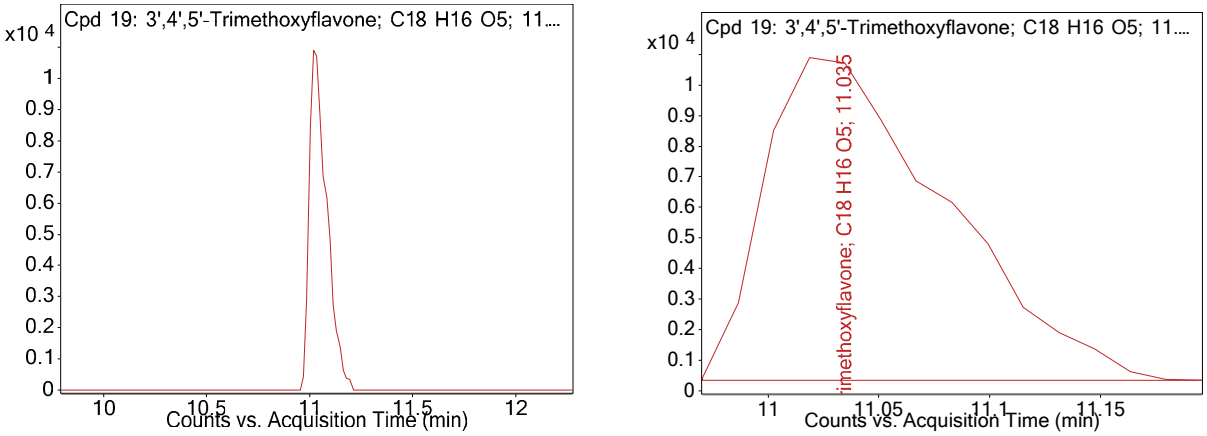
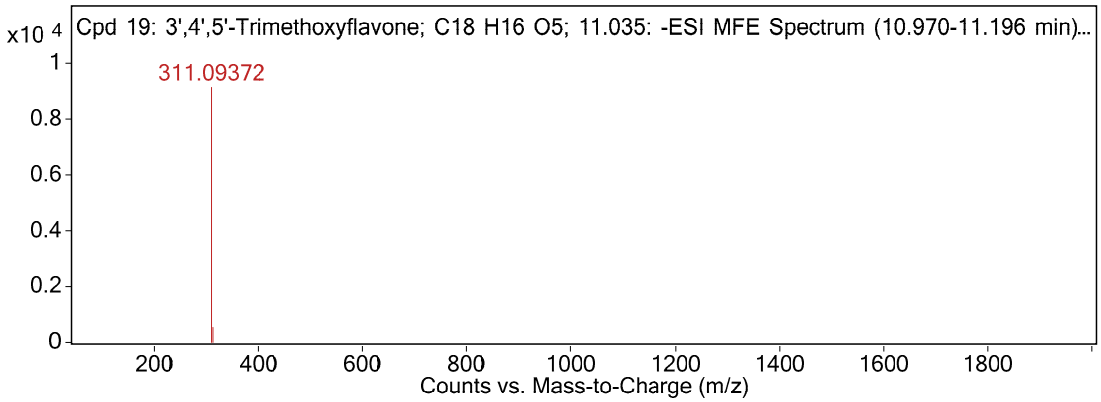
Figure S1

