Supporting Information

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Curcuma kwangsiensis Extracts Produced Antioxidant Effects Against Injury Induced by H2O2 on PC12 Cells

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Table S1. The gradient programs of HPLC chromatographic analysis for extracts

HCECW			**MCECW**			**MECW**			**DECW**			**PECW**		
Time (min)	H_2O (v/v)	MeOH (v/v)	Time (min)	H_2O (v/v)	MeOH (v/v)	Time (min)	H_2O (v/v)	MeOH (v/v)	Time (min)	H_2O (v/v)	MeOH (v/v)	Time (min)	H_2O (v/v)	MeOH (v/v)
0.00	55.0	45.0	0.00	50.0	50.0	0.00	91.0	9.0	0.00	55.0	45.0	0.00	71.0	29.0
20.00	30.0	70.0	15.00	30.0	70.0	10.00	71.0	29.0	15.00	50.0	50.0	15.00	45.0	55.0
40.00	20.0	80.0	25.00	20.0	80.0	22.00	51.0	49.0	35.00	40.0	60.0	20.00	45.0	55.0
60.00	0.0	100.0	35.00	10.0	90.0	36.00	41.0	59.0	55.00	30.0	70.0	30.00	30.0	70.0
65.00	0.0	100.0	45.00	0.0	100.0	48.00	21.0	79.0				36.00	30.0	70.0
			50.00	0.0	100.0	58.00	0.0	100.0				46.00	15.0	85.0
						65.00	0.0	100.0				52.00	15.0	85.0
												65.00	0.0	100.0

Table S2. Analysis results of major chemicals from HCECW by UPLC-Q-TOF-MS in positive ion mode

Peak	Rt (min)	Experimental MW	Theoretical MW	Identity *	Formula	[Error] (ppm)	Ref.
1	10.7	376.1889	376.1886	Diarylcomosols III	$C_{21}H_{28}O_6$	0.8	[1]
2	14.9	374.1737	374.1729	3,5-dihydroxy-1-(3,4-dihydroxyphenyl)-7-(4-hydroxyphenyl) heptane	$C_{21}H_{26}O_6$	2.1	[1]
3	24.0	266.1531	266.1518	Zedoalactone A	$C_{15}H_{22}O_4$	4.9	[2]
4 [a]	24.5	246.1244	246.1256	Zederone	$C_{15}H_{18}O_3$	4.9	[3]
5	25.6	248.1403	248.1412	9-oxo-neoprocurcumenol	$C_{15}H_{20}O_3$	3.6	[4]
6 [a]	29.0	230.1398	230.1407	Isofuranodienone	$C_{15}H_{18}O_2$	3.9	[5]
7 [a]	35.9	230.1397	230.1407	Isofuranodienone	$C_{15}H_{18}O_2$	4.3	[5]
8 [a]	37.6	390.167	390.1679	3-acetoxy-5-hydroxy-1,7-bis (3,4-dihydroxyphenyl)heptane	$C_{21}H_{26}O_7$	2.3	[1]
9 [a]	38.7	278.1317	278.1307	1-(4-hydroxyphenyl)-7-phenyl-4,6-heptadien-3-one	$C_{19}H_{18}O_2$	3.6	[6]
10 [a]	39.4	278.1319	278.1307	1-(4-hydroxyphenyl)-7-phenyl--4,6-heptadien-3-one	$C_{19}H_{18}O_2$	3.3	[6]
11 [a]	40.6	278.1297	278.1307	1-(4-hydroxyphenyl)-7-phenyl-4,6-heptadien-3-one	$C_{19}H_{18}O_2$	3.6	[6]
12	51.4	446.2815	446.2821	Unknown	$C_{30}H_{38}O_3$	1.3	
13	58.0	252.1727	252.1725	Bisacurone epoxide	$C_{15}H_{24}O_3$	0.8	[7]
14	58.2	316.2041	316.2038	15-hydroxy-labda-8(17),11,13-trien-16,15-olide	$C_{20}H_{28}O_3$	0.9	[8]
15 [a]	60.8	390.1659	390.1679	3-acetoxy-5-hydroxy-1,7-bis(3,4-dihydroxyphenyl)heptane	$C_{21}H_{26}O_7$	5.1	[1]
16 [a]	62.5	246.1267	246.1256	Zederone	$C_{15}H_{18}O_3$	4.5	[3]

* Confirmation according to reference

[a] Stereoisomeride

Table S3. Analysis results of major chemicals from MCECW by UPLC-Q-TOF-MS in positive ion mode

