

Supplementary material

GlmU inhibitor from the roots of *Euphorbia ebracteolata* as the anti-tuberculosis agent

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Table S1. Herbal medicines and their inhibitory effects against GlmU AT.

No.	Name	Activity remaining (%)	SD
1	Cirsii Herba	65.49	10.07
2	Typhae Pollen	76.15	3.70
3	Carthami Flos	76.30	12.87
4	Cynanchi Atrati Radix Rhizoma	65.99	5.51
5	Tuckahoe with pine	77.00	2.80
7	Corydalis Rhizoma	77.21	6.18
8	Cassiae Semen	76.19	11.94
9	Pseudostellariae Radix	89.24	9.98
10	Lonicerae Japonicae Flos	89.02	7.33
11	Mori Folium	99.26	0.28
12	Chuanxiong Rhizoma	100.62	1.72
13	Euphorbiae Ebracteolatae Radix	33.34	1.24
14	Forsythiae Fructus	52.27	6.12
15	Aurantii Fructus Immaturus	55.35	8.08
16	Ginseng Radix et Rhizoma Rubra	50.55	0.63
17	Cuscurae Semen	55.51	11.10
18	Sophorae Tonkinensis Radix et Rhizoma	41.33	3.61
18	Gastrodiae Rhizoma	85.12	7.24
19	Epimedii Folium	61.63	5.06
20	Magnoliae Officinalis Cortex	51.06	6.03
21	Polygonati Rhizoma	90.43	11.94
22	Curcumae Radix	75.97	9.15
23	Rhei Radix et Rhizoma	61.45	9.71
24	Cimicifugae Rhizoma	61.78	2.68
25	Ziziphi Spinosae Semen	52.17	6.31
26	Poria	59.24	11.37
27	Sinomenii Caulis	70.31	8.83
28	Gentianae Radix et Rhizoma	64.27	4.85
29	Mori Ramulus	57.47	0.93
30	Erigerontis Herba	50.93	1.92
31	Foeniculi Fructus	64.65	1.48
32	Ganoderma	42.61	0.31
33	Cistanches Herba	47.27	5.00
34	Houttuynia cordata Thunb	46.36	1.88
35	Polygoni Multiflori Radix	85.01	9.76
36	Tribulifructus	87.82	3.95
37	Herba Hedyotidis	102.68	1.19
38	Glehniae Radix	99.43	4.76
39	Astragali Radix	103.78	0.24
40	Xanthii Fructus	98.44	5.24
41	Atractylodis Macrocephalae Rhizoma	105.88	0.50

42	Acori TatarinowiiRhizoma	70.54	2.70
43	Dipsaci Radix	78.51	6.59
44	Bupleuri Radix	89.69	12.94
45	Pogostemonis Herba	75.80	0.71
46	Schisandrae Chinensis Fructus	56.64	0.40
47	Ligustri Lucidi Fructus	77.709	4.13
48	Hordei Fructus Germinatus	88.67	18.72
49	Sennae Folium	101.92	5.68

Table S2. The inhibitory effect of Ebractenoid F on GlmU acetyltransferase

IC ₅₀ (μM)	K _i (μM)	
	<i>Ki-com</i> /Acetyl CoA	<i>Ki-com</i> /GlcN-1-P
13.98	18.59	26.77