1. **3',4',5'-Trimethoxyflavone**

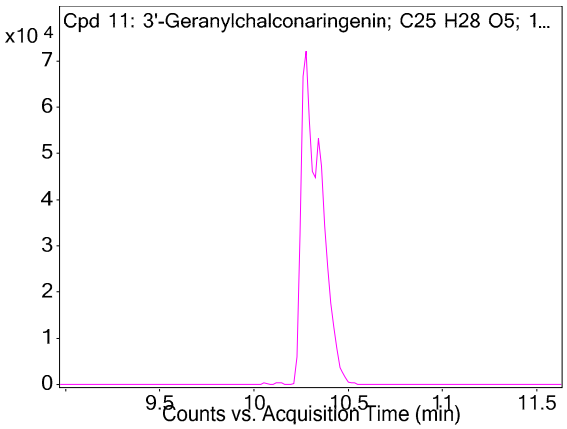


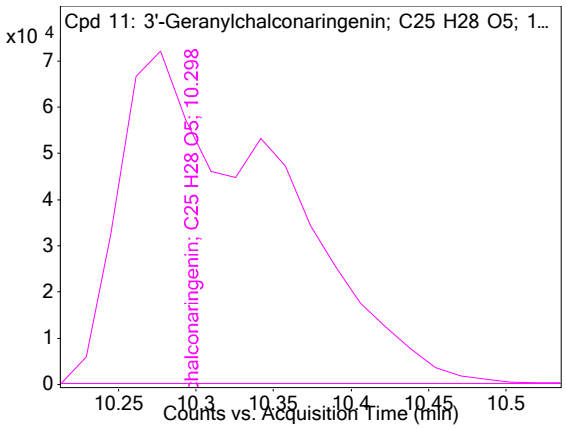


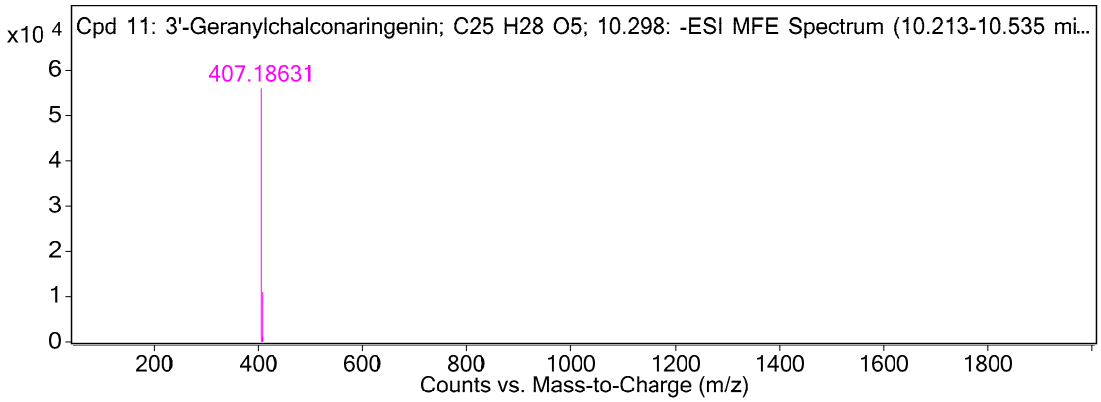
MS spectrum peak list

m/z	z	Abund	Formula	Ion
311.09372	-1	9100.8	$C_{18}H_{15}O_5$	$(M-H)^-$
312.09564	-1	1448	$C_{11}H_{15}N_6O_3S$	$(M-H)^-$
313.09493	-1	547.25	$C_{11}H_{15}N_6O_3S$	$(M-H)^-$

