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The Effect of Standardised Leaf Extracts of *Gaultheria procumbens* on Multiple Oxidants, Inflammation-Related Enzymes, and Pro-Oxidant and Pro-Inflammatory Functions of Human Neutrophils

Piotr Michel [1,*], Sebastian Granica [2], Karolina Rosińska [1], Małgorzata Glige [1], Jarosław Rojek [1], Łukasz Poraj [1], Monika Anna Olszewska [1]

[1] Department of Pharmacognosy, Faculty of Pharmacy, Medical University of Lodz, 1 Muszynskiego St., 90-151 Lodz, Poland; karolinaa.rosinskaa@gmail.com (K.R.); gosiaju11@gmail.com (M.G.); jaroslaw.rojek@o2.pl (J.R.); lukasz.poraj@gmail.com (Ł.P.); monika.olszewska@umed.lodz.pl (M.A.O.)

[2] Microbiota Lab, Centre for Preclinical Studies, Department of Pharmacognosy and Molecular Basis of Phytotherapy, Medical University of Warsaw, 1 Banacha St., 02-097 Warsaw, Poland; sgranica@wum.edu.pl (S.G.)

* Correspondence: piotr.michel@umed.lodz.pl (P.M.); Tel.: +48 426779169

Supplementary Materials:

Table S1. Phenolic analytes detected in *G. procumbens* leaf dry extracts by UHPLC-PDA-ESI-MS^3.

Table S2. Correlation (*r*) coefficients and probability (*p*) values of linear relationships between antioxidant and anti-inflammatory activity parameters and phenolic contents of *G. procumbens* leaf dry extracts.

Table S1. Phenolic analytes detected in *G. procumbens* leaf dry extracts by UHPLC-PDA-ESI-MS^3.

Peak	Analyte	t_R (min)	UV λ_{max} (nm)	$[M–H]^-$ *m*/*z*	MS^2 (% relative abundance)	MS^3 (% relative abundance)	Extract
1	protocatechuic acid hexoside	4.1	259, 293	315	225 (25); 153 (100); 107 (8)		All
2	protocatechuic acid [a]	4.6	259, 293	153			All
3	protocatechuic acid hexoside	5.6	259, 293	315	225 (1); 153 (100); 107 (2)		ME
4	unknown compound	5.8	310	331	313 (100); 211 (9); 167 (42); 125 (9)		All
5	3-*O*-caffeoylquinic acid (neochlorogenic acid) [a]	6.4	325	353	191 (100); 179 (50)		All
6	3-*O*-*p*-coumaroylquinic acid derivative	6.8	310	371	353 (6); 325 (72); 163 (100)		All
7	*p*-hydroxybenzoic acid [a]	7.6	254	137			EAE
8	procyanidin A-type dimer	9.4	280	575	499 (100); 490 (84); 451 (22); 407 (17); 289 (7)		All
9	3-*O*-*p*-coumaroylquinic acid hexoside	10.3	310	325	163 (100); 119 (9)		All
10	5-*O*-caffeoylquinic acid (chlorogenic acid) [a]	11.0	325	353	191 (100); 179 (5)		All
11	methyl salicylate 2-*O*-*β*-D-glucopyranosyl-(1→2)-[*O*-*β*-D-xylopyranosyl-(1→6)]-*O*-*β*-D-glucopyranoside [a, b]	12.6	285	653 *	607 (100); 575 (12)		ME, BE
12	4-*O*-caffeoylquinic acid (cryptochlorogenic acid) [a]	12.8	325	353	173 (100)		ME, BE
13	procyanidin B-type dimer	14.0	280	577	559 (17); 451 (41); **425 (100)**; 407 (44); 289 (27)	407 (100); 339 (2); 273 (7)	All
14	procyanidin B2 [a]	15.2	280	577	**425 (100)**; 407 (51); 289 (15)	407 (100); 273 (6)	ME, BE
15	procyanidin B-type trimer	15.5	280	865	847 (15); 739 (79); **713 (48)**; 695 (67); 577 (79); 451 (21); 287 (38)	695 (100); 575 (45); 561 (11); 425 (21); 405 (34); 287 (16)	All
16	gaultherin isomer [b]	15.7	285	491 *	445 (7); 413 (10); 293 (100); 149 (4)		All
17	unknown compound	16.2	280	417	373 (100); 331 (75)		ME, BE
18	(–)-epicatechin [a]	16.5	280	289	245 (100); 205 (19)		All
19	caffeoylquinic acid derivative	16.9	325	431	385 (100); 277 (7); 179 (22)		ME, BE
20	gaultherin [a]	17.1	285	491 *	445 (7); 413 (4); 293 (100); 149 (2)		All
21	unknown compound	17.7	280	363	345 (4); 183 (100); 179 (19); 143 (7); 121 (14)		All

