

Supplemental material to

Structure-dependent effects of cinnamaldehyde-derivatives on TRPA1- induced serotonin release in human intestinal cell models

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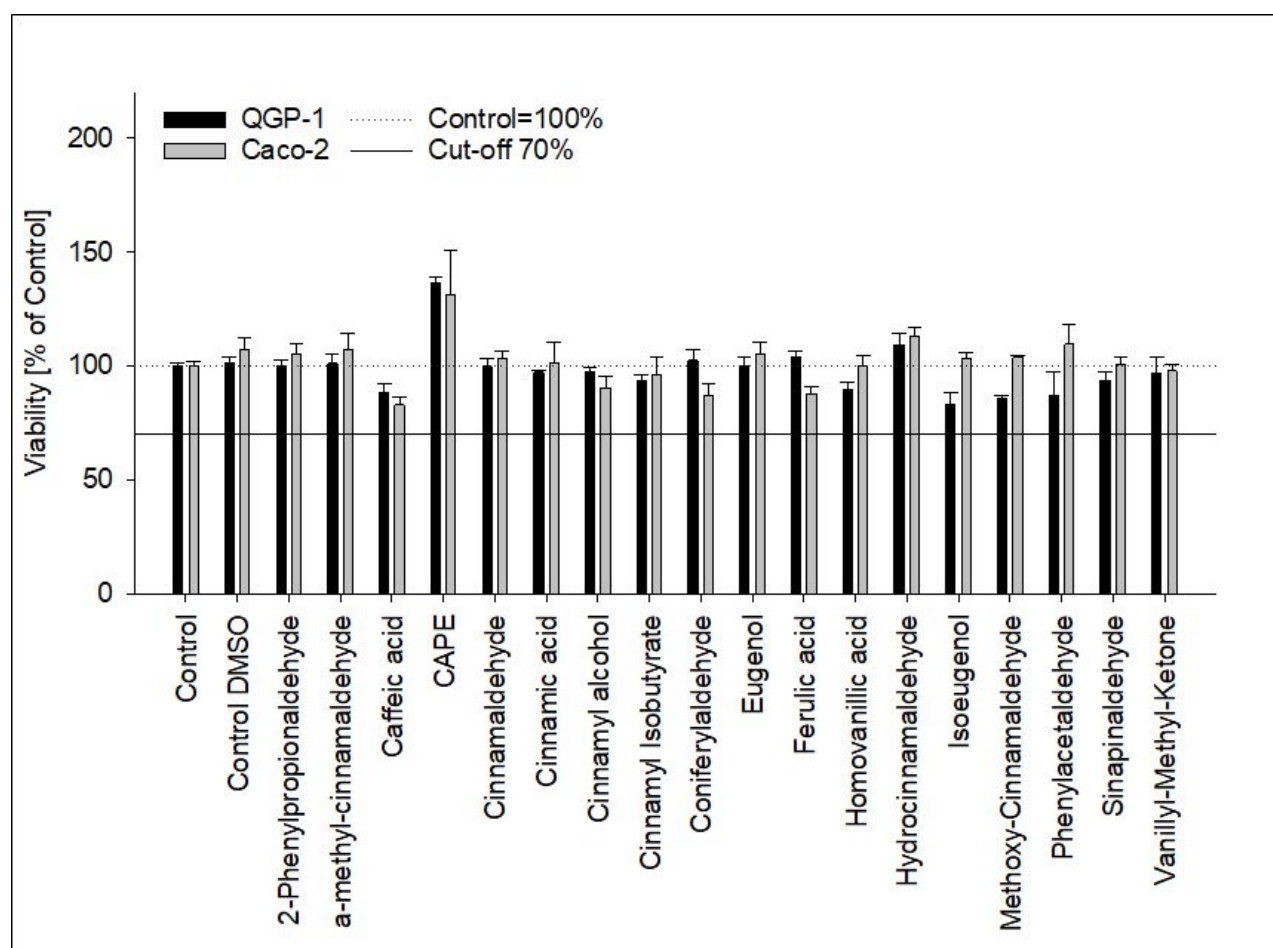
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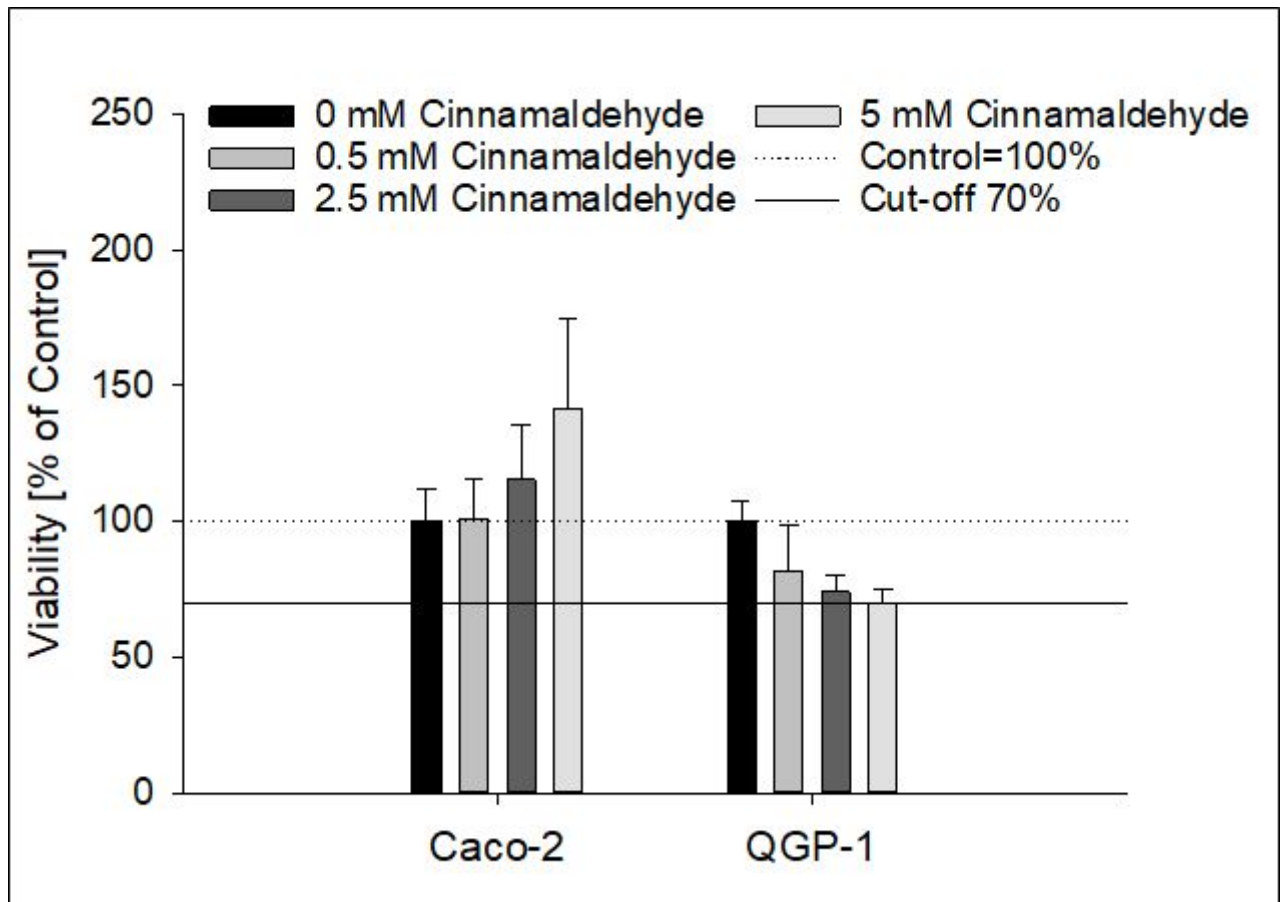
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Figure S1