2. 3'-Geranylchalconaringenin



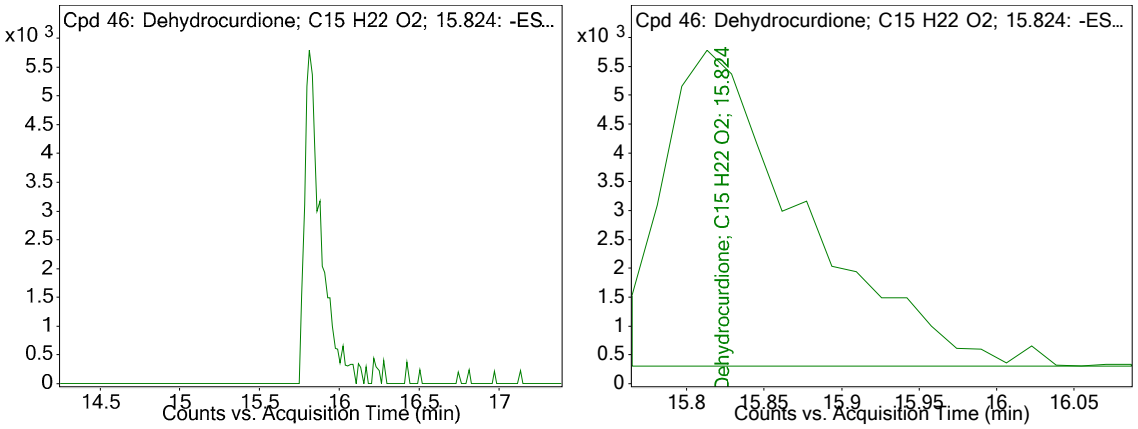


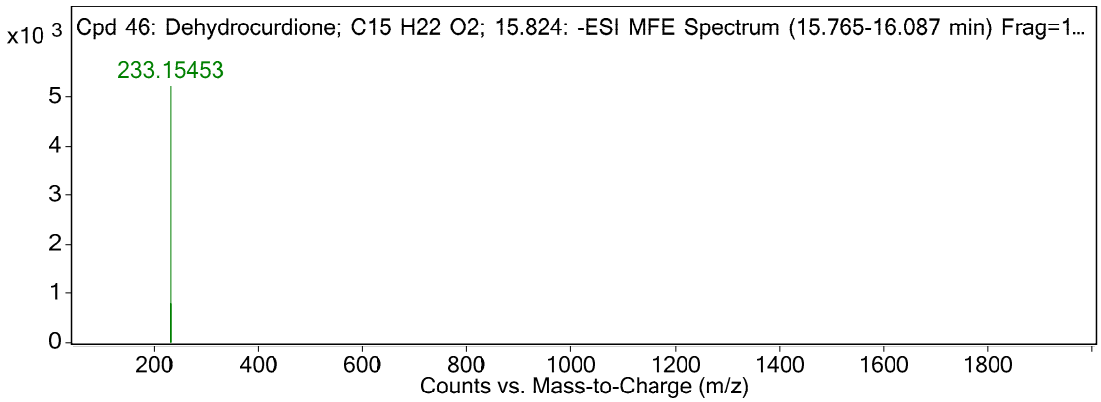


MS spectrum peak list

m/z	z	Abund	Formula	Ion
407.18631	-1	55923.5	$C_{25}H_{27}O_5$	(M-H)-
408.18916	-1	11171.83	$C_{17}H_{31}N_2O_7S$	(M-H)-
409.18588	-1	3975.38	$C_{17}H_{31}N_2O_7S$	(M-H)-
410.18856	-1	959.04	$C_{17}H_{31}N_2O_7S$	(M-H)-

3. Dehydrocurdione

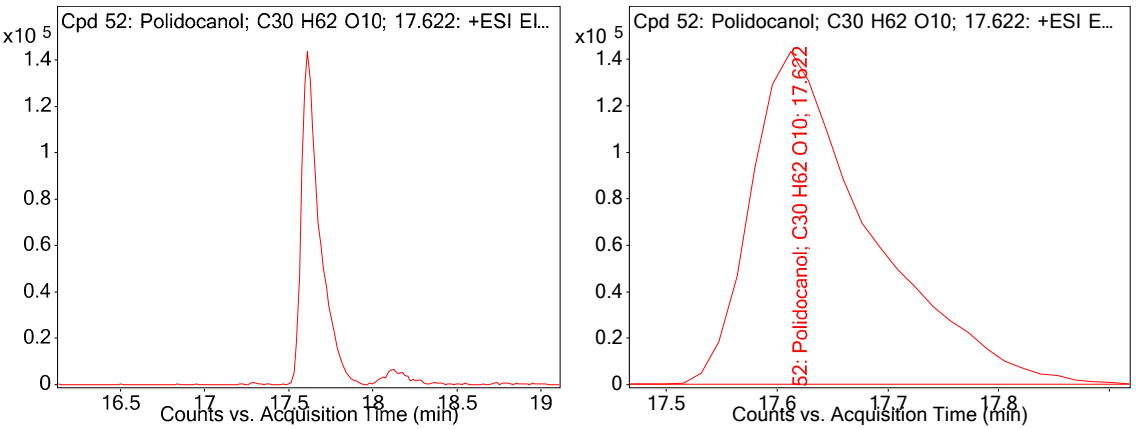


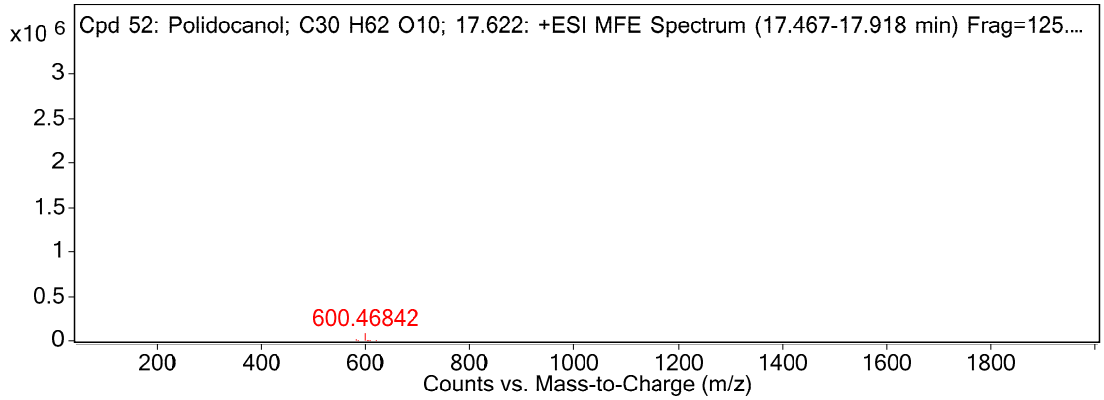


MS spectrum peak list

m/z	z	Abund	Formula	Ion
233.15453	-1	5230.5	C15 H21 O2	(M-H)-
234.15844	-1	807.37	C15 H21 O2	(M-H)-

