

Supplementary material

# Antioxidant, Antimicrobial, and Other Biological Properties of Pompia Juice

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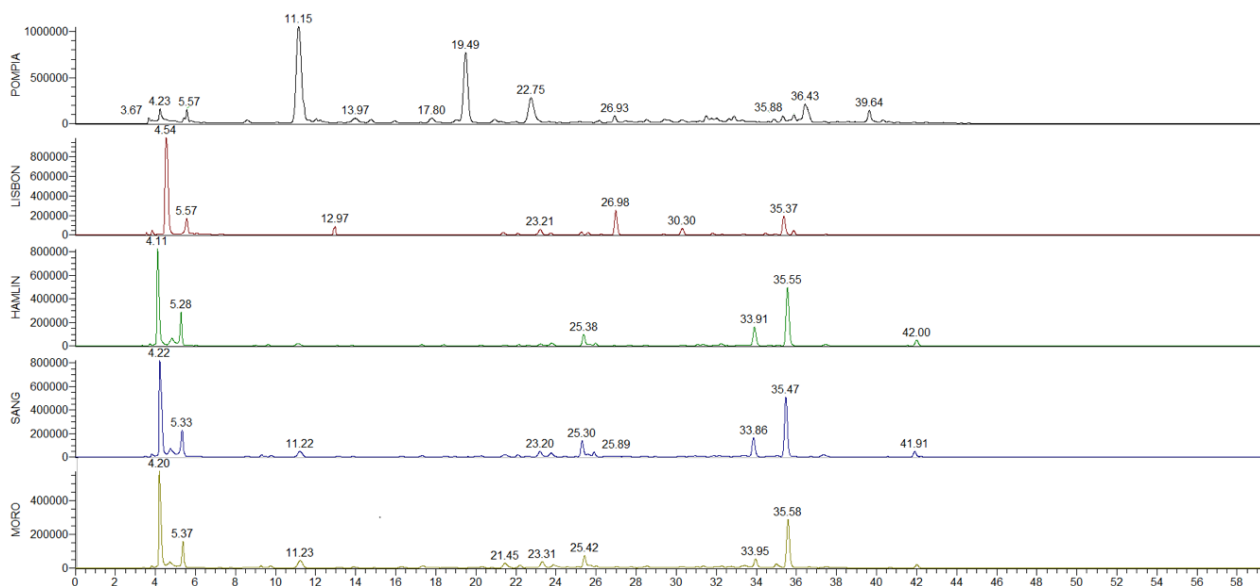


Figure S1. HPLC DAD chromatograms at 320 nm of Pompia, lemon Lisbon, and oranges Hamlin, Sanguinello and Moro juices.

Table S1. Characterization of phenolics and organic compounds of Pompia, Lemon (*cv* Lisbon) and orange (*cv* Hamlin, Sanguinello and Moro) juice by LCMS analysis.