Table S1. *Cont.*

Peak	Analyte	t_R (min)	UV λ_{max} (nm)	$[M–H]^-$ *m*/*z*	MS^2 (% relative abundance)	MS^3 (% relative abundance)	Extract
22	procyanidin A-type trimer	18.4	280	863	**711 (100)**; 573 (32); 559 (19); 451 (53); 411 (75); 289 (100)	693 (100); 559 (49); 541 (9); 407 (11)	ME, BE
23	procyanidin B-type dimer	19.3	280	577	559 (11); 451 (38); **425 (100)**; 407 (46); 289 (36)	407 (100); 381 (13); 299 (18); 273 (4)	All
24	procyanidin A-type trimer (cinnamtannin B-1) [a, b]	20.0	280	863	**711 (100)**; 693 (11); 573 (23); 559 (15); 451 (16); 411 (13); 289 (5)	693 (79); 559 (100); 541 (33); 463 (14); 407 (26)	All
25	procyanidin B-type trimer (procyanidin C1) [a, b]	21.2	280	865	847 (36); 739 (71); **713 (45)**; 695 (100); 577 (95); 451 (19); 287 (20)	693 (100); 561 (64); 411 (19); 243 (4)	ME, BE
26	procyanidin A-type trimer	21.6	280	863	**711 (100)**; 573 (41); 559 (10); 451 (53); 411 (78); 289 (25)	693 (100); 559 (79); 541 (28); 463 (19); 407 (21)	ME, BE
27	caffeoylquinic acid derivative	22.2	325	391	225 (17); 179 (100); 161 (4); 143 (9); 119 (7); 113 (6)		All
28	procyanidin A-type dimer	22.4	280	575	499 (100); 491 (4); 451 (8); 423 (16); 289 (22)		All
29	procyanidin A-type dimer	23.4	280	575	499 (100); 491 (67); 451 (11); 423 (24); 289 (73)		ME, BE
30	procyanidin A-type dimer	24.7	280	575	499 (100); 491 (21); 451 (13); 423 (18); 289 (37)		All
31	quercetin 3-*O*-*β*-D-xylopyranosyl-(1→2)-*β*-D-glucuronopyranoside (wintergreenoside A) [a, b]	25.5	257, 356	609	477 (2); **301 (100)**	273 (47); 255 (17); 179 (100); 151 (79)	ME, BE
32	procyanidin A-type dimer	26.4	280	575	499 (23); 491 (16); 451 (6); 411 (57); 289 (100)		ME, BE
33	procyanidin A-type trimer	26.8	280	863	**711 (100)**; 573 (58); 559 (9); 451 (58); 411 (87); 289 (29)	693 (100); 559 (11); 541 (15); 463 (42); 407 (28)	All
34	3-*O*-*p*-coumaroylquinic acid derivative	27.2	310	487	441 (100); 307 (73); 163 (7)		ME, EAE
35	quercetin 3-*O*-*β*-D-galactopyranoside (hyperoside) [a]	27.6	254, 353	463	**301 (100)**	273 (49); 255 (19); 179 (95); 151 (75)	All
36	quercetin 3-*O*-*β*-D-glucopyranoside (isoquercitrin) [a]	28.5	256, 353	463	**301 (100)**	273 (53); 255 (25); 179 (100); 151 (71)	All
37	quercetin 3-*O*-*β*-D-glucuronopyranoside (miquelianin) [a]	29.1	256, 356	477	**301 (100)**	273 (17); 257 (16); 179 (100); 151 (61)	All