4. Polidocanol

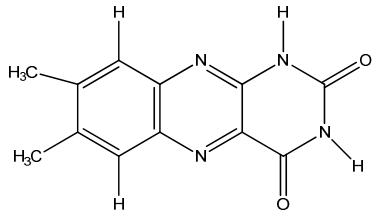
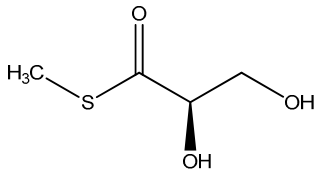
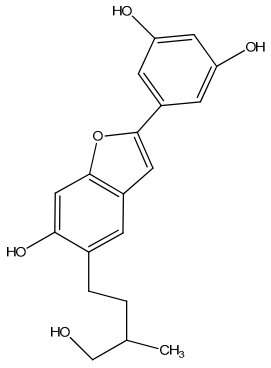


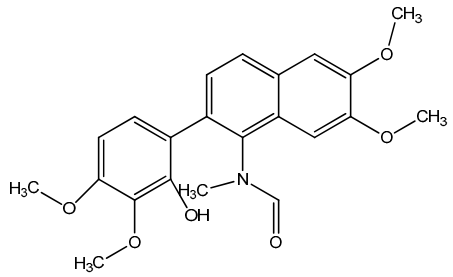
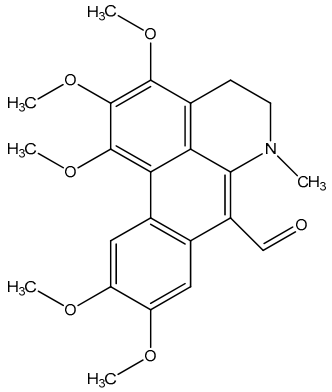


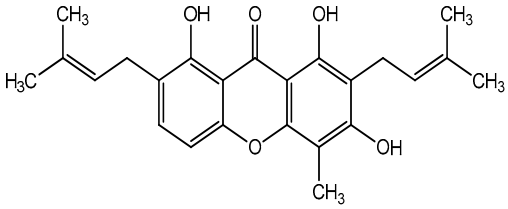
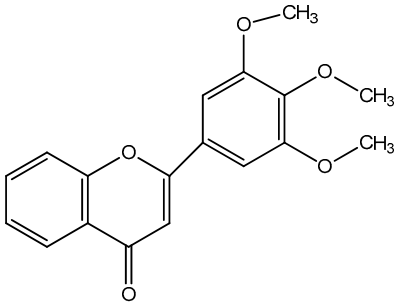
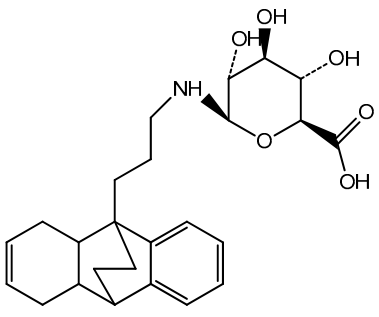
m/z	z	Abund	Formula	Ion
583.4412	1	8820.41	C30 H63 O10	(M+H) +
584.44513	1	3353.26	C30 H63 O10	(M+H) +
585.44541	1	827.22	C30 H63 O10	(M+H) +
600.46842	1	83070.76	C30 H66 N O10	(M+NH4) +
601.4715	1	27828.99	C30 H66 N O10	(M+NH4) +
602.47363	1	6586.78	C30 H66 N O10	(M+NH4) +
603.47744	1	1217	C30 H66 N O10	(M+NH4) +