Peak	RT (min)	Molecular formula	m/z calculate	m/z experimental	$\Delta$ (ppm)	Cultivar	Fragments	Compound
1	6.43	C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>	191.01973	191.01934	-2.04167	L	NEG	Citric acid
2	7.88	C <sub>9</sub> H <sub>8</sub> O <sub>3</sub>	165.05462	165.05557	5.75567	P	POS	(E)-p-coumaric acid
3	11.15	C <sub>7</sub> H <sub>12</sub> O <sub>6</sub>	191.05611	191.05699	4.60598	H,S,M,L,P	NEG	Quinic acid derivate
4	12.97	C <sub>17</sub> H <sub>20</sub> O <sub>9</sub>	367.10342	367.0984	-0.01362	L	Pos	Feruloylquinic acid
5	17.74	C <sub>21</sub> H <sub>21</sub> O <sub>11</sub>	450.11566	450.11285	-6.24284	M,S	POS	Cyanidin 3-O-glucoside
6	17.8	C <sub>30</sub> H <sub>36</sub> O <sub>18</sub>	685.19744	685.1988	1.98483	P	POS	Caffeic acid hexoside dimer
7	19.49	C <sub>28</sub> H <sub>32</sub> O <sub>16</sub>	625.17631	625.17284	-5.55043	P	POS	Chrysoeriol 6,8-C-diglucoside
8	20.94	C <sub>28</sub> H <sub>32</sub> O <sub>16</sub>	625.17631	625.17284	-5.55043	P	POS	Diosmetin 6,8-C-dihexoside
9	21.67	C <sub>27</sub> H <sub>30</sub> O <sub>14</sub>	577.15628	577.15453	-3.03211	L	NEG	Apigenin 7-O-neohesperidoside
10	22.75	C <sub>28</sub> H <sub>32</sub> O <sub>15</sub>	609.18141	609.17875	-4.35010	P	POS	Diosmetin 7-O-neohesperidoside
11	22.8	C <sub>28</sub> H <sub>32</sub> O <sub>16</sub>	625.17631	625.18009	6.04629	L,P	POS	Diosmetin 6,8 -C-diglucoside
12	22.9	C <sub>25</sub> H <sub>21</sub> O <sub>17</sub>	594.08515	594.07993	-8.78662	M,S	POS	Cyanidin 3-6''-dioxalyglucoside
13	23.14	C <sub>27</sub> H <sub>30</sub> O <sub>16</sub>	611.17631	611.17743	1.83253	L	POS	Luteolin 6,8-di-C-glucoside
14	23.21	C <sub>33</sub> H <sub>40</sub> O <sub>21</sub>	773.21348	773.21492	1.86236	M,S,L,P	POS	Quercetin-7-O-glucoside 3-rutinoside
15	23.89	C <sub>17</sub> H <sub>12</sub> O <sub>10</sub>	387.12857	387.13098	6.22532	H,M,S	POS	Sinapoyl D-glucoside
16	24.19	C <sub>24</sub> H <sub>23</sub> O <sub>14</sub>	536.11606	536.11413	-3.59997	M,S	POS	Cyanidin-3-6'-malonylglucoside
17	25.18	C <sub>27</sub> H <sub>30</sub> O <sub>15</sub>	595.16575	595.16181	-6.62000	H,M,S	POS	Apigenin 6,8-di-C-glucoside
18	25.22	C <sub>27</sub> H <sub>30</sub> O <sub>15</sub>	593.15119	593.15211	1.55104	L	NEG	Luteolin 7-O-rutinoside
19	25.38	C <sub>27</sub> H <sub>32</sub> O <sub>14</sub>	581.18648	581.18719	1.22164	H,M,S	POS	Naringenin 7-O-rutinoside
20	25.89	C <sub>33</sub> H <sub>40</sub> O <sub>20</sub>	759.23422	759.22991	-5.67677	H,S,M	POS	Eriodictyol-7-O-rutinoside 4-glucoside
21	26.98	C <sub>28</sub> H <sub>32</sub> O <sub>16</sub>	625.17631	625.17191	-7.03801	L,P	POS	Isorhamnetin-3-O-rutinoside
22	29.41	C <sub>33</sub> H <sub>40</sub> O <sub>19</sub>	741.22366	741.22452	1.16024	L,P	POS	Rhoifolin 4-O-glucoside
