

Supplementary data

**Elucidation of Phytochemicals Affecting Platelet Responsiveness in Dangguisu-san:  
Active ingredient prediction and experimental research using network  
pharmacology**

Figure S1. HPLC-Q-TOF-MS chromatogram of Dangguisu-san in negative mode

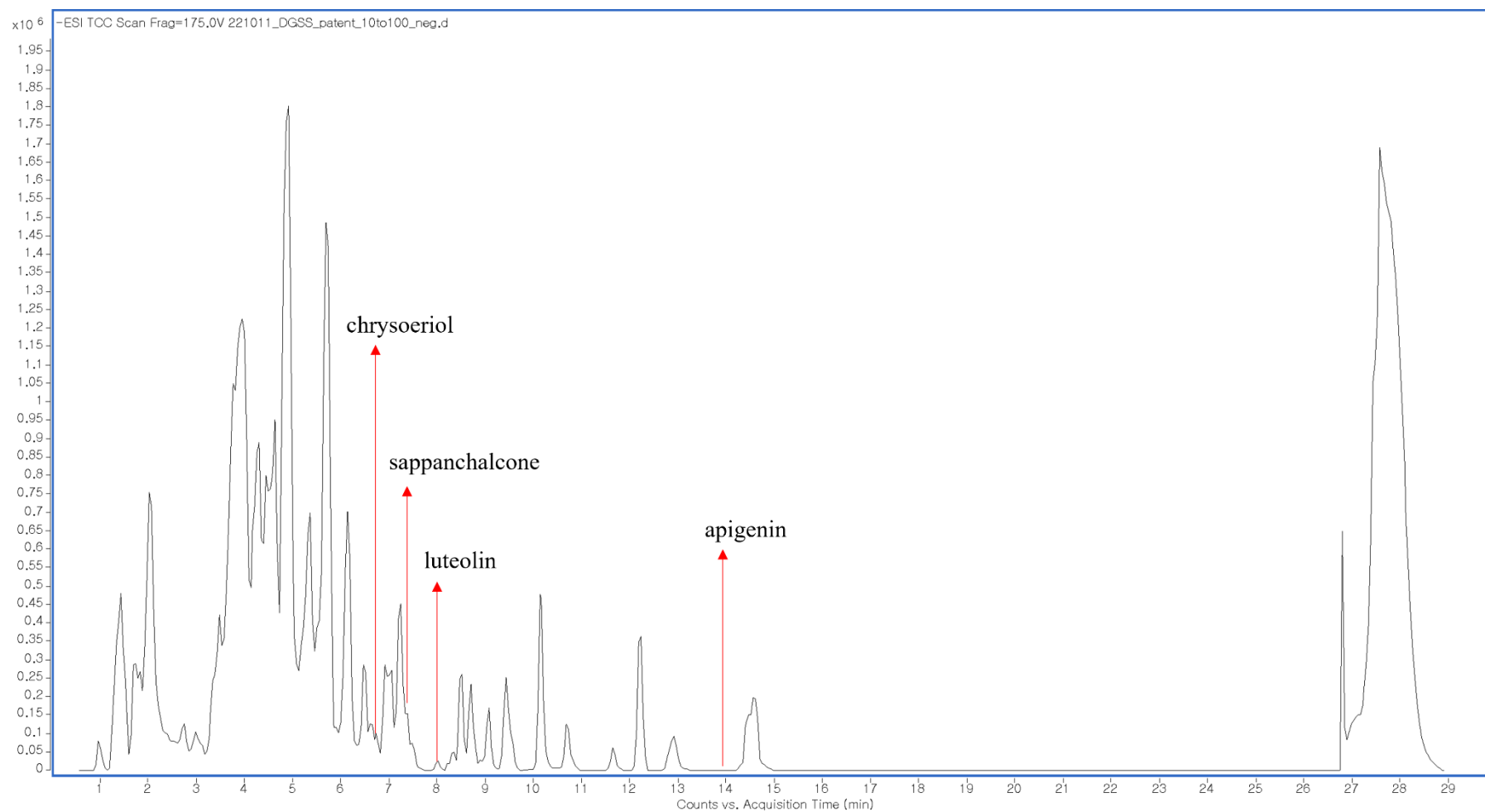


Table S1. List of physicochemical properties, QED and OB of Dangguisu-san derived compounds