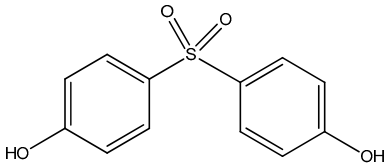
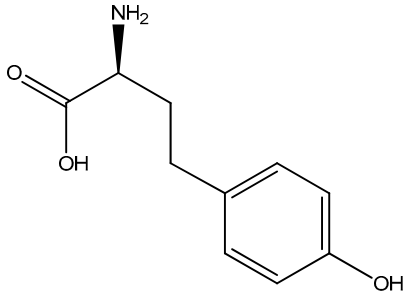
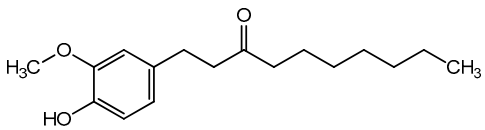
605.42385	1	7389.64	C30 H62 Na O10	(M+Na) +
606.42801	1	2621.84	C30 H62 Na O10	(M+Na) +
621.39842	1	1056.28	C30 H62 K O10	(M+K) +

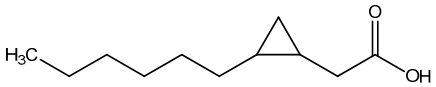
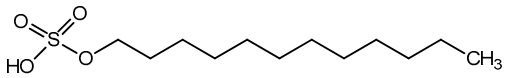
Table S1: Compounds identified from gut bacteria of water monitor lizard.

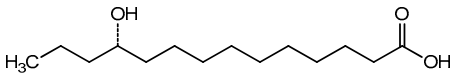
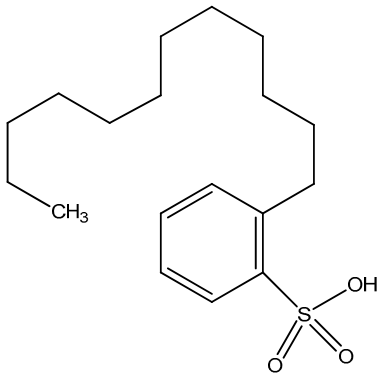
S. No	Compound (s)	Formula	Structure	Reported activities
1.	Lumichrome	$C_{12}H_{10}N_4O_2$		Antimicrobial properties against bacterial pathogens (Ahgilan et al., 2016, Massaro et al., 2014). increased the photosynthetic rates and growth of soybean plants (Khan et al., 2008).
2.	S-Methyl-1-thio-D-glycerate	$C_4H_8O_3S$		No activity reported.
3.	omega-Hydroxymoracin N	$C_{19}H_{18}O_5$		No activity reported. A component in the Anti-inflammatory functional food composition https://patents.google.com/patent/WO2012115469A2/en.

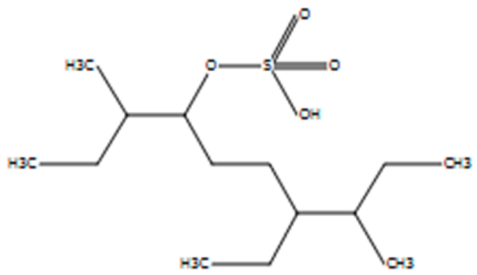
4.	Simulansamide	$C_{22}H_{23}NO_6$		Shows strong inhibition of platelet aggregation (Wu et al., 1996) Exhibit antibacterial activity, cytotoxicity and inhibit DNA isomerase enzyme (Zhou et al., 2011).
5.	Callytriol C	$C_{23}H_{24}O_3$		Antimicrobial activities (Tada and Yasuda, 1984). Having antifouling activity against barnacle and metamorphosis promoting activity in ascidians (Pallela and Ehrlich, 2016)
6.	7-Formyldehydrothalicsimidine	$C_{23}H_{25}NO_6$		Inhibitor of metalloproteinases (Chang et al., 1998). Exhibit significant inhibition of arachidonic acid, collagen and platelet activating factor-induced platelet aggregation. Inhibition against thrombin-induced platelet