Table S1. *Cont.*

Peak	Analyte	t_R (min)	UV λ_{max} (nm)	$[M-H]^-$ *m/z*	MS^2 (% relative abundance)	MS^3 (% relative abundance)	Extract
38	kaempferol 3-*O*-*β*-D-xylopyranosyl-(1→2)-*β*-D-glucuronopyranoside (wintergreenoside B) [a, b]	29.4	275, 345	593	**285 (100)**	267 (31); 257 (100); 241 (19); 229 (35); 151 (19)	ME, BE
39	quercetin 3-*O*-*α*-L-arabinopyranoside (guaijaverin) [a]	30.8	258, 356	433	**301 (100)**	273 (45); 255 (17); 179 (100); 151 (73)	All
40	kaempferol 3-*O*-*β*-D-glucuronopyranoside [a]	33.3	265, 345	461	**285 (100)**	267 (39); 257 (100); 241 (40); 229 (31); 151 (9)	ME, BE
41	quercetin [a]	43.7	255, 364	301	273 (41); 255 (18); 179 (100); 151 (74)		All

[a] confirmed by comparison with authentic standard; [b] detected for the first time in *G. procumbens* leaf; t*R*, retention times; UV λ_{max}, absorbance maxima in PDA spectra; $[M-H]^-$, pseudomolecular ions in MS spectra recorded in a negative ion mode; in bold – ions subjected to MS^3 fragmentation; * $[M+HCOO]^-$. The nomenclature of caffeoylquinic acids isomers is according to IUPAC.

Table S2. Correlation (*r*) coefficients and probability (*p*) values of linear relationships between antioxidant and anti-inflammatory activity parameters and phenolic contents of *G. procumbens* leaf dry extracts.

***r* (*p*) for:**	**Antioxidant activity**						**Anti-inflammatory activity**		
	DPPH	**FRAP**	**TBARS**	**$O_2^{\bullet-}$**	**$^{\bullet}OH$**	**H_2O_2**	**HYAL**	**LOX**	**COX-2**
TPC	–0.6961 (0.510)	0.9841 (0.114)	–0.7996 (0.410)	–0.7459 (0.464)	–0.7302 (0.479)	–0.5171 (0.654)	–0.3675 (0.760)	–0.3351 (0.782)	–0.8080 (0.401)
TPH	0.9447 (0.213)	–0.5767 (0.609)	0.8820 (0.312)	–0.2889 (0.813)	0.9276 (0.244)	0.9942 (0.068)	0.9982 (0.038) *	0.9956 (0.060)	0.8753 (0.321)
TPA	–0.8892 (0.302)	0.9892 (0.094)	–0.9497 (0.203)	–0.4935 (0.671)	–0.9104 (0.271)	–0.7638 (0.447)	–0.6458 (0.553)	–0.6190 (0.575)	–0.9540 (0.194)
TLPA	–0.9841 (0.114)	0.9032 (0.282)	–0.9998 (0.014) *	–0.2178 (0.860)	–0.9916 (0.083)	–0.9191 (0.258)	–0.8407 (0.364)	–0.8215 (0.386)	–1.0000 (0.005) **
TPHA	0.8973 (0.291)	–0.4719 (0.687)	0.8174 (0.391)	–0.4043 (0.735)	0.8747 (0.322)	0.9735 (0.147)	0.9980 (0.040) *	0.9996 (0.018) *	0.8092 (0.400)
TSAL	0.9985 (0.035) *	–0.7795 (0.431)	0.9777 (0.135)	–0.0138 (0.991)	0.9947 (0.066)	0.9853 (0.109)	0.9431 (0.216)	0.9311 (0.238)	0.9747 (0.144)
TFL	–0.7831 (0.427)	0.9988 (0.031)	–0.8705 (0.328)	–0.6535 (0.547)	–0.8124 (0.396)	–0.6234 (0.571)	–0.4847 (0.678)	–0.4541 (0.700)	–0.8774 (0.319)

TPC: total phenolic content (Folin-Ciocalteau assay) in gallic acid equivalents, TPH: total phenolic content (HPLC), TSAL: total content of salicylates (HPLC), TPA: total content of proanthocyanidins (*n*-butanol/HCl assay) in cyanidin chloride equivalents, TLPA: total content of proanthocyanidins (HPLC), TPHA: total content of phenolic acids (HPLC), TFL: total content of flavonoids (HPLC). Asterisks mean significance of the estimated linear relationship (*$p < 0.05$, ** $p < 0.01$) for three extracts ($n = 3$).