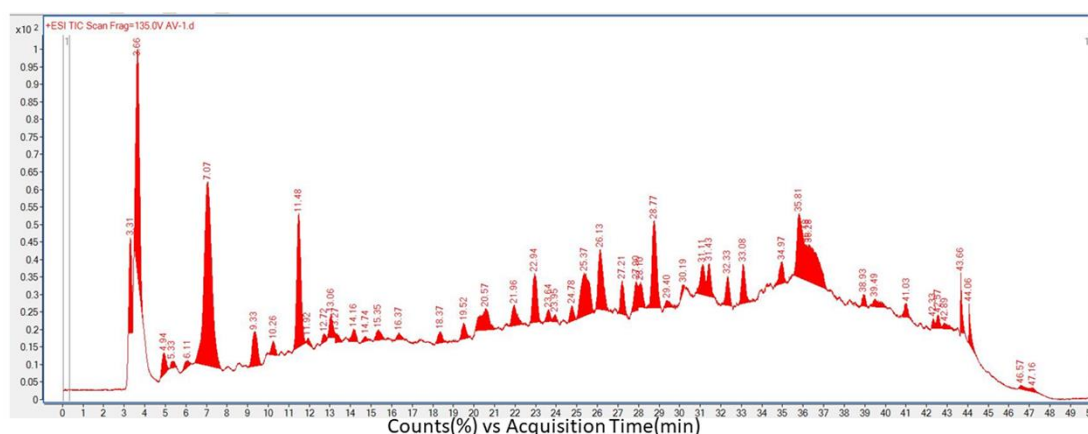


Supplementary file

Supplementary Table S1: List of phytochemicals obtained by LC-MS analysis of *J. adhatoda* methanolic extract.

