Table 1S. primer sequences

Gene Symbol	Forward primer (5'-3')	Reverse primer (5'-3')	Product size	Accession number	Efficiency %
STAR	F	ACCAAACTCACTTGGCTGCT	270 bP	XM_017350352	92.242%
	R	ACACTATTGTCCCACTGCCG			
CYP11A1	F	TACCATTTGGCTGAGGAGAAGG	210 bP	S59219	99.955%
	R	GTACTCGTGATAGGCGACCC			
3B-HSD	F	TGGGACACAGTTCCTGGTCT	102 bP	XM_008248712	95.146%
	R	GCCTCATATGGGGTGTCCTC			
GAPDH	F	AGACACGATGGTGAAGGTCG	164 bP	L23961	96.296%
	R	TGCCGTGGGTGGAATCATAC			
Bax	F	CACGTCTGCGGGGAGTCAC	419	NM_017059.2	92.564%
	R	TAGAAAAGGGCAACCACCCG			
Bcl-2	F	TTTCTCTCTTTCGGCCGTGG	208	NM_016993.1	97.513%
	R	GACATCTCCCTGTTGACGCT			

STAR: steroidogenic acute regulatory protein. CYP11A1: cytochrome P450 cholesterol side-chain cleavage enzyme. 3B-HSD: hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 7. GAPDH: glyceraldehyde-3-phosphate dehydrogenase. Bax, Bcl-2-associated X protein. Bcl-2, B-cell lymphoma 2.