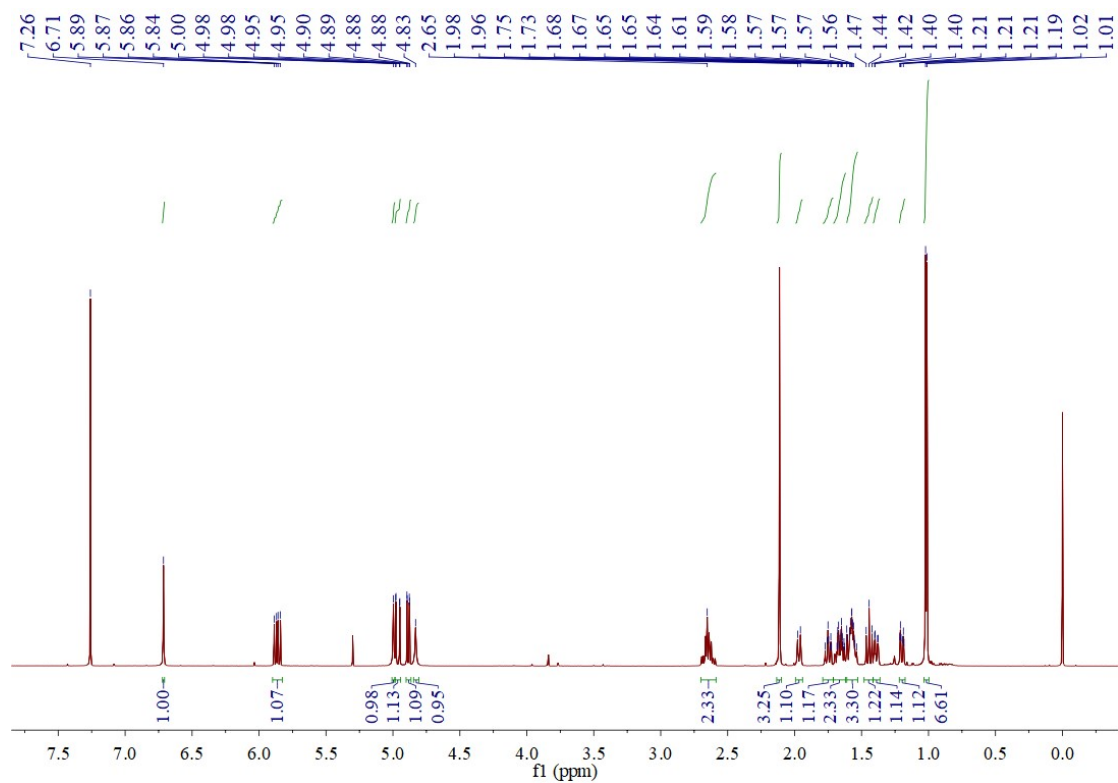


Figure S1. ^1H NMR spectrum (CDCl_3 , 600 MHz) of Ebractenoid F.

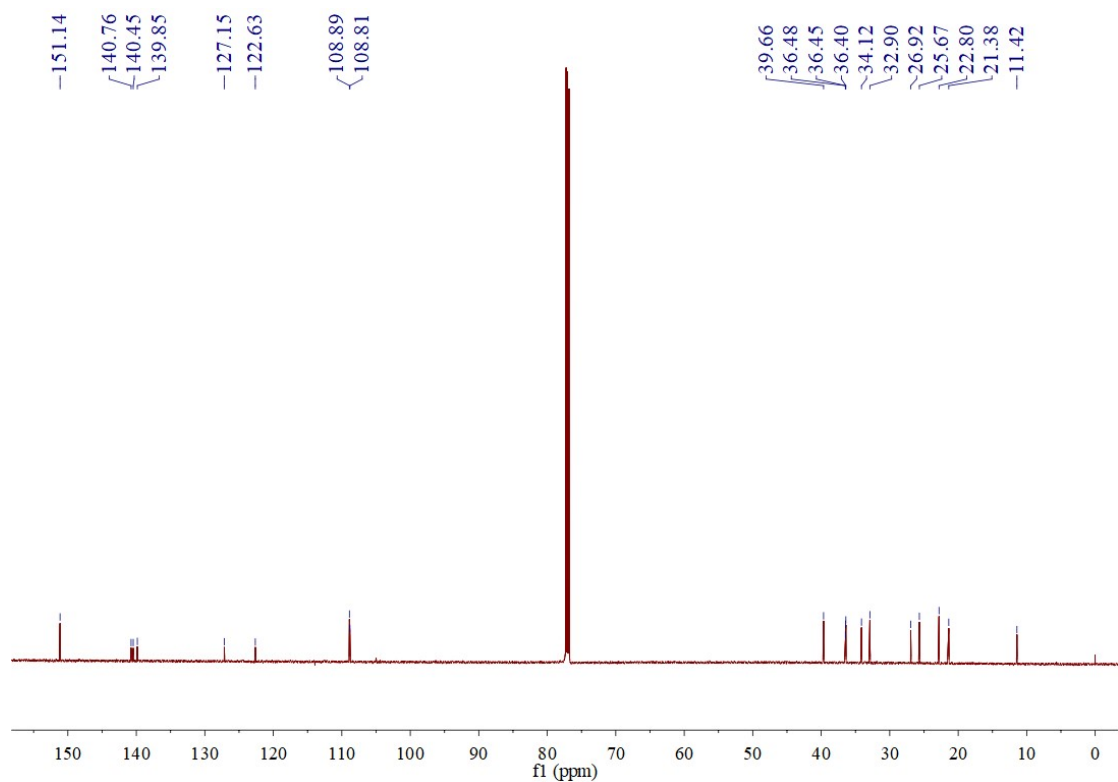


Figure S2. ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of Ebractenoid F.