No.	Compound Name	MW	ALOGP	HBA	HBD	PSA	ROTB	AROM	ALERTS	QED	OB
<i>Angelica gigas</i>											
1	nodakenin	408.40	0.67	9	4	138.82	4	2	1	0.538	FALSE
2	decursin	328.36	4.06	5	0	65.74	3	2	2	0.628	TRUE
3	decursinol angelate	328.36	4.06	5	0	65.74	3	2	2	0.628	TRUE
4	isoimperatorin	270.29	3.99	4	0	52.58	3	2	2	0.625	TRUE
5	ferulic acid	194.18	1.26	4	2	66.76	3	1	1	0.711	TRUE
6	umbelliferone	162.14	1.97	3	1	50.44	0	2	1	0.602	TRUE
7	demethylsuberosin	230.26	3.50	3	1	50.44	2	2	2	0.634	TRUE
8	decursinol	246.26	2.81	4	1	59.67	0	2	1	0.726	TRUE
9	xanthoarnol	262.26	1.88	5	2	79.90	1	2	1	0.767	TRUE
10	marmesin	246.26	2.78	4	1	59.67	1	2	1	0.786	TRUE
11	peucedanone	262.26	2.45	5	2	87.74	3	2	1	0.829	TRUE
12	xanthyletin	228.24	3.32	3	0	39.44	0	3	1	0.554	TRUE
13	Z-ligustilide	190.24	2.99	2	0	26.30	2	1	0	0.716	TRUE
14	Butylidenephthalide	188.22	3.33	2	0	26.30	2	1	0	0.711	TRUE
<i>Paeonia lactiflora</i>											
15	albiflorin	480.46	-0.25	11	5	172.21	7	1	1	0.326	FALSE
16	oleanolic acid	456.7	5.85	3	2	57.53	1	0	1	0.487	TRUE
17	paeoniflorin	480.46	-0.36	11	5	164.37	7	1	0	0.346	FALSE
18	paeonol	166.17	1.68	3	1	46.53	2	1	0	0.727	TRUE
19	benzoic acid	122.12	1.24	2	1	37.30	1	1	0	0.608	TRUE
20	daucosterol	576.85	5.02	6	4	99.38	9	0	1	0.288	TRUE
21	betulinic acid	456.7	5.75	3	2	57.53	2	0	1	0.520	TRUE
22	hederagenin	472.7	5.24	4	3	77.76	2	0	1	0.480	TRUE
23	oxypaeoniflorin	496.46	-0.83	12	6	184.60	7	1	0	0.276	FALSE
24	4-O-methylpaeoniflorin	494.49	0.19	11	4	153.37	8	1	0	0.392	FALSE
25	<i>p</i> -hydroxybenzoic acid	138.12	0.74	3	2	57.53	1	1	0	0.601	TRUE
26	30-norhederagenin	456.66	5.00	4	3	77.76	2	0	1	0.511	TRUE
27	mudanpioside E	526.49	-0.75	13	6	193.83	8	1	0	0.248	FALSE
28	lactiflorin	462.45	0.52	10	3	140.98	5	1	0	0.567	FALSE

