	0.20	0.31	n.a.	1.49	0.28
0.96	1.66	18.80	0.37	1.13	16.91	1.72	1.08	4.28	0.49	0.34	0.38	1.16	0.90	0.38
0.93	0.98	22.46	0.39	1.06	13.61	1.66	1.61	4.44	0.09	0.20	0.24	1.32	0.59	0.28
0.77	0.49	23.01		0.79	14.22		2.26	5.19		0.31	0.22		1.34	0.24
0.82	0.66	18.82		0.65	13.08		1.26	4.08		0.37	0.22		1.12	0.34
1.06±0.40	0.82±0.45	21.76±2.37***	0.37±0.02	1.12±0.42	13.64±1.54***	1.83±0.33	1.43±0.46	4.48±0.73***	0.42±0.30	0.31±0.09	0.27±0.07	1.32±0.16	1.11±0.33	0.29±0.06***
Skin ear			*Skin ear*			*Skin ear*			*Skin ear*			*Skin ear*		
1.10	0.81	17.81	0.68	0.37	12.00	1.12	1.96	5.35	0.21	0.37	0.25	1.16	1.82	0.22
0.74	0.54	17.74	0.29	0.49	18.73	1.33	2.58	5.25	0.33	0.37	0.31	1.41	1.23	0.10
0.83	1.18	18.79	0.66	0.58	17.09	2.03	2.36	3.82	0.19	0.20	0.21	1.07	1.48	0.29
1.23	1.17	14.36	0.30	0.67	12.31	2.36	n.a.	3.78	0.31	0.41	0.20	1.73	1.62	0.31
1.09	1.11	7.88		0.41	17.66		1.72	3.47		0.27	0.16		1.71	0.44
1.46	0.52	6.96		0.23	17.56		0.72	4.12		0.24	0.18		1.28	0.33
1.08±0.26	0.89±0.31	13.92±5.27***	0.48±0.22	0.46±0.16	15.89±2.95***	1.71±0.58	1.87±0.72	4.30±0.80***	0.26±0.07	0.31±0.08	0.22±0.05	1.34±0.30	1.52±0.24	0.28±0.11***

n.a. not analyzed due to artefacts and cell debris

***p<0.001, **p<0.01, *p<0.05; showing significant differences of the treated irradiated group vs the vehicle irradiated and the treated non irradiated group

bold numbers indicate the mean±standard deviation of the above mentioned individual data