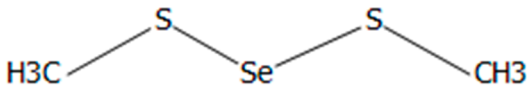
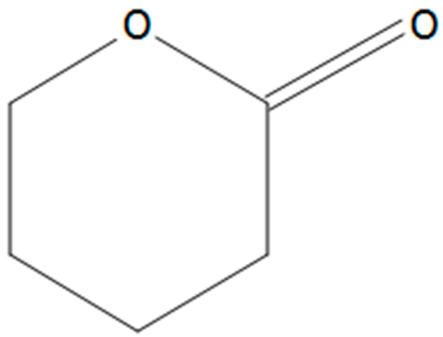
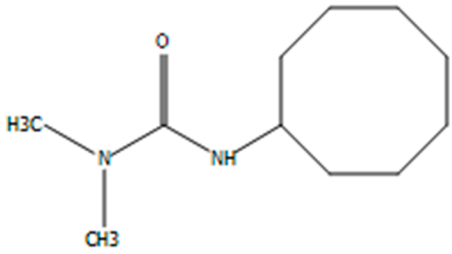
				aggregation (Chang et al., 1998).
7.	1,3,8-Trihydroxy-4-methyl-2,7-diprenylxanthone	$C_{24}H_{26}O_5$		No activity reported. However, 1,3,8-trihydroxy-2,4-dimethoxyxanthone displayed anti-HIV-1 activities (El-Seedi et al., 2010). It is a constituent of the fruit hulls of *Garcinia mangostana* (Yannai, 2003).
8.	3',4',5'-Trimethoxyflavone	$C_{18}H_{16}O_5$		Trimethoxyflavone show antibacterial activity against Gram positive and Gram negative bacteria (FERNANDES et al., 2013). Flavonoids exhibit antibacterial and antioxidant activities (Süzgeç-Selçuk and Birteksöz, 2011).
9.	Desmethylmaprotiline glucuronide	$C_{25}H_{29}NO_6$		No reported activity. However, Desmethyl Maprotiline itself is antidepressant drug (Rotzinger et al., 1999,

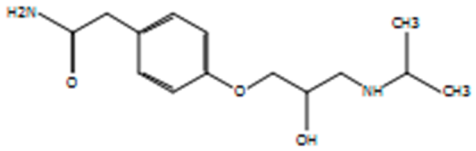
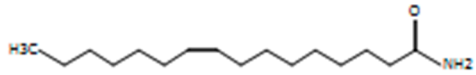
				López-Muñoz and Alamo, 2013).
10.	4,4'-Sulfonyldiphenol	$C_{12}H_{10}O_4S$		Significant increase TUNEL positive cells in neonatal testis, disruption of the expression of apoptosis, autophagy, and oxidative stress-related factors (Shi et al., 2018). Affect fetal development and increase risk of adverse health consequences during pregnancy (Speidel et al., 2018).
11.	L-Homotyrosine	$C_{10}H_{13}NO_3$		Competitive inhibitors of tyrosine phenol lyase (Do et al., 2016). Derivatives have antifungal activities (Lee et al., 2014, Capobianco et al., 1998).
12.	6-Paradol	$C_{17}H_{26}O_3$		Reduce inflammatory responses in activated BV2 microglia, most effective in neuroinflammation-associated with CNS

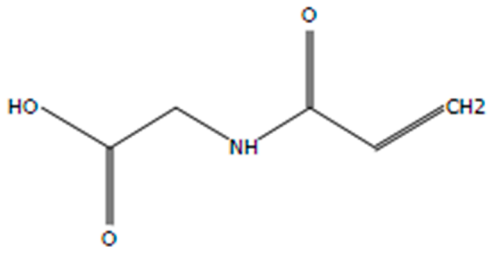
				disorders without toxicity (Gaire et al., 2015). Antibacterial activities against *Mycobacterium smegmatis* (Galal, 2008) and *Candida albicans* (Abourashed et al., 2007).
13.	trans-2-Hexyl-1-cyclopropaneacetic acid	$C_{11}H_{20}O_2$		It is a main component of cascarilla essential oil that has antibacterial activity against *Mycobacterium avium* and antifungal activities against some fungi (Opdyke, 1979). Acute cytotoxicity in mice (Opdyke, 1979).
14.	Lauryl hydrogen sulfate	$C_{12}H_{26}O_4S$		Commonly used as an adjuvant or synergist with antimicrobials and insecticides (Baker and Grant, 2018). To control immature mosquitos (Piper and Maxwell, 1971). Rapidly biodegradable in the environment (Singer and Tjeerdema, 1993) and