29	3,3'-di-O-methylelagic acid	330.25	2.71	8	2	119.34	2	4	2	0.425	TRUE
30	mudanpioside C	600.57	0.70	13	5	190.67	10	2	1	0.240	FALSE
31	paeonidanin A	598.59	1.86	12	3	167.28	11	2	1	0.322	FALSE
32	paeonidanin B	646.59	0.46	15	6	227.97	11	2	2	0.144	FALSE
33	paeonidanin C	614.59	1.39	13	4	187.51	11	2	1	0.266	FALSE
34	paeoniflorigenone	318.32	1.95	6	1	82.06	4	1	0	0.914	TRUE
35	aromadendrin	288.25	1.15	6	4	107.22	1	3	0	0.535	TRUE
36	$\beta$ -amyrin	426.72	6.92	1	1	20.23	0	0	1	0.417	TRUE
37	arjunolic acid	488.7	4.35	5	2	97.99	0	0	1	0.494	TRUE
38	24-methylenecycloartanol	440.74	7.93	1	1	20.23	5	0	1	0.430	TRUE
39	palbinone	358.47	3.44	4	2	74.60	0	0	1	0.651	TRUE
40	benzoylpaeoniflorin	584.57	1.17	12	4	170.44	10	2	1	0.295	FALSE
41	8-debenzoylpaeoniflorin	376.36	-1.88	10	6	158.30	4	0	0	0.328	FALSE
42	paeonilactone A	198.22	1.10	4	1	63.60	0	0	0	0.633	TRUE
43	paeonilactone B	196.2	1.37	4	1	63.60	0	0	0	0.635	TRUE
44	paeonilactone C	318.32	2.04	6	1	89.90	4	1	1	0.854	TRUE
45	pyrethrin I	328.45	5.27	3	0	43.37	7	0	2	0.472	TRUE
46	pyrethrin II	372.45	4.82	5	0	69.67	9	0	3	0.330	TRUE
<i>Lindera strychnifolia</i>											
47	linderane	260.29	3.20	4	0	51.97	4	0	2	0.575	TRUE
48	norisoboldine	313.35	3.02	5	3	70.95	2	2	0	0.795	TRUE
49	lindestrene	214.30	4.18	1	0	13.14	0	0	1	0.551	TRUE
50	linderene	230.30	3.25	2	1	33.37	0	0	1	0.648	TRUE
51	chamazulene	184.28	4.78	0	0	0.00	1	1	0	0.589	TRUE
52	linderazulene	210.27	4.89	1	0	13.14	0	1	0	0.594	TRUE
53	linderalactone	244.29	3.34	3	0	39.44	0	0	1	0.613	TRUE
54	isolinderalactone	244.29	3.81	3	0	39.44	1	0	2	0.520	TRUE
55	strychnistenolide	262.30	1.81	4	2	66.76	0	0	1	0.653	TRUE
56	epicatechin	290.27	0.98	6	5	110.38	1	2	1	0.501	TRUE
57	6,7-dimethoxy-2-(2-phenylethyl)chromone	310.34	4.80	4	0	48.67	5	3	0	0.679	TRUE
58	6,7-Dimethoxy-2-(2-(4-methoxyphenyl)ethyl)chromone	340.37	4.86	5	0	57.90	6	3	0	0.641	TRUE

59	norboldine	313.35	3.02	5	3	70.95	2	2	0	0.795	TRUE
60	nubigenol	290.27	1.40	6	5	118.22	4	2	0	0.581	TRUE
61	boldine	327.37	2.95	5	2	62.16	2	2	0	0.888	TRUE
<i>Cyperus rotundus</i>											
62	cyperene	204.35	4.3	0	0	0.00	0	0	1	0.516	TRUE
63	$\alpha$ -copaene	204.35	3.73	0	0	0.00	1	0	1	0.571	TRUE
64	$\alpha$ -selinene	204.35	4.14	0	0	0.00	1	0	1	0.563	TRUE
65	rotundene	204.35	3.70	0	0	0.00	0	0	1	0.528	TRUE
66	valencene	204.35	4.14	0	0	0.00	1	0	1	0.563	TRUE
67	$\beta$ -gurjunene	204.35	3.80	0	0	0.00	0	0	1	0.526	TRUE
68	trans-calamene	202.34	4.48	0	0	0.00	1	1	0	0.630	TRUE
69	$\delta$ -cadinene	204.35	4.01	0	0	0.00	1	0	1	0.566	TRUE
70	$\gamma$ -calacorene	200.32	4.47	0	0	0.00	1	1	0	0.627	TRUE
71	epi- $\alpha$ -selinene	204.35	4.14	0	0	0.00	1	0	1	0.563	TRUE
72	$\alpha$ -mauurolene	204.35	3.73	0	0	0.00	1	0	0	0.610	TRUE
73	cadalene	198.3	4.97	0	0	0.00	1	2	0	0.607	TRUE
74	nootkatene	202.34	3.74	0	0	0.00	1	0	1	0.568	TRUE
75	cyperotundone	218.33	3.97	1	0	17.07	0	0	0	0.601	TRUE
76	mustakone	218.33	3.40	1	0	17.07	1	0	0	0.659	TRUE
77	cyperol	220.35	3.62	1	1	20.23	1	0	1	0.669	TRUE
78	isocyperol	220.35	3.51	1	1	20.23	1	0	0	0.717	TRUE
79	$\alpha$ -cyperone	218.33	4.21	1	0	17.07	1	0	1	0.602	TRUE
80	chrysoeriol	300.26	2.55	6	3	100.13	2	3	0	0.672	TRUE
81	nootkatone	218.33	3.82	1	0	17.07	1	0	1	0.611	TRUE
<i>Caesalpinia sappan</i>											
82	sappanchalcone	286.28	2.53	5	3	86.99	4	2	2	0.594	TRUE
83	3-deoxysappanone B	286.28	2.42	5	3	86.99	2	2	1	0.738	TRUE
84	3-deoxysappanchalcone	270.28	3.00	4	2	66.76	4	2	1	0.838	TRUE
85	3'-deoxy-4-O-methylepisappanol	302.32	2.33	5	3	79.15	3	2	0	0.811	TRUE
86	brazilin	286.28	1.86	5	4	90.15	0	2	1	0.555	TRUE
87	brazilein	284.26	1.68	5	3	86.99	0	1	1	0.631	TRUE