23	30.3	C <sub>27</sub> H <sub>32</sub> O <sub>15</sub>	597.18141	597.17923	-3.63374	H,S,M,L,P	POS	Eriodictyol 7-O-rutinoside
24	30.44	C <sub>27</sub> H <sub>30</sub> O <sub>15</sub>	595.16575	595.17035	7.72894	H	POS	Kaempferol 3-O-rutinoside
25	31.35	C <sub>28</sub> H <sub>34</sub> O <sub>15</sub>	611.19705	611.19297	-6.67542	H	POS	Hesperetin 7-O-neohesperidoside
26	31.82	C <sub>27</sub> H <sub>30</sub> O <sub>16</sub>	611.16066	611.15873	-3.15793	H,L,P	POS	Luteolin-3',7-O-diglucoside
27	32.45	C <sub>28</sub> H <sub>32</sub> O <sub>17</sub>	639.15667	639.15991	5.06918	M	NEG	Isorhamnetin 3',7-O--diglucoside
28	32.89	C <sub>28</sub> H <sub>34</sub> O <sub>14</sub>	595.20213	595.19988	-3.78023	P	POS	Isosakuranetin 7-O-rutinoside
29	33.86	C <sub>27</sub> H <sub>32</sub> O <sub>14</sub>	581.18648	581.18384	-4.54243	H,M,S	POS	Naringenin 7-O-neohesperidoside
30	33.91	C <sub>27</sub> H <sub>22</sub> O <sub>11</sub>	463.1355	463.13495	-1.18756	M,S,L,P	POS	Diosmetin-7-O-glucoside
31	34.46	C <sub>27</sub> H <sub>30</sub> O <sub>16</sub>	611.16066	611.16319	4.13966	L	POS	Quercetin 3-O-rutinoside
32	34.95	C <sub>28</sub> H <sub>32</sub> O <sub>15</sub>	609.18104	609.17991	-1.85495	M,L,P	POS	Chrysoeriol 7-O-neohesperidoside
33	35.55	C <sub>28</sub> H <sub>34</sub> O <sub>15</sub>	611.19705	611.19328	-6.16822	H,M,S,L,P	POS	Hesperetin 7-O-rutinoside
34	35.88	C <sub>27</sub> H <sub>32</sub> O <sub>14</sub>	581.18648	581.18712	1.10120	P	POS	Naringenin 5-O-neohesperidoside
35	36.43	C <sub>28</sub> H <sub>32</sub> O <sub>15</sub>	609.18104	609.17727	-6.18864	L,P	POS	Diosmin
36	36.88	C <sub>26</sub> H <sub>30</sub> O <sub>8</sub>	471.20134	471.20387	5.36925	L	POS	Limonin
37	37.48	C <sub>29</sub> H <sub>34</sub> O <sub>17</sub>	653.17232	653.17272	0.61240	L	NEG	Neo-Limocitrin
38	38.94	C <sub>33</sub> H <sub>40</sub> O <sub>20</sub>	757.21857	757.21299	6.49545	P	POS	Kaempferol 3-O-rutinoside 7-O-glucoside
39	39.64	C <sub>33</sub> H <sub>40</sub> O <sub>20</sub>	757.21857	757.22211	4.67500	P	POS	Quercetin 3-O-rhamnosyl-rhamnosyl-glucoside
40	42.01	C <sub>28</sub> H <sub>34</sub> O <sub>14</sub>	595.20213	595.20018	-3.27620	H,M,S	POS	Dydimin
41	44.37	C <sub>28</sub> H <sub>34</sub> O <sub>9</sub>	515.22757	515.22482	-5.33745	L	POS	Nomilin
42	45.02	C <sub>16</sub> H <sub>12</sub> O <sub>7</sub>	317.06558	317.06377	-5.70860	L	POS	Isorhamnetin
43	50.36	C <sub>15</sub> H <sub>10</sub> O <sub>8</sub>	319.04484	319.04516	1.00299	P	POS	Myricetin
44	51.74	C <sub>15</sub> H <sub>10</sub> O <sub>7</sub>	303.04993	303.04879	-3.76176	H	POS	Quercetin
45	53.55	C <sub>20</sub> H <sub>20</sub> O <sub>7</sub>	373.12818	373.13035	5.81570	H	POS	Sinensetin
46	55.77	C <sub>21</sub> H <sub>22</sub> O <sub>8</sub>	403.13874	403.14051	4.39055	H	POS	Nobiletin