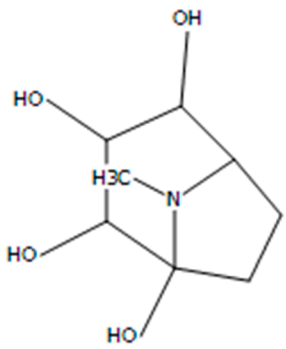
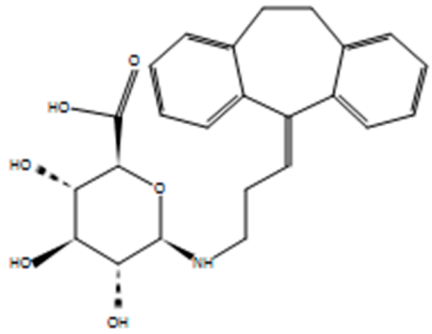
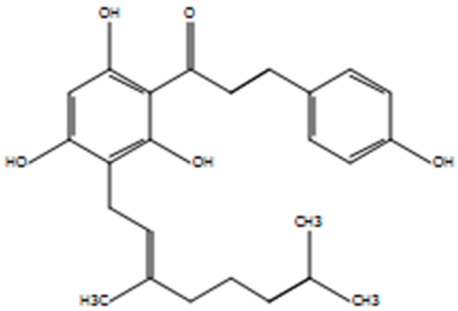
				under laboratory conditions (Leal et al., 1991). Responsible for oxygen deprivation and suffocation (Piper and Maxwell, 1971)
15.	11S-hydroxy-tetradecanoic acid	$C_{14}H_{28}O_3$		It is an anti-oxidant, cancer preventive and hyper-cholesterolemic (Gomathi Rajashyamala and Elango, 2015).
16.	2-Dodecylbenzenesulfonic acid	$C_{18}H_{30}O_3S$		Dodecyl benzene sulfonic acid is extensively applied anionic surfactant (Mimanne et al., 2012). No reported activity itself. A novel, biodegradable, and efficient Brønsted acid catalyst used for the reaction of indoles/4-hydroxy coumarin with aldehydes to obtain a bis(indolyl)methanes/ bis (4- hydroxycoumarin-3- yl)methanes. (Mimanne et al., 2012).

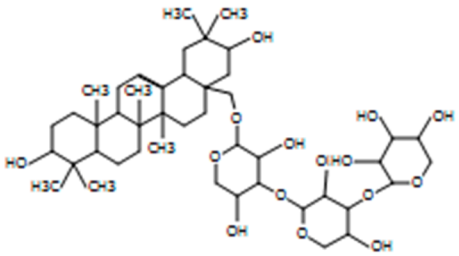
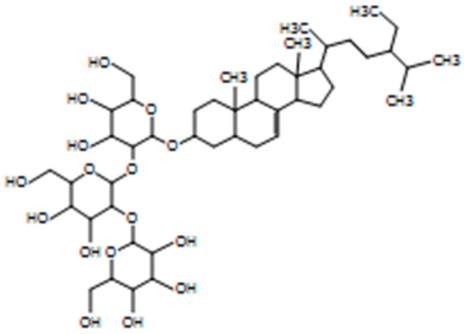
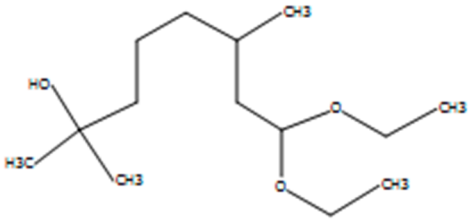
				The coumarin has therapeutic potential for antibiotic, anti-inflammatory, anti-tumor, anti-coagulant, analgesic, anti-HIV, cytotoxic, anti-apoptotic, anti-oxidant and insecticidal activities (Pawar et al., 2013) An emulsifier for agricultural herbicides (Mimanne et al., 2012) .
17.	Tetradecyl sulfate	$C_{14}H_{30}O_4S$		Its sodium salt is used as formulations for treatment of adipose tissue (Dobak, 2017). Treatment of Pyogenic Granuloma (Moon et al., 2005). The infiltrations of sodium tetradecyl sulfate into stromal tissues can cause tissue necrosis (Goldman et al., 1986).

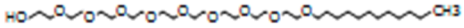
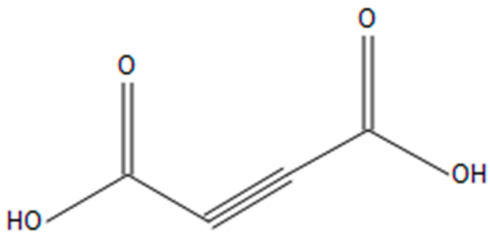
18.	Bis(methylthio) selenide	$C_2 H_6 S_2 Se$		Volatile bis(methylthio)-selenide found in natural elephant garlic and onion oil (Meija and Caruso, 2004). Selenide is the intermediate component in the metabolic pathway of Se in plants (Hudson et al., 2012).
19.	5-Valerolactone	$C_5 H_8 O_2$		Valerolactone and some analogues exhibit antioxidant activity (Sánchez-Patán et al., 2011).
20.	Cycluron	$C_{11} H_{22} N_2 O$		Cycluron has pesticidal activity and effective for the control of monocotyledonous germinating weeds (Matolcsy et al., 1989, Draber and Fujita, 1992).