88	brazilane	270.28	2.37	4	3	69.92	0	2	1	0.643	TRUE
89	hematoxyline	302.28	1.37	6	5	110.38	0	2	1	0.470	TRUE
90	hematein	300.26	1.17	6	4	107.22	0	1	1	0.536	TRUE
<i>Catharmus tinctorius</i>											
91	6-hydroxykaempferol	302.24	1.54	7	5	131.36	1	3	1	0.431	TRUE
92	carthamone	448.38	-0.53	11	6	191.05	6	1	3	0.186	FALSE
93	quercetagetin	318.24	1.06	8	6	151.59	1	3	1	0.364	FALSE
94	kaempferol	286.24	2.03	6	4	111.13	1	3	0	0.544	TRUE
95	luteolin	286.24	2.03	6	4	111.13	1	3	1	0.509	TRUE
96	quercetin	302.24	1.54	7	5	131.36	1	3	1	0.431	TRUE
97	apigenin	270.24	2.52	5	3	90.90	1	3	0	0.632	TRUE
98	safflomin A	612.53	-3.25	16	12	295.36	6	1	3	0.085	FALSE
99	sophoricoside	432.38	0.35	10	6	170.05	4	3	0	0.338	FALSE
<i>Prunus persica</i>											
100	amygdalin	457.43	-2.71	12	7	202.32	7	1	0	0.223	FALSE
101	prunasin	295.29	-0.66	7	4	123.17	4	1	0	0.581	TRUE
102	neoamygdalin	457.43	-2.71	12	7	202.32	7	1	0	0.223	FALSE
103	vanilloside	316.30	-0.80	8	5	128.84	5	1	0	0.477	FALSE
104	lacticolorin	406.38	0.22	9	5	145.91	7	2	0	0.436	FALSE
<i>Cinnamomum cassia</i>											
105	cinnamic acid	148.16	1.70	2	1	37.30	2	1	1	0.648	TRUE
106	cinnamaldehyde	132.16	2.48	1	0	17.07	2	1	2	0.446	TRUE
107	coumarin	146.14	2.50	2	0	30.21	0	1	1	0.526	TRUE
<i>Glycyrrhiza uralenesis</i>											
108	glycyrrhizin	822.93	0.52	16	8	267.04	7	0	1	0.163	FALSE
109	liquiritin	418.39	0.36	9	5	145.91	4	2	0	0.475	FALSE
110	liquiritigenin	256.25	2.55	4	2	66.76	1	2	0	0.822	TRUE
111	isoliquiritin	418.39	0.42	9	6	156.91	6	2	1	0.366	FALSE
112	isoliquiritigenin	256.25	2.48	4	3	77.76	3	2	1	0.737	TRUE
113	formonetin	284.26	3.03	5	2	79.9	2	3	1	0.707	TRUE
114	ononin	430.40	1.36	9	4	138.82	5	3	0	0.472	FALSE
115	glycycoumarin	368.38	4.28	6	3	100.13	4	2	2	0.550	TRUE