Peak	Rt (min)	Experimental MW	Theoretical MW	Identity *	Formula	[Error] (ppm)	Ref.
1	13.9	316.1685	316.1675	3,5-dihydroxy-1,7-bis (4-hydroxyphenyl)-heptane	$C_{19}H_{24}O_4$	3.2	[9]
2 [a]	16.9	278.1297	278.1307	1-(4-hydroxyphenyl)-7-phenyl-4,6-heptadien-3-one	$C_{19}H_{18}O_2$	3.6	[6]
3	23.1`	248.1418	248.1412	9-oxo-neoprocurcumenol	$C_{15}H_{20}O_3$	2.4	[4]
4	25.0	232.1475	232.1463	Glechomanolide	$C_{15}H_{20}O_2$	5.2	[8]
5	29.9	230.1303	230.1307	Isofuranodienone	$C_{15}H_{18}O_2$	1.7	[5]
6 [a]	30.2	390.1663	390.1679	3-acetoxy-5-hydroxy-1,7-bis (3,4-dihydroxyphenyl) heptane	$C_{21}H_{26}O_7$	4.1	[1]
7 [a]	30.8	278.1298	278.1307	1-(4-hydroxyphenyl)-7-phenyl-4,6-heptadien-3-one	$C_{19}H_{18}O_2$	3.2	[6]
8 [a]	33.4	390.1681	390.1679	3-acetoxy-5-hydroxy-1,7-bis (3,4-dihydroxyphenyl) heptane	$C_{21}H_{26}O_7$	0.5	[1]
9	34.2	318.2178	318.2195	(+)-zerumin A	$C_{20}H_{30}O_3$	5.3	[10]
10 [a]	42.5	390.1663	390.1679	3-acetoxy-5-hydroxy-1,7-bis (3,4-dihydroxyphenyl) heptane	$C_{21}H_{26}O_7$	4.1	[1]
11 [a]	45.9	390.1683	390.1679	3-acetoxy-5-hydroxy-1,7-bis (3,4-dihydroxyphenyl) heptane	$C_{21}H_{26}O_7$	1.0	[1]

* Confirmation according to reference

[a] Stereoisomeride

Table S4. Analysis results of major chemicals from MECW by UPLC-Q-TOF-MS in positive ion mode

Peak	Rt (min)	Experimental MW	Theoretical MW	Identity *	Formula	[Error] (ppm)	Ref.
1	34.2	374.1730	374.1729	3,5-dihydroxy-1-(3,4-dihydroxyphenyl-7-(4-hydroxyphenyl) heptane	$C_{21}H_{26}O_6$	0.3	[1]
2	36.8	216.1513	216.1514	Furanodiene	$C_{15}H_{20}O$	0.5	[5]
3	39.1	380.2572	380.2563	Coronadiene	$C_{22}H_{36}O_5$	2.4	[11]
4	41.6	416.1845	416.1835	3,5-diacetoxy-1-(3,4-dihydroxyphenyl) -7-(4-hydroxyphenyl) heptane	$C_{23}H_{28}O_7$	2.4	[1]
5 [a]	44.2	234.1629	234.162	(+)-germacrone-4,5-epoxide	$C_{15}H_{22}O_2$	3.8	[11]
6 [a]	45.7	246.1248	246.1256	Zederone	$C_{15}H_{18}O_3$	3.3	[3]
7 [a]	46.2	246.1253	246.1256	Zederone	$C_{15}H_{18}O_3$	1.2	[3]
8	47.4	248.1398	248.1412	Gweicurculactone	$C_{15}H_{20}O_3$	5.6	[12]
9	49.9	232.1454	232.1463	Glechomanolide	$C_{15}H_{20}O_2$	3.9	[8]
10	54.1	248.1395	248.1412	9-oxo-neoprocurcumenol	$C_{15}H_{20}O_3$	6.9	[4]
11 [a]	54.5	278.1319	278.1307	1-(4-hydroxyphenyl)-7-phenyl-4,6-heptadien-3-one	$C_{19}H_{18}O_2$	4.3	[6]
12 [a]	55.1	278.1307	278.1307	1-(4-hydroxyphenyl)-7-phenyl-4,6-heptadien-3-one	$C_{19}H_{18}O_2$	0	[6]
13	59.3	236.1766	236.1776	Curcarabranol A	$C_{15}H_{24}O_2$	4.2	[13]
14 [a]	60.3	234.1629	234.162	(+)-germacrone-4,5-epoxide	$C_{15}H_{22}O_2$	3.8	[11]
15	61.2	362.1741	362.1729	3,5-dihydroxy-1-(3-methoxy-4,5-dihydroxyphenyl)-7-(4-hydroxyphenyl) heptane	$C_{20}H_{26}O_6$	3.3	[14]
16	62.3	390.1683	390.1679	3-acetoxy-5-hydroxy-1,7-bis(3,4-dihydroxyphenyl) heptane	$C_{21}H_{26}O_7$	1.0	[1]