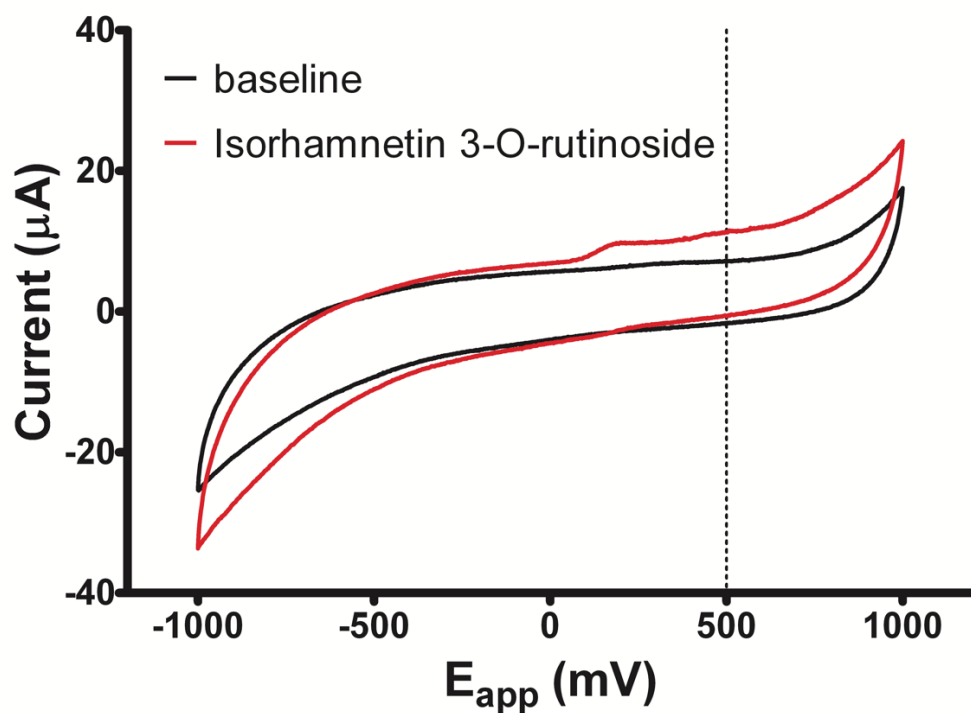


Figure S2. Cyclic voltammetry, with a scanned potential range ( $E_{app}$ ) comprised between  $-1\text{ V}$  and  $+1\text{ V}$  *vs* carbon pseudoreference, in the absence (PBS black line) and in the presence of 1 mM Isorhamnetin 3-O-rutinoside (red line).

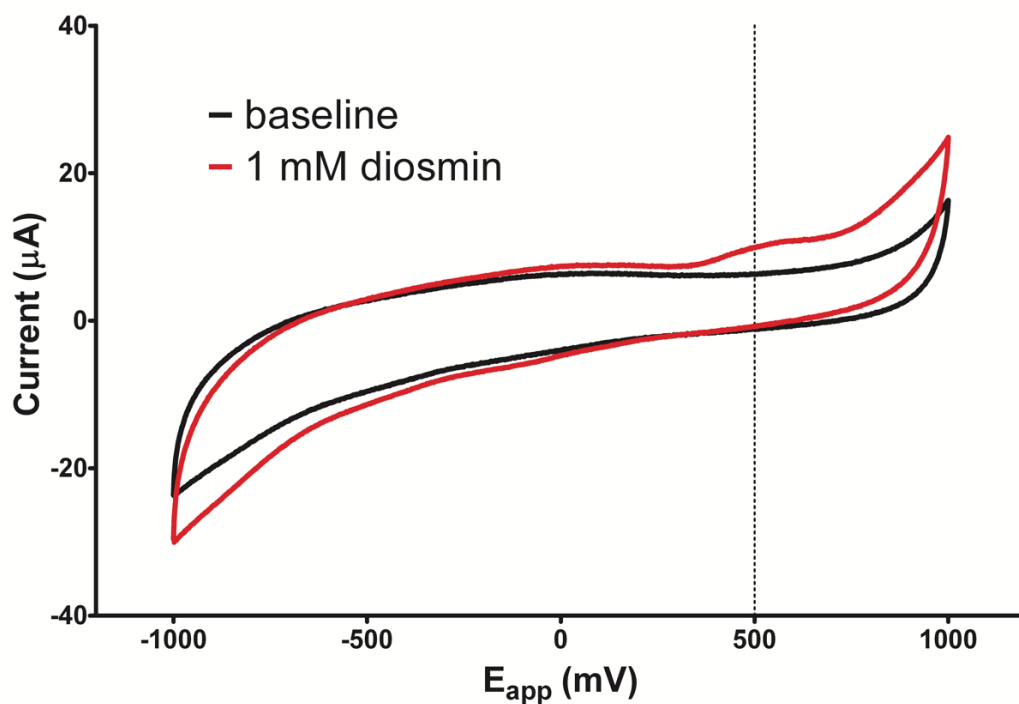


Figure S3. Cyclic voltammetry, with a scanned potential range ( $E_{app}$ ) comprised between  $-1\text{ V}$  and  $+1\text{ V}$  *vs* carbon pseudoreference, in the absence (PBS black line) and in the presence of 1 mM Diosmin (red line).