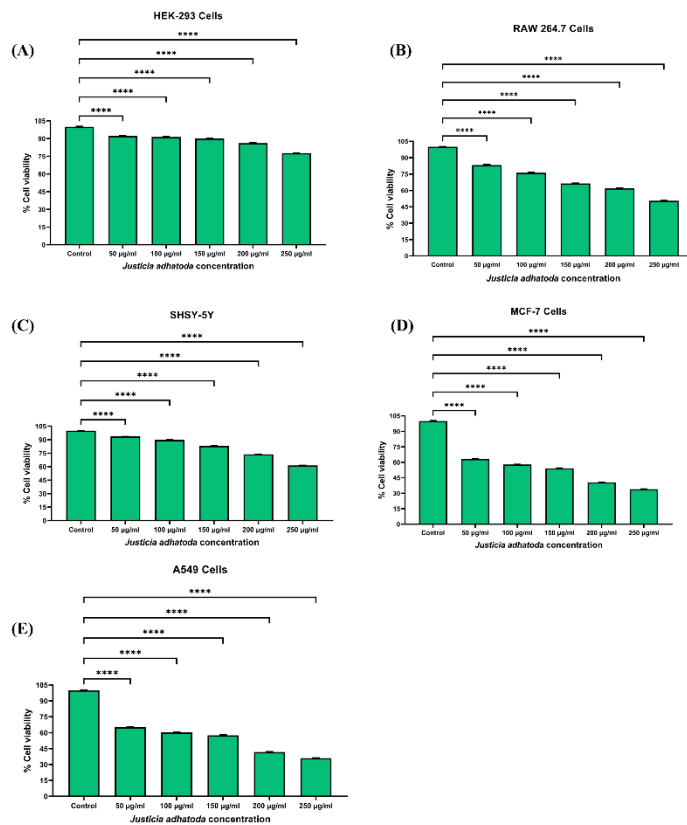
Sl no	Name	Formula	m/z	RT	Width	Height	Area
1	Alpha d galactopyranose	C6H12O6	203.0512	3.69	0.26	25367	397353
2	Vasicinol	C11H12N2O2	205.0966	5.35	0.26	608518	9994763
3	Vasicine	C11H12N2O	189.1017	7.07	0.48	5392962	197106506
4	Vasicinolone	C11H10N2O3	219.0759	8.59	0.29	420243	7716009
5	Resveratrol 5 O-glucoside	C20H22O8	391.1392	8.79	0.22	23854	323315
6	Sinapine	C16H24NO5	311.1711	8.98	0.2	3520	29381
7	Resveratrol 5 O-glucoside	C20H22O8	391.1385	9.3	0.45	8531	197992
8	Adhavasinsonone	C12H14N2O2	219.1122	9.34	0.32	1479562	29031855
9	d-Viniferin	C28H22O6	455.1511	9.89	0.2	2624	27455
10	Vasicol	C11H14N2O2	207.1117	10.1	0.2	82013	1164407
11	Dihydrocaffeic acid	C9H10O4	205.0486	10.23	0.21	15904	205464
12	Ferulic acid	C10H10O4	195.0642	10.28	0.22	14893	201236
13	Paniculide B	C15H20O5	281.1387	10.92	0.33	23889	411272
14	Vasicinone	C11H10N2O2	203.0809	11.49	0.24	3692676	58709084
15	Pinosylvin	C14H12O2	235.0701	12	0.25	5880	79402
16	5-methoxyvasicinone	C12H14N2O3	235.1067	12.26	0.33	7446	143398
17	Skullcapflavone I	C17H14O6	337.0709	13.22	2.84	1552	10614
18	Andrographidine C	C23H24O10	461.1443	14.24	0.27	4511	75925
19	Deoxyvasicinone	C11H10N2O	187.0855	14.82	0.24	150137	2318336
20	Andropanoside	C26H40O9	497.2717	15.13	0.54	1886	12211
21	Ferulic acid	C10H10O4	195.0639	15.88	0.22	9536	130269
22	d-Viniferin	C28H22O6	477.1379	16.05	0.26	5618	74795
23	Andrographidine D	C25H28O12	477.1379	16.05	0.23	5061	74475
24	Gardenin A	C21H22O9	419.134	17.38	0.25	2259	23320
25	Andrographidine A	C23H26O10	463.1604	17.39	0.25	11749	185201
26	14-Deoxy-11-hydroxyandrographolide	C20H30O5	351.2128	17.4	0.5	2465	14134
27	3,14-Dideoxyandrographolide	C20H30O3	319.2258	18.16	0.23	1830	15684
28	Deoxyandrographiside	C26H40O8	481.2784	18.18	0.22	10075	140837
29	19-O-acetylanhydroandrographolide	C24H34O7	457.2212	18.32	0.17	3406	18481
30	Andropaniculosin A	C18H16O7	345.097	19.02	0.28	2839	38387
31	Homoveratric acid	C10H12O4	194.1509	19.78	0.18	4182	49807
32	12-Hydroxyandrographolide	C19H28O7	391.1752	20.25	0.23	29753	425541
33	14-Deoxy-11-hydroxyandrographolide	C20H30O5	351.2129	20.54	0.53	21040	603543
34	Methoxyphenylacetic acid	C9H10O3	167.0693	20.73	0.4	7156	128553
35	5-hydroxy-7,8,4'-trimethoxyflavone	C18H16O6	329.1018	20.93	0.27	5444	99737
36	5-Hydroxy-7,8,2',3'-tetramethoxyflavone	C19H18O7	359.1127	21.25	0.26	18156	350292
37	8,17-Epoxy-14-deoxyandrographolide	C20H30O5	353.2286	21.61	0.3	25543	478869
38	Isoswertisin	C22H22O10	447.1284	22.72	0.33	2753	46492
39	Andrographidine C	C23H24O10	461.1437	22.75	8.3	1379	11271
40	Andrographolactone	C20H24O2	297.1831	23	0.16	5444	57374
41	Stigmastanol ferulate	C39H60O4	615.4297	23.49	0.51	5781	161224
42	5-Hydroxy-7,8,2',3'-tetramethoxyflavone	C19H18O7	359.1115	23.68	1.38	1004	11710
43	14-deoxy-11,12-didehydroandrographolide	C20H28O4	333.2021	23.93	0.22	19265	258614
44	14-deoxy-11,12-didehydroandrographolide	C20H28O4	355.1868	25.87	0.2	5937	67107
45	Adipic acid	C6H10O4	147.0636	26.18	0.19	3023	31977
46	Andrographic Acid	C20H28O6	387.1786	26.87	0.17	7561	74839
47	Piceatannol	C14H12O4	245.077	27.21	0.23	110784	1869280
48	Tocopherol	C29H50O2	453.3666	27.37	0.26	6114	80583
49	14-acetylandrographolide	C22H32O6	415.2097	27.39	0.2	21115	294302
50	tetradecanoic acid/ Myristic acid	C14H28O2	251.1979	27.75	0.23	5296	27296
51	Vasnetine	C19H17N3O3	336.1328	27.87	0.21	257935	3489968
52	4-Hydroxyphenylacetic acid	C8H8O3	153.0535	27.88	0.23	19601	262864