* Confirmation according to reference

[a] Stereoisomeride

Table S5. Analysis results of major chemicals from DECW by UPLC-Q-TOF-MS in positive ion mode

Peak	Rt (min)	Experimental MW	Theoretical MW	Identity *	Formula	[Error] (ppm)	Ref.
1	15.0	346.1721	346.1729	3,5-dihydroxy-1-(4-hydroxy-3-methoxyphenyl)-7-(4-hydroxyphenyl) heptane	$C_{20}H_{26}O_5$	2.3	[14]
2 [a]	16.1	374.1718	374.1729	3-acetoxy-5-hydroxy-1-(4-hydroxyphenyl)-7-(3,4-dihydroxyphenyl) heptane	$C_{21}H_{26}O_6$	2.9	[1]
3	19.6	246.1243	246.1256	Zederone	$C_{15}H_{18}O_3$	5.3	[3]
4	20.5	264.1354	264.1362	Zedoalactone B	$C_{15}H_{20}O_4$	3.0	[2]
5 [a]	23.3	374.1738	374.1729	3-acetoxy-5-hydroxy-1-(4-hydroxyphenyl)-7-(3,4-dihydroxyphenyl) heptane	$C_{21}H_{26}O_6$	2.4	[1]
6	27.8	432.1742	432.1748	3,5-diacetoxy-1,7-bis (3,4-dihydroxyphenyl) heptane.	$C_{23}H_{28}O_8$	1.4	[15]
7	33.3	294.1273	294.1256	5-Acetoxy-1,7-diphenylheptene	$C_{19}H_{18}O_3$	5.8	[16]
8	35.7	416.1848	416.1835	3,5-diacetoxy-1-(3,4-dihydroxyphenyl)-7-(4-hydroxyphenyl) heptane	$C_{23}H_{28}O_7$	3.1	[1]
9 [a]	38.7	246.1239	246.1256	Zederone	$C_{15}H_{18}O_3$	6.9	[3]
10 [a]	41.9	246.1242	246.1256	Zederone	$C_{15}H_{18}O_3$	5.7	[3]
11 [a]	43.4	246.1244	246.1256	Zederone	$C_{15}H_{18}O_3$	4.8	[3]
12	53.2	230.1297	230.1307	Isofuranodienone	$C_{15}H_{18}O_2$	4.3	[5]
13	54.1	216.1524	216.1514	Furanodiene	$C_{15}H_{20}O$	4.6	[17]

* Confirmation according to reference

[a] Stereoisomeride

Table S6. Analysis results of major chemicals from PECW by UPLC-Q-TOF-MS in positive ion mode

1 [a]	31.0	234.1616	234.1620	(+)-germacrone-4,5-epoxide	$C_{15}H_{22}0_2$	1.7	[11]
2	34.0	266.1512	266.1518	Zedoalactone A	$C_{15}H_{22}0_4$	2.3	[2]
3	34.5	246.1259	246.1256	Zederone	$C_{15}H_{18}0_3$	1.2	[3]
4 [a]	35.3	234.1630	234.1620	(+)-germacrone-4,5-epoxide	$C_{15}H_{22}0_2$	4.3	[11]
5 [a]	39.8	230.1299	230.1307	Isofuranodienone	$C_{15}H_{18}0_2$	3.5	[5]
6	43.6	264.1501	264.1514	1,7-diphenyl-6-hepten-3-one	$C_{19}H_{20}0$	4.9	[6]
7 [a]	46.1	230.1299	230.1307	Isofuranodienone	$C_{15}H_{18}0_2$	3.5	[5]
8 [a]	47.3	278.1299	278.1307	1-(4-hydroxyphenyl)-7-phenyl-4,6-heptadien-3-one	$C_{19}H_{18}0_2$	2.9	[6]
9 [a]	47.9	278.1293	278.1307	1-(4-hydroxyphenyl)-7-phenyl-4,6-heptadien-3-one	$C_{19}H_{18}0_2$	5.0	[6]
10 [a]	48.4	262.1348	262.1358	1,7-diphenyl-4,6-heptadien-3-one	$C_{19}H_{18}0$	3.8	[6]
11 [a]	52.0	262.1343	262.1358	1,7-diphenyl-4,6-heptadien-3-one	$C_{19}H_{18}0$	5.7	[6]
12	54.5	250.1553	250.1569	Germacrone-1(10),4-diepoxide	$C_{15}H_{22}0_3$	6.4	[18]

* Confirmation according to reference

[a] Stereoisomeride

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