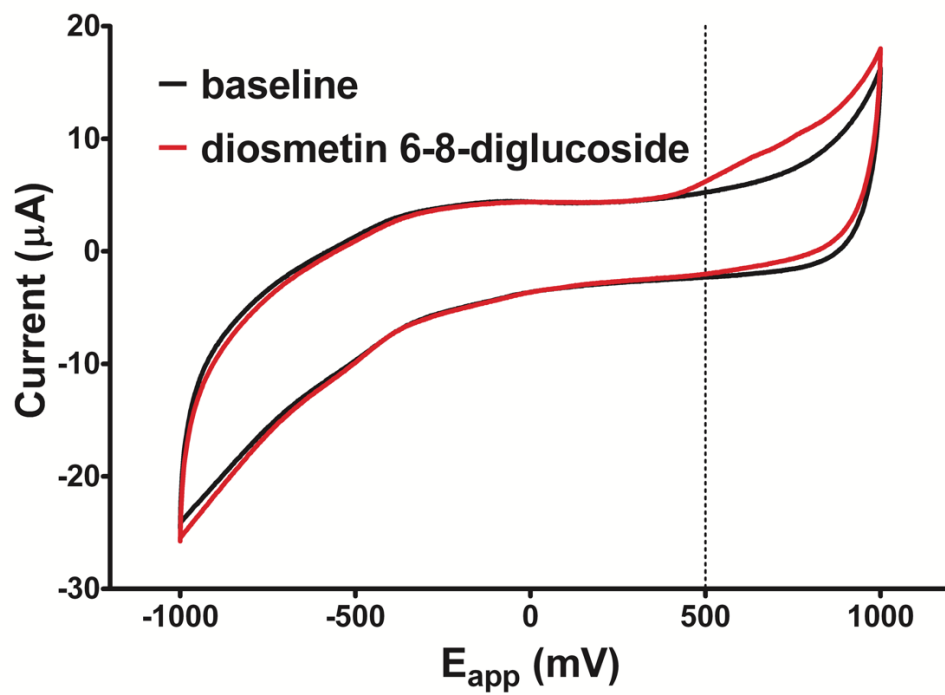


Figure S4. Cyclic voltammetry, with a scanned potential range ( $E_{\text{app}}$ ) comprised between  $-1$  V and  $+1$  V *vs* carbon pseudoreference, in the absence (PBS black line) and in the presence of 1 mM Diosmetin 6,8-diglucoside (red line).