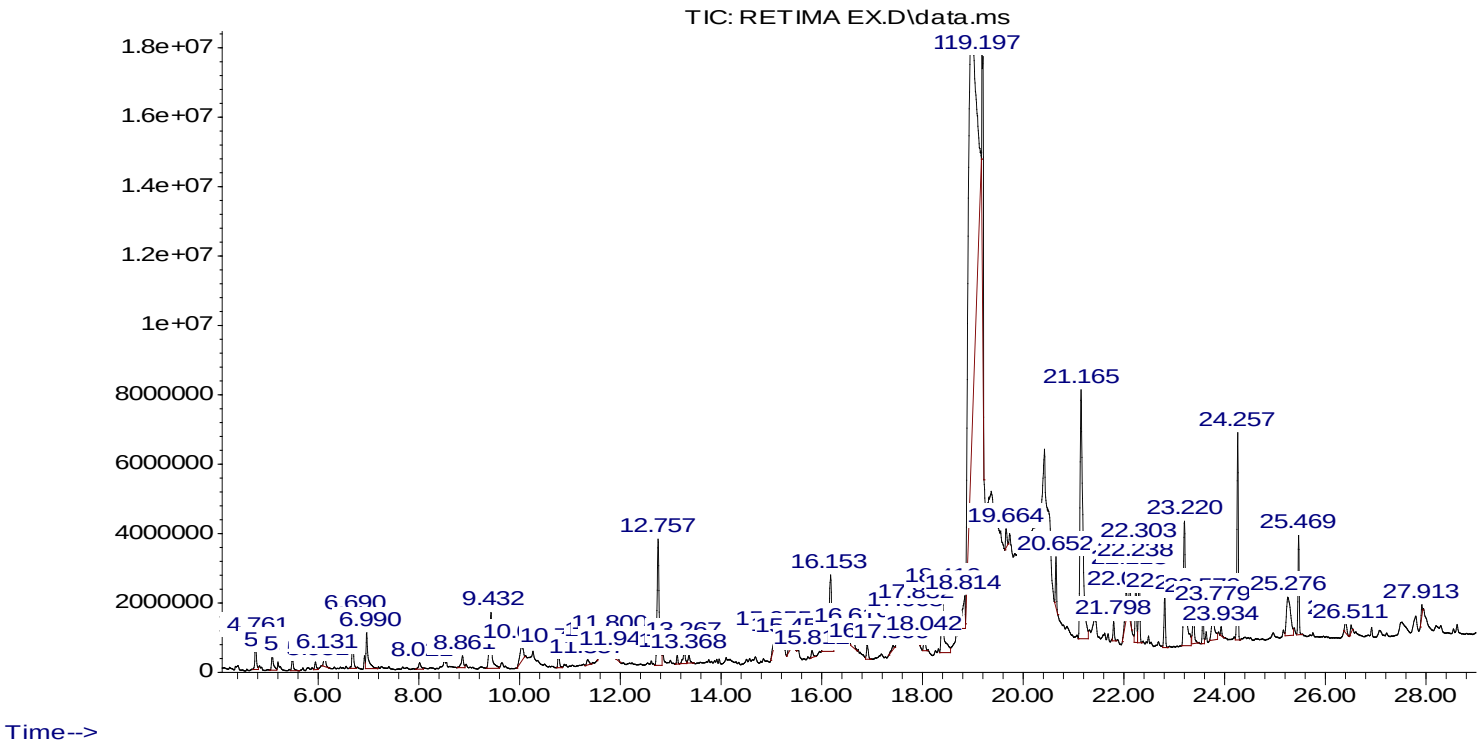

Figure 1S. HPLC analysis of the Retama raetam

Table 2S: GC-MS analysis of Retama

Compound number (#)	RT (min)	Area (Ab*s)	Peak Width 50% (min)	Hit Name	Quality	Mol Weight (amu)
1	4.762	1793248	0.114	Furfural	86	96.021
2	5.1	1278283	0.143	2-Furanmethanol	90	98.037
3	5.495	874792	0.16	2-Cyclopentene-1,4-dione	78	96.021
4	5.952	520250	0.097	2(5H)-Furanone	53	84.021
5	6.13	901426	0.132	1,3-Cyclopentanedione	64	98.037
6	6.69	2783083	0.137	2-Furancarboxaldehyde, 5-methyl-	91	110.037
7	6.988	3010076	0.24	Isomaltol	74	126.032
8	8.024	667212	0.154	Furan, 2-methyl-5-(methylthio)-	35	128.03
9	9.431	6058112	0.263	Maltol	91	126.032
10	10.032	2130353	0.155	4H-Pyran-4-one, 2,3-dihydro-3,5-dihydroxy-6-methyl-	72	144.042
11	11.663	1153346	0.212	2-Furancarboxaldehyde, 5-(hydroxymethyl)-	60	126.032
12	11.8	580060	0.074	2-Furancarboxaldehyde, 5-(hydroxymethyl)-	55	126.032
13	12.756	11009779	0.143	2-Methoxy-4-vinylphenol	95	150.068
14	13.133	474833	0.086	Naphthalene, 1,2,3,4-tetrahydro-1,1,6-trimethyl-	93	174.141
15	13.368	562977	0.12	Phenol, 2-methoxy-3-(2-propenyl)-	98	164.084
16	15.056	1182521	0.12	Phenol, 2-butyl-	78	150.104
17	15.365	1122287	0.109	Phenol, 4-(2-methylpropyl)-	60	150.104
18	15.457	511364	0.074	2-Butanone, 4-(4-hydroxyphenyl)-	53	164.084
19	16.155	10144547	0.246	2,3,5,6-Tetrafluoroanisole	49	180.02

20	16.618	1782409	0.143	Dodecanoic acid	96	200.178
21	16.904	1007524	0.097	Megastigmatrienone	97	190.136
22	17.671	869582	0.069	Benzeneacetic acid, 4-hydroxy-, methyl ester	70	166.063
23	17.883	2445464	0.114	Benzeneacetic acid, 4-hydroxy-, methyl ester	81	166.063
24	18.043	1023822	0.092	2-Butenimidic acid, 3-methyl-N-phenyl-, methyl ester	50	189.115
25	18.421	6631100	0.217	4-((1E)-3-Hydroxy-1-propenyl)-2-methoxyphenol	96	180.079
26	18.987	130938076	0.315	Dodecahydro-7,14-methanodipyrido[1,2-a;1',2'-e][1,5]diazocine	99	234.21
27	19.662	1105415	0.063	4,6-Di-O-methyl-.alpha.-d-galactose	25	208.095
28	20.652	2107251	0.063	Hexadecanoic acid, ethyl ester	92	284.272
29	21.796	980507	0.074	Phytol	83	296.308
30	22.037	2314137	0.109	9,12-Octadecadienoic acid (Z,Z)-	99	280.24
31	22.237	4185555	0.069	Linoleic acid ethyl ester	99	308.272
32	22.306	4842950	0.08	Ethyl 9,12,15-octadecatrienoate	99	306.256
33	22.809	2952138	0.103	7,14-Methano-4H,6H-dipyrido[1,2-a:1',2'-e][1,5]diazocin-4-one, 2,3,7,7a,8,9,10,11,13,14-decahydro-, [7S-(7.alpha.,7a.beta.,14.alpha.)]-	94	246.173
34	23.221	12449919	0.189	Lupanine	99	248.189
35	23.381	2720770	0.126	Methyl ricinoleate	91	312.266
36	23.776	3554117	0.154	Ricinoleic acid	91	298.251
37	24.257	10543029	0.092	Hexanedioic acid, bis(2-ethylhexyl) ester	95	370.308
38	25.275	6293222	0.166	7,14-Methano-4H,6H-dipyrido[1,2-a:1',2'-E][1,5]diazocin-4-one, 7,7a,8,9,10,11,13,14-octahydro-, [7R-(7.alpha.,7a.alpha.,14.alpha.)]-	98	244.158
39	25.47	4674379	0.097	1,2-Benzenedicarboxylic acid, mono(2-ethylhexyl) ester	91	278.152

40	26.408	858728	0.092	Linoleic acid ethyl ester	92	308.272
41	26.511	408025	0.057	Cyclohexane, 1-(1,5-dimethylhexyl)-4-(4-methylpentyl)-	95	280.313
42	27.913	594642	0.052	Heptadecane	97	240.282