116	glycyrol	366.36	4.62	6	2	93.04	3	2	2	0.608	TRUE
117	prunetin	284.26	3.03	5	2	79.9	2	3	0	0.756	TRUE
118	glycyrrhetic acid	470.68	5.55	4	2	74.6	1	0	0	0.527	TRUE
119	licoricidin	424.53	5.93	5	3	79.15	6	2	1	0.501	TRUE

Table S2. List of expected active compounds

No.	Compound Name	MW	ALOGP	HBA	HBD	PSA	ROTB	AROM	ALERTS	QED	OB
<i>Angelica gigas</i>											
1	decursin	328.36	4.06	5	0	65.74	3	2	2	0.628	TRUE
2	decursinol angelate	328.36	4.06	5	0	65.74	3	2	2	0.628	TRUE
3	isoimperatorin	270.29	3.99	4	0	52.58	3	2	2	0.625	TRUE
4	ferulic acid	194.18	1.26	4	2	66.76	3	1	1	0.711	TRUE
5	umbelliferone	162.14	1.97	3	1	50.44	0	2	1	0.602	TRUE
6	demethylsuberosin	230.26	3.50	3	1	50.44	2	2	2	0.634	TRUE
7	decursinol	246.26	2.81	4	1	59.67	0	2	1	0.726	TRUE
8	xanthoarnol	262.26	1.88	5	2	79.90	1	2	1	0.767	TRUE
9	marmesin	246.26	2.78	4	1	59.67	1	2	1	0.786	TRUE
10	peucedanone	262.26	2.45	5	2	87.74	3	2	1	0.829	TRUE
11	xanthyletin	228.24	3.32	3	0	39.44	0	3	1	0.554	TRUE
12	Z-ligustilide	190.24	2.99	2	0	26.30	2	1	0	0.716	TRUE
13	Butylidenephthalide	188.22	3.33	2	0	26.30	2	1	0	0.711	TRUE
<i>Paeonia lactiflora</i>											
14	oleanolic acid	456.7	5.85	3	2	57.53	1	0	1	0.487	TRUE
15	paeonol	166.17	1.68	3	1	46.53	2	1	0	0.727	TRUE
16	benzoic acid	122.12	1.24	2	1	37.30	1	1	0	0.608	TRUE
17	daucosterol	576.85	5.02	6	4	99.38	9	0	1	0.288	TRUE
18	betulinic acid	456.7	5.75	3	2	57.53	2	0	1	0.520	TRUE
19	hederagenin	472.7	5.24	4	3	77.76	2	0	1	0.480	TRUE
20	<i>p</i> -hydroxybenzoic acid	138.12	0.74	3	2	57.53	1	1	0	0.601	TRUE
21	30-norhederagenin	456.66	5.00	4	3	77.76	2	0	1	0.511	TRUE
22	3,3'-di- <i>O</i> -methylelagic acid	330.25	2.71	8	2	119.34	2	4	2	0.425	TRUE
23	paeoniflorigenone	318.32	1.95	6	1	82.06	4	1	0	0.914	TRUE
24	aromadendrin	288.25	1.15	6	4	107.22	1	3	0	0.535	TRUE
25	$\beta$ -amyrin	426.72	6.92	1	1	20.23	0	0	1	0.417	TRUE
26	arjunolic acid	488.7	4.35	5	2	97.99	0	0	1	0.494	TRUE
27	24-methylenecycloartanol	440.74	7.93	1	1	20.23	5	0	1	0.430	TRUE