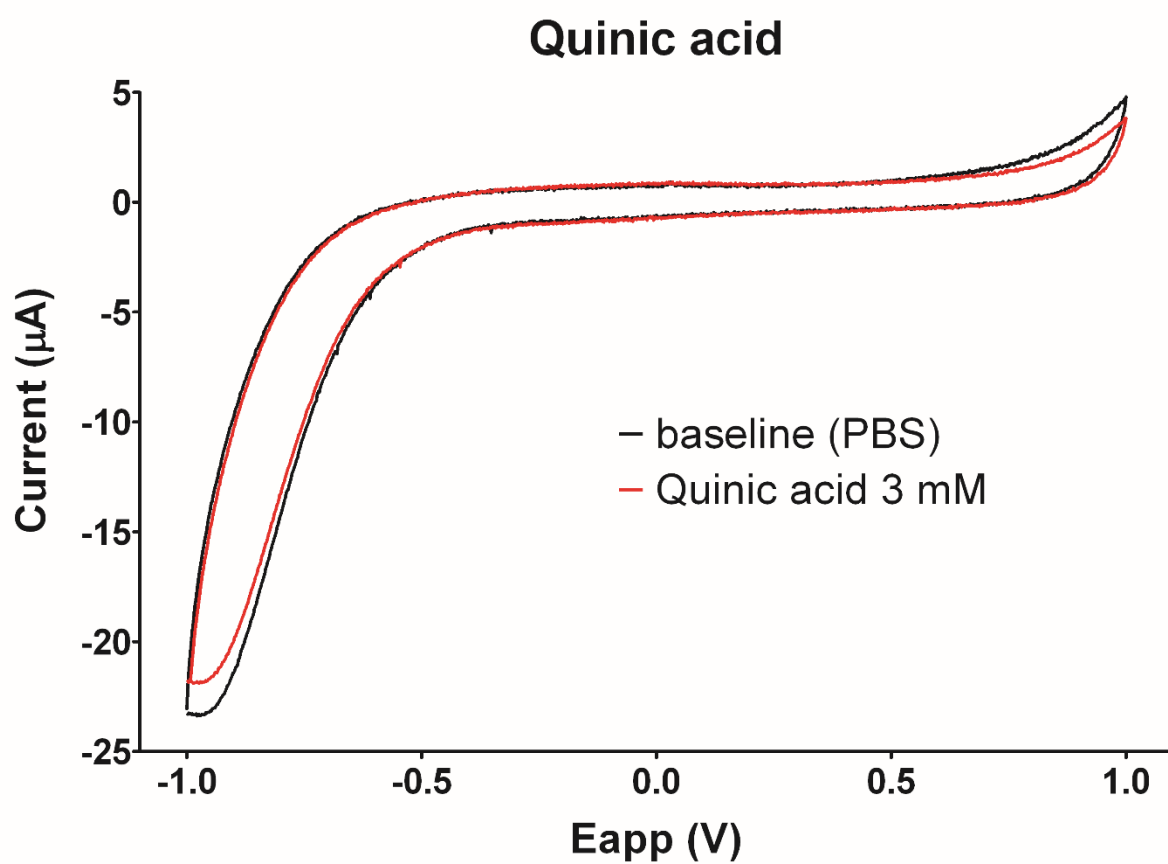


Figure S5. AA and quinic acid cyclic voltammeteries, with a scanned potential range ( $E_{app}$ ) comprised between  $-1\text{ V}$  and  $+1\text{ V}$  vs carbon pseudoreference, in the absence (PBS black line) and in the presence of  $3\text{ mM}$  quinic acid (red line).

MTT assay on Caco-2 cells

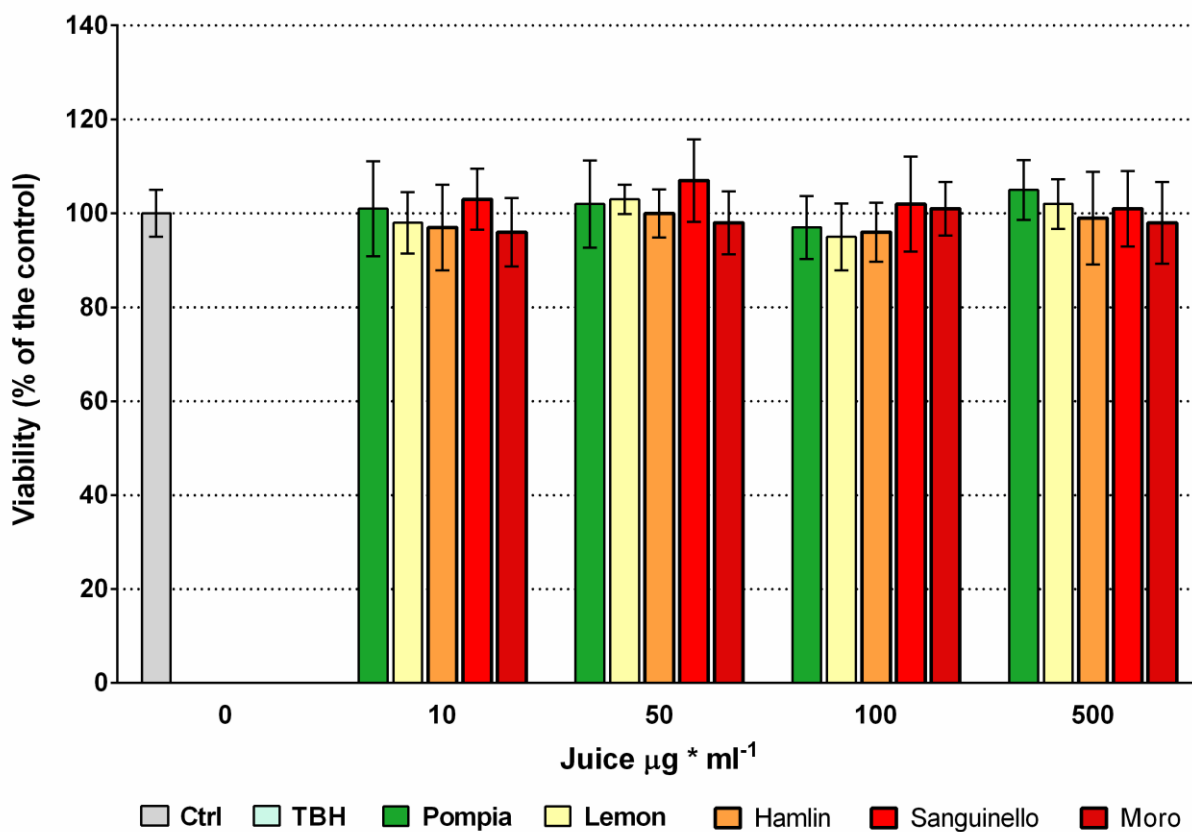


Figure S6. Cell viability of differentiated CaCo-2 cells treated with Pompia, Lemon (*cv* Lisbon) and orange (*cv* Hamlin, Sanguinello and Moro) juice at concentrations between 10 and 500 µg \* mL<sup>-1</sup> in medium, and incubated for 72 h. Data are presented as mean ± SD (n = 4). \* = p ≤ 0.01 *vs* control.