Cell viability of Caco-2 and QGP-1 cells after treatment with 0.5 mM of the test compounds used in the present study assessed via MTT assay. None of the tested compounds at .05 mM reduced cellular viability in both cell lines below 70% (black line), which was regarded as cytotoxic according to ISO 10993:5.

Figure S2:



Cell viability of Caco-2 and QGP-1 cells after treatment with 0.5 to 5 mM cinnamaldehyde assessed via MTT assay. Concentrations leading to a viability below 70% (black line) were regarded as cytotoxic according to ISO 10993:5 and not further used for the serotonin assays.

Figure S3: Graphical representation of the matched-molecular pair analysis carried out with the software Vortex (Version 2019.04, Dotmatics Ltd., UK) including single atom changes and non-ring fragmentations (with maximum fragment size of 8 and minimum core size of 8 atoms, respectively), using both experimental readouts of TRPA1 activation and serotonin secretion by Caco-2 enterocytes as parameters of interest.

Structure 1	TRPA1_1	Serotonin_1	Structure 2	TRPA1_2	Serotonin_2	Structure Core	R1	R2	Reaction	Freq.	Δ_{TRPA1}	$\Delta_{Serotonin}$
	10.69	13.448		6.2231	6.5986		$\cdot\text{H}$	\cdot	$\cdot\text{H} \rightarrow \cdot$	3	-4.467	-6.8495
	8.8335	5.7217		5.6931	4.7534		$\cdot\text{H}$	\cdot	$\cdot\text{H} \rightarrow \cdot$	3	-3.1404	-0.96833
	3.6312	2.7811		0.92079	1.3874		$\cdot\text{H}$	\cdot	$\cdot\text{H} \rightarrow \cdot$	3	-2.7104	-1.3937
	8.4423	4.2997		10.69	13.448		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	2	2.2479	9.1485
	8.046	1.7118		5.7886	15.841		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	2	-2.2574	14.13
	0.89169	1.5202		1.1996	2.8462		$\cdot\text{O}$	\cdot	$\cdot\text{O} \rightarrow \cdot$	1	0.30792	1.3259
	1.3263	1.0206		10.69	13.448		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	9.3638	12.428
	0.92079	1.3874		3.6312	2.7811		$\cdot\text{O}$	$\cdot\text{O}$	$\cdot\text{O} \rightarrow \cdot\text{O}$	1	2.7104	1.3937
	9.73	5.0921		5.7886	15.841		$\cdot\text{H}$	$\cdot\text{H}$	$\cdot\text{H} \rightarrow \cdot\text{H}$	1	-3.9414	10.749
	1.1996	2.8462		5.7886	15.841		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	4.589	12.995
	1.1996	2.8462		9.73	5.0921		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	8.5304	2.2459
	0.92079	1.3874		5.7886	15.841		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	4.8678	14.454
	0.92079	1.3874		9.73	5.0921		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	8.8092	3.7046
	0.92079	1.3874		1.1996	2.8462		$\cdot\text{O}$	$\cdot\text{O}$	$\cdot\text{O} \rightarrow \cdot\text{O}$	1	0.27882	1.4587
	4.4657	2.4716		5.7886	15.841		$\cdot\text{H}$	$\cdot\text{H}$	$\cdot\text{H} \rightarrow \cdot\text{H}$	1	1.3228	13.37
	4.4657	2.4716		9.73	5.0921		$\cdot\text{H}$	$\cdot\text{H}$	$\cdot\text{H} \rightarrow \cdot\text{H}$	1	5.2643	2.6205
	4.4657	2.4716		1.1996	2.8462		$\cdot\text{H}$	$\cdot\text{O}$	$\cdot\text{H} \rightarrow \cdot\text{O}$	1	-3.2661	0.3746
	4.4657	2.4716		0.92079	1.3874		$\cdot\text{H}$	$\cdot\text{O}$	$\cdot\text{H} \rightarrow \cdot\text{O}$	1	-3.5449	-1.0841
	0.89169	1.5202		5.7886	15.841		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	4.8969	14.321
	0.89169	1.5202		9.73	5.0921		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	8.8383	3.5719
	0.89169	1.5202		0.92079	1.3874		$\cdot\text{O}$	$\cdot\text{O}$	$\cdot\text{O} \rightarrow \cdot\text{O}$	1	0.029097	-0.13276
	0.89169	1.5202		4.4657	2.4716		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	3.574	0.95134
	1.6743	0.80564		10.69	13.448		$\cdot\text{O}$	$\cdot\text{O}$	$\cdot\text{O} \rightarrow \cdot\text{O}$	1	9.0158	12.643
	0.89169	1.5202		4.4657	2.4716		$\cdot\text{O}$	$\cdot\text{H}$	$\cdot\text{O} \rightarrow \cdot\text{H}$	1	3.574	0.95134
	1.6743	0.80564		10.69	13.448		$\cdot\text{O}$	$\cdot\text{O}$	$\cdot\text{O} \rightarrow \cdot\text{O}$	1	9.0158	12.643