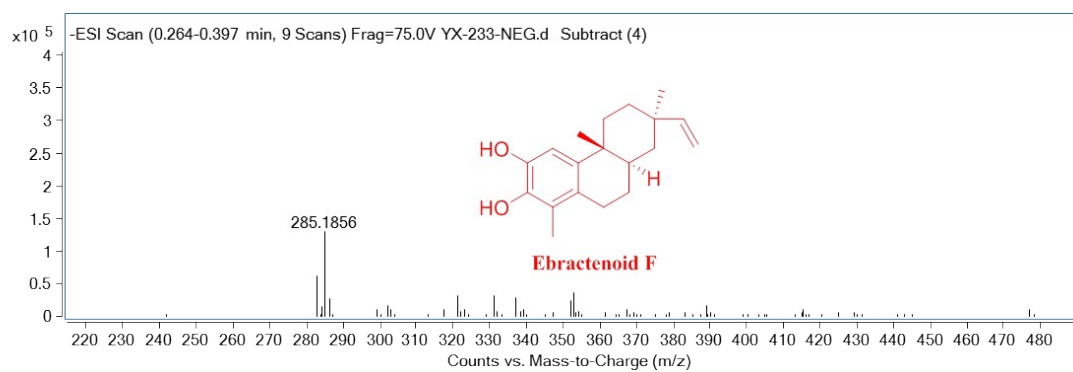


Figure S3. HR-MS of Ebractenoid F.

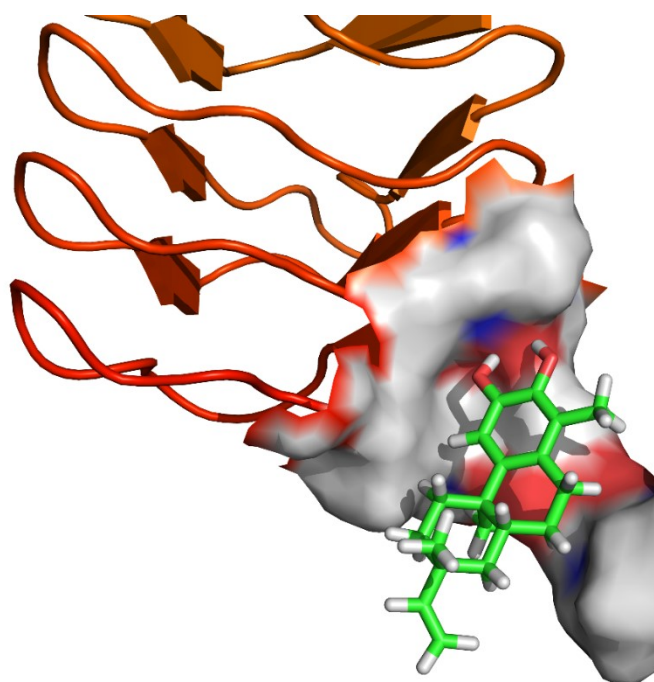


Figure S4. Docking analysis of ebractenoid F and GlmU (PDB code: 4K6R).

Table S3. Sequences of primers used for constructing site-direct mutants of *glmU* gene

Mutations	Forward primer (5'-3')	Reverse primer (5'-3')
Gly433Ala	CGCGTATACCGCGGCCGCACAGTGG	CCGTCGCCGATGGTTACTGGGGCCAC
Ala434Ser	CGCGTATACCGGGTCCGGCACAGTGG	CCGTCGCCGATGGTTACTGGGGCCAC
Ala451Ser	GGCAGTGTCTCGGGTCCGCAACGCAA	AGCGCCCCCGCGGGACATC