28	palbinone	358.47	3.44	4	2	74.60	0	0	1	0.651	TRUE
29	paeonilactone A	198.22	1.10	4	1	63.60	0	0	0	0.633	TRUE
30	paeonilactone B	196.2	1.37	4	1	63.60	0	0	0	0.635	TRUE
31	paeonilactone C	318.32	2.04	6	1	89.90	4	1	1	0.854	TRUE
32	pyrethrin I	328.45	5.27	3	0	43.37	7	0	2	0.472	TRUE
33	pyrethrin II	372.45	4.82	5	0	69.67	9	0	3	0.330	TRUE
<i>Lindera strychnifolin</i>											
34	linderane	260.29	3.20	4	0	51.97	4	0	2	0.575	TRUE
35	norisoboldine	313.35	3.02	5	3	70.95	2	2	0	0.795	TRUE
36	lindestrene	214.30	4.18	1	0	13.14	0	0	1	0.551	TRUE
37	linderene	230.30	3.25	2	1	33.37	0	0	1	0.648	TRUE
38	chamazulene	184.28	4.78	0	0	0.00	1	1	0	0.589	TRUE
39	linderazulene	210.27	4.89	1	0	13.14	0	1	0	0.594	TRUE
40	linderalactone	244.29	3.34	3	0	39.44	0	0	1	0.613	TRUE
41	isolinderalactone	244.29	3.81	3	0	39.44	1	0	2	0.520	TRUE
42	strychnistenolide	262.30	1.81	4	2	66.76	0	0	1	0.653	TRUE
43	epicatechin	290.27	0.98	6	5	110.38	1	2	1	0.501	TRUE
44	6,7-dimethoxy-2-(2-phenylethyl)chromone	310.34	4.80	4	0	48.67	5	3	0	0.679	TRUE
45	6,7-Dimethoxy-2-(2-(4-methoxyphenyl)ethyl)chromone	340.37	4.86	5	0	57.90	6	3	0	0.641	TRUE
46	norboldine	313.35	3.02	5	3	70.95	2	2	0	0.795	TRUE
47	nubigenol	290.27	1.40	6	5	118.22	4	2	0	0.581	TRUE
48	boldine	327.37	2.95	5	2	62.16	2	2	0	0.888	TRUE
<i>Cyperus rotundus</i>											
49	cyperene	204.35	4.3	0	0	0.00	0	0	1	0.516	TRUE
50	$\alpha$ -copaene	204.35	3.73	0	0	0.00	1	0	1	0.571	TRUE
51	$\alpha$ -selinene	204.35	4.14	0	0	0.00	1	0	1	0.563	TRUE
52	rotundene	204.35	3.70	0	0	0.00	0	0	1	0.528	TRUE
53	valencene	204.35	4.14	0	0	0.00	1	0	1	0.563	TRUE
54	$\beta$ -gurjunene	204.35	3.80	0	0	0.00	0	0	1	0.526	TRUE
55	trans-calamene	202.34	4.48	0	0	0.00	1	1	0	0.630	TRUE
56	$\delta$ -cadinene	204.35	4.01	0	0	0.00	1	0	1	0.566	TRUE

[illegible]

84	cinnamic acid	148.16	1.70	2	1	37.30	2	1	1	0.648	TRUE
85	cinnamaldehyde	132.16	2.48	1	0	17.07	2	1	2	0.446	TRUE
86	coumarin	146.14	2.50	2	0	30.21	0	1	1	0.526	TRUE

*Glycyrrhiza uralensis*

87	liquiritigenin	256.25	2.55	4	2	66.76	1	2	0	0.822	TRUE
88	isoliquiritigenin	256.25	2.48	4	3	77.76	3	2	1	0.737	TRUE
89	formonetin	284.26	3.03	5	2	79.9	2	3	1	0.707	TRUE
90	glycy coumarin	368.38	4.28	6	3	100.13	4	2	2	0.550	TRUE
91	glycyrol	366.36	4.62	6	2	93.04	3	2	2	0.608	TRUE
92	prunetin	284.26	3.03	5	2	79.9	2	3	0	0.756	TRUE
93	glycyrrhetic acid	470.68	5.55	4	2	74.6	1	0	0	0.527	TRUE
94	licoricidin	424.53	5.93	5	3	79.15	6	2	1	0.501	TRUE

