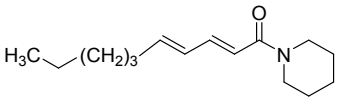
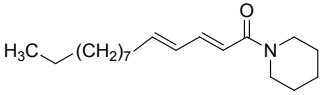
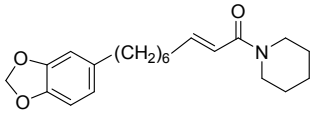
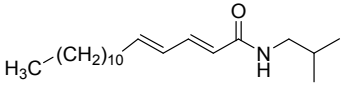
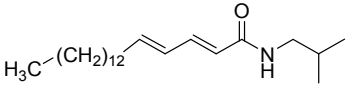
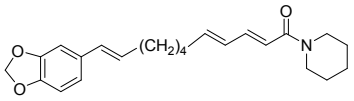
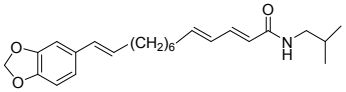
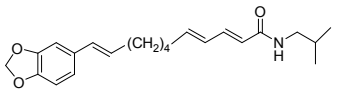
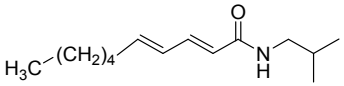
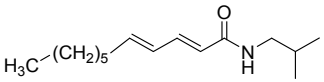
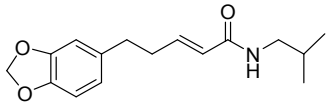
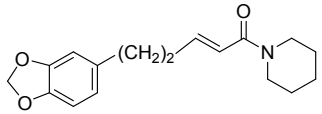
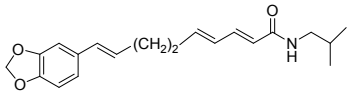
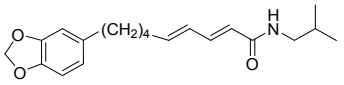
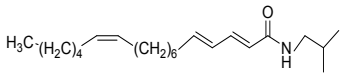
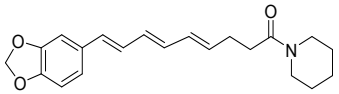
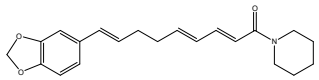
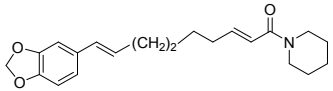
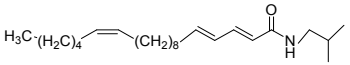
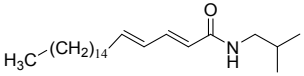
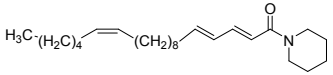
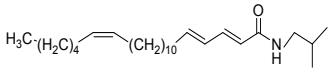
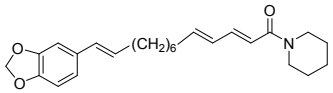
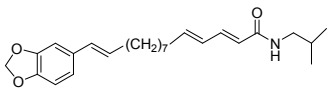
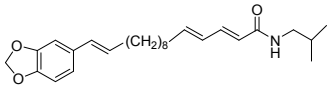
Electronic Supplementary Material (ESI) for Analyst.

Structure characterization of isolated compounds from *Piper Longum* L. (these information were obtained from scifinder)

Compound	Name	Structure	pKa （most basic temperature: 25 °C）	log P (25 °C)	H-bond donor	H-bond acceptor
1	N-[(2E,4E)-decadienoyl]-piperidine.		-0.87±0.20	3.791±0.407	0	2
2	N-[(2E,4E)-tetradeca dienoyl]piperidine		-0.88±0.20	5.829±0.408	0	2
3	(E)-9-(benzo[d][1,3]dioxol-5-yl)-1-(piperidin-1-yl) non-2-en-1-one		-0.77±0.20	5.042+0.497	0	4
4	N-isobutyl-2E,4E-hexadecadienamide		-0.91±0.70	7.000±0.261	1	2
5	N-isobutyl-2E,4E-octadecadienamide		-0.88±0.20	8.886±0.408	0	2
6	(2E,4E,10E)-N-11-(3,4-Methylenedioxyphenylhmd ecatrienoylpiperidine		-0.88±0.20	5.877±0.535	0	4
7	Guineensine		-0.91±-.70	7.140±0.420	1	4

8	Retrofractamide B		-0.91±0.70	8.159±0.420	1	4
9	pellitorine		-0.96±0.70	3.434±0.260	1	2
10	N-isobutyl-2E,4E-undecadienamide		-0.90±0.70	4.453±0.260	1	2
11	dihydropiperlonguminine		-0.82±0.70	2.703±0.384	1	4
12	piperanine		-0.79±0.20	2.551±0.507	0	4
13	Retrofractamide A		-0.92±0.70	4.786±0.422	1	4
14	Pipercallosine		-0.91±0.70	4.722±0.377	1	4
15	(2E,4E,12Z)-N-Isobutylocatadeca-2,4,12-trienamide		-0.88±0.20	7.457±0.414	0	2

16	1-[9-(3',4'-methylenedioxyphenyl)-4E,6E,8E-nonatrienoyl]piperidine		-0.51±0.20	4.784±0.505	0	2
17	dehydropipernonaline		-0.89±0.20	4.634±0.536	0	4
18	Pipernonatine		-0.77±0.20	5.267±0.530	0	4
19	(2E,4E,14Z)-N-Isobutyl eicosa-2,4,14-trienamide		-0.85±0.70	9.294±0.262	1	2
20	N-isobutyl-2E,4E-decyldecadienamide		-0.91±0.70	9.038±0.261	1	2
21	1-[(2E,4E,14Z)-1-oxo-2,4,14-eicosatrienyl]-piperidine		-0.88±0.20	8.476±0.414	0	2
22	(2E,4E,14Z)-N-Isobutyl docosa-2,4,14-trienamide		-0.91±0.70	9.648±0.266	1	2
23	(2E,4E,12E)-13-(benzo[d][1,3]dioxol-6-yl)-1-(piperidin-1-yl)trideca-2,4,12-trien-1-one		-0.88±0.20	6.987±0.535	0	4

24	(2E,4E,13E)-14-(benzo[d][1,3]dioxol-6-yl)-N-isobutyltetradeca-2,4,13-trienamide		-0.91±0.70	7.649±0.420	1	4
25	brachyamide B		-0.91±0.70	8.159±0.420	1	4