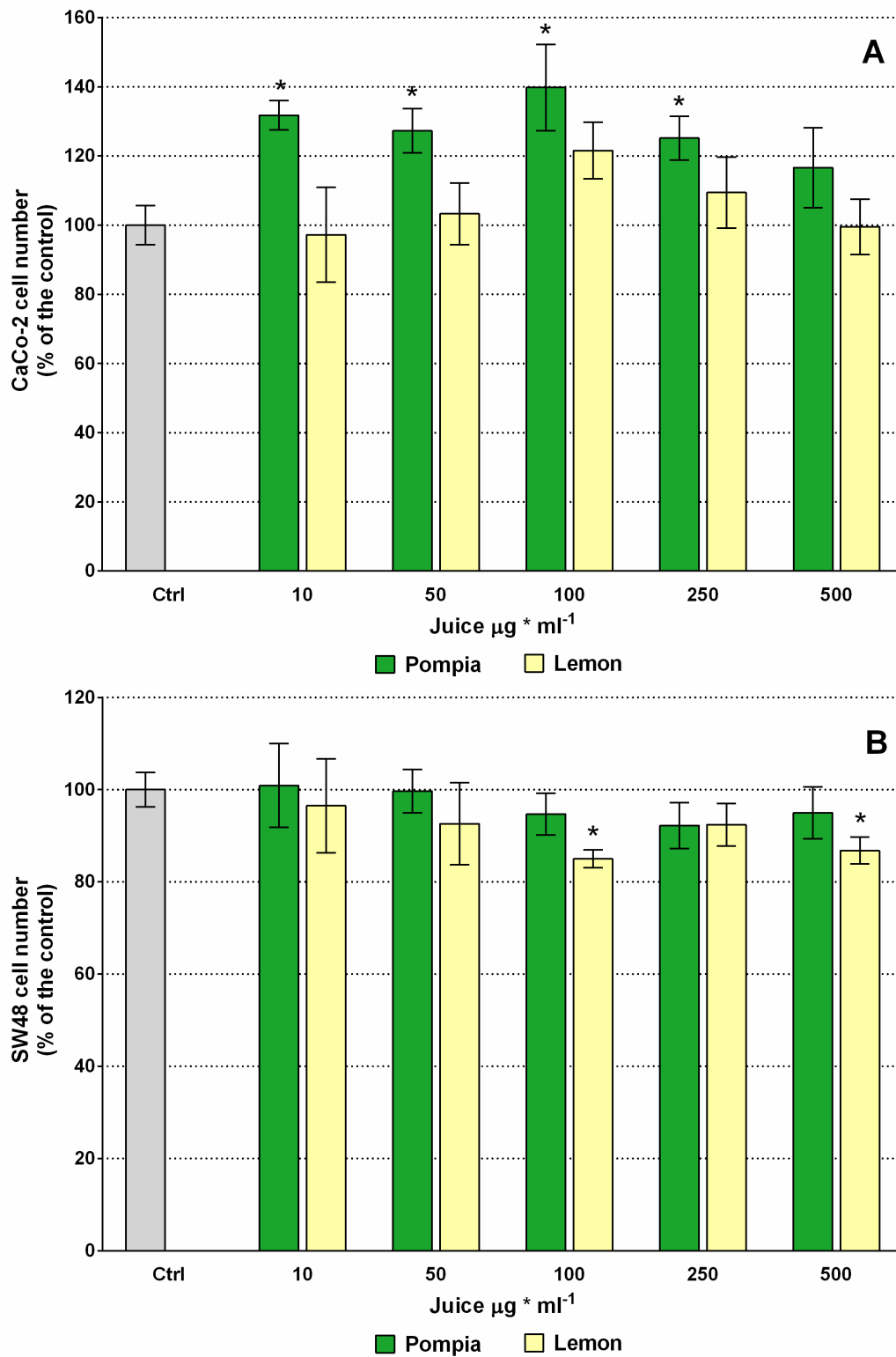


Figure S7. Effect of Pompia and lemon juices on cells number of CaCo-2 (A) and SW48 (B) colon cancer cell lines.