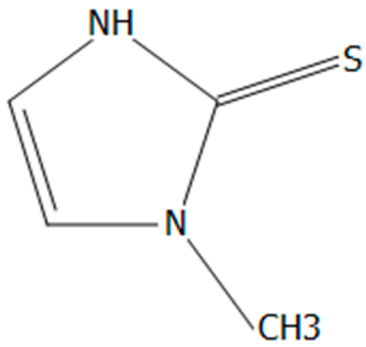
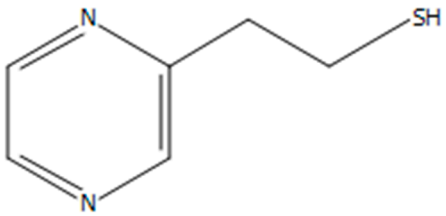
21.	Atenolol	$C_{14}H_{22}N_2O_3$		Hydrophilic β-adrenergic blocking agent (AGON et al., 1991). For the treatment of Hypertension and angina (Akarim et al., 2015). Prevent migraines https://www.drugs.com/ monograph /atenolol.html. Antimicrobial activities against *Micrococcus luteus* and *Candida tropicalis* (Gölcü and Yavuz, 2008).
22.	Palmitoleamide	$C_{16}H_{31}NO$		Palmitoleamides are fatty acid amide with antibacterial activities (Zaher et al., 2015)
23.	HClO	Cl H O		A powerful oxidizer and deproteinizer (Eryilmaz and Palabiyik, 2013). Has good microbicidal activity (Eryilmaz and Palabiyik, 2013).

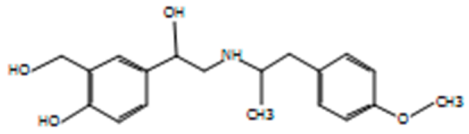
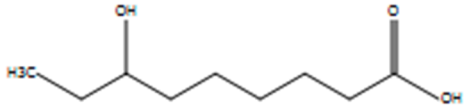
				Widely used as disinfectant (Kunawarote et al., 2010). Reacts with several biomolecules, especially carbohydrates, amino groups, proteins, thiol, thiol ether, heme as well as overcomes pathogens to fight infections in the body (Kunawarote et al., 2010, Pattison and Davies, 2001, Wang et al., 2007). Important role in bacterial killing (McKenna and Davies, 1988). Play role in host defense by killing pathogens and initiates cell apoptosis (Tian et al., 2016).
24.	N-Acryloylglycine	$C_5 H_7 N O_3$		Used in the preparation of hydrogel and as a drug carrier (Deng et al., 2011).

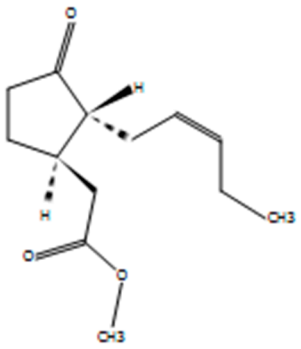
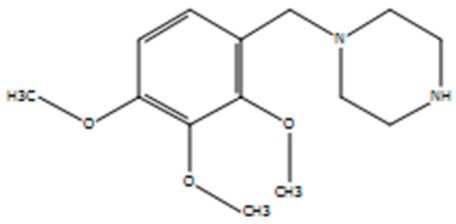
25.	N-Methylcalystegine B2	$C_8 H_{15} N O_4$		Calystegines are polyhydroxy alkaloids act as α-galactosidase inhibitors (Asano et al., 1997).
26.	Desmethylnortriptyline glucuronide	$C_{24} H_{27} N O_6$		No biological activity reported.
27.	3'-Geranylchalconaringenin	$C_{25} H_{28} O_5$		This compound belongs to class of flavonoids (Stevens et al., 1999, Rauha, 2001). The derivatives of this compound exhibit antibacterial activity (Feng et al., 2014). Inhibit α-glucosidase irreversibly and moderately inhibit α-amylase activity (Sun et al., 2017).

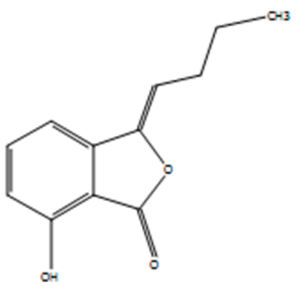