53	5-Hydroxy-7,8,2',5'-tetramethoxyflavone-5-O-β-D-glucopyranoside	C ₂₅ H ₂₈ O ₁₂	543.1479	28.1	0.19	3240	28007
54	14-deoxy-11,12-didehydroandrographolide	C ₂₀ H ₂₈ O ₄	333.2017	28.28	0.2	4440	42215
55	8,17-Epoxy-14-deoxyandrographolide	C ₂₀ H ₃₀ O ₅	375.21	28.44	0.18	2403	16696
56	Paniculide C	C ₁₅ H ₁₈ O ₅	279.1205	28.69	0.2	2248	18200
57	tetradecanoic acid/ Myristic acid	C ₁₄ H ₂₈ O ₂	251.1991	29.31	0.18	7730	83687
58	14-deoxy-14,15-dehydroandrographolide	C ₂₀ H ₂₈ O ₅	319.1865	29.34	0.18	10598	115180
59	3-O-beta-D-glucopyranosyl-andrographolide	C ₂₆ H ₄₀ O ₁₀	535.2561	30.28	0.19	18200	223783
60	Dehydroandrographoline	C ₂₀ H ₂₈ O ₅	349.1968	30.4	0.2	26773	347701
61	Methoxyphenylacetic acid	C ₉ H ₁₀ O ₃	167.0691	30.41	0.24	35228	578309
62	5,7,8-Trimethoxydihydroflavone	C ₁₈ H ₁₈ O ₅	337.102	30.94	0.17	4596	45821
63	Cinnamic acid	C ₉ H ₈ O ₂	149.0584	30.94	0.19	5718	55195
64	Resveratrol	C ₁₄ H ₁₂ O ₃	229.0857	31.3	19.58	1544	15456
65	Andrographolic acid	C ₂₀ H ₃₂ O ₆	391.2134	31.46	0.16	15030	145413
66	Palmitic acid	C ₁₆ H ₃₂ O ₂	279.23	31.63	0.12	27229	229798
67	1,2-Dihydroxy-6,8-dimethoxyxanthone	C ₁₅ H ₁₂ O ₆	311.0542	32.33	0.25	3487	47362
68	alpha-Linolenic acid	C ₁₈ H ₃₀ O ₂	279.2312	33.09	0.23	1047003	15455407
69	Stigmasta-5,22-dien-3-ol	C ₂₉ H ₄₈ O	413.3729	33.26	0.46	11126	241485
70	Monostearin	C ₂₁ H ₄₂ O ₄	359.3148	33.93	0.2	14164	168599
71	Paniculide A	C ₁₅ H ₂₀ O ₄	265.1428	34.11	0.2	5168	52919
72	6'-Acetylneoandrographolide	C ₂₈ H ₄₄ O ₈	531.2918	34.37	0.18	7960	86793
73	Deoxyandrographolide	C ₂₀ H ₃₀ O ₄	335.2174	35.34	1.09	2977	26605
74	Sitosterol	C ₂₉ H ₅₀ O	437.3724	35.61	0.38	28350	646711
75	Octadecanoic acid	C ₁₈ H ₃₆ O ₂	307.2616	36.14	0.17	3911	34236
76	3-Oxo-14-deoxy-11, 12-didehydroandrographolide	C ₃₁ H ₃₉ N ₃ O ₆	329.2095	37.85	0.2	3342	30789
77	14-Deoxyandrographolide	C ₂₀ H ₃₀ O ₄	337.1992	38.25	0.14	3795	30473
78	Monostearin	C ₂₁ H ₄₂ O ₄	359.314	38.32	0.15	7642	69569
79	Phytol	C ₂₀ H ₄₀ O	319.2977	39.87	0.2	5333	70295
80	Deoxyandrographolide	C ₂₀ H ₃₀ O ₄	357.2015	41.34	0.18	2786	19677
81	Tocopherol	C ₂₉ H ₅₀ O ₂	431.3869	44.09	1.18	1808	10739



Supplementary Figure S1- LCMS *Justicia adhatoda* leaf extract. The chromatogram was obtained by Q-TOF-LCMS analysis of *Justicia adhatoda* leaf extract to determine its phytoconstituents.

FIGURE 3

Supplementary Figure S2- MTT assay of *J. adhatoda* leaf extract in different cell lines.**Supplementary Table S2:** The gradient of the mobile phase for chromatographic separation

Time(min)	Acetonitrile (%)	Methanol (%)	0.5% acetic acid in water (%)
0-30	12-25	0	88-75
30-45	25-23.5	0-11	75-65.5
45-68	23.5-35	11-4	65.5-61
68-85	35	4	61
85-90	35-50	4-0	61-50
90-95	100	0	0
95-100	100	0	0