Table S3. List of potential targets

No.	Uniprot ID	Gene	Relevance score	Protein class
1	P00734	F2	58.855	Enzyme
2	O60674	JAK2	36.781	Kinase
3	P13726	F3	23.179	Receptor
4	P05121	SERPINE1	21.828	Enzyme modulator
5	P00742	F10	15.713	Enzyme
6	P00747	PLG	12.016	Enzyme
7	P31749	AKT1	11.390	Kinase
8	P42336	PIK3CA	9.507	Kinase
9	P11712	CYP2C9	8.860	-
10	P05231	IL6	8.536	-
11	P37023	ACVRL1	8.031	Kinase
12	P29474	NOS3	7.956	-
13	P15692	VEGFA	7.895	Signaling
14	P16581	SELE	7.715	-
15	P01911	HLA-DRB1	7.697	Immune response
16	O00206	TLR4	7.630	-
17	P02768	ALB	7.226	Transporter
18	P01375	TNF	7.125	Signaling
19	Q13315	ATM	6.941	Kinase
20	P12821	ACE	6.867	Enzyme
21	P35354	PTGS2	6.734	Enzyme
22	O75874	IDH1	6.726	-
23	P33261	CYP2C19	6.485	-
24	Q9Y2R2	PTPN22	6.229	-
25	P16234	PDGFRA	5.720	Kinase
26	Q13093	PLA2G7	5.527	Enzyme
27	P23219	PTGS1	5.516	Enzyme
28	O14746	TERT	5.463	Enzyme
29	P05362	ICAM1	5.260	-
30	P13569	CFTR	5.085	Ion channel
31	Q08499	PDE4D	4.963	-
32	Q99895	CTRC	4.855	-
33	P15085	CPA1	4.744	Enzyme
34	P07477	PRSS1	4.744	Enzyme
35	P19438	TNFRSF1A	4.729	-
36	P00749	PLAU	4.719	Enzyme
37	P19320	VCAM1	4.597	-
38	P27169	PON1	4.476	-
39	P08581	MET	4.397	Kinase
40	P32246	CCR1	4.339	G-protein coupled receptor
41	P01042	KNG1	4.289	Enzyme modulator
42	P34949	MPI	4.280	Enzyme
43	P05164	MPO	4.240	Enzyme
44	P35222	CTNNB1	4.002	-
45	P08183	ABCB1	3.940	Transporter
46	P14780	MMP9	3.936	Enzyme
47	P40763	STAT3	3.767	Nucleic acid binding

48	P31645	SLC6A4	3.663	Transporter
49	P11509	CYP2A6	3.460	-
50	P08254	MMP3	3.432	Enzyme
51	P03372	ESR1	3.424	Nuclear receptor
52	P09038	FGF2	3.380	Signaling
53	P48736	PIK3CG	3.213	Kinase
54	P08253	MMP2	3.102	Enzyme
55	P08684	CYP3A4	3.073	Enzyme
56	P04278	SHBG	3.028	-
57	P60568	IL2	2.973	-
58	P52732	KIF11	2.861	Cellular structure
59	Q16665	HIF1A	2.834	Transcription factor
60	P12931	SRC	2.834	Kinase
61	P05107	ITGB2	2.812	Receptor
62	P61073	CXCR4	2.595	G-protein coupled receptor
63	Q07817	BCL2L1	2.575	Signaling
64	P03956	MMP1	2.561	Enzyme
65	P45379	TNNT2	2.557	Cellular structure
66	Q9NR96	TLR9	2.523	-
67	P37231	PPARG	2.515	Nuclear receptor
68	P23526	AHCY	2.489	Enzyme
69	Q06124	PTPN11	2.467	-
70	P08246	ELANE	2.460	Enzyme
71	P19429	TNNI3	2.443	Cellular structure
72	P10721	KIT	2.435	Kinase
73	P04035	HMGCR	2.400	-
74	Q14790	CASP8	2.362	Enzyme
75	P11597	CETP	2.356	-
76	P00519	ABL1	2.346	Kinase
77	P21964	COMT	2.320	Enzyme
78	P20701	ITGAL	2.274	-
79	P05067	APP	2.270	Enzyme modulator
80	Q15910	EZH2	2.228	Epigenetic regulator
81	P04818	TYMS	2.218	Enzyme
82	P42345	MTOR	2.209	Kinase
83	Q9Y243	AKT3	2.209	Kinase
84	P02766	TTR	2.190	Transporter
85	P14174	MIF	2.184	-
86	P35968	KDR	2.177	Kinase
87	Q9GZT9	EGLN1	2.160	-
88	P51451	BLK	2.154	Kinase
89	P09619	PDGFRB	2.117	Kinase
90	P43405	SYK	2.066	Kinase
91	P19838	NFKB1	2.011	Transcription factor
92	Q99835	SMO	1.998	G-protein coupled receptor
93	Q14524	SCN5A	1.956	Ion channel
94	P00533	EGFR	1.950	Kinase
95	P01130	LDLR	1.928	-
96	P28223	HTR2A	1.883	G-protein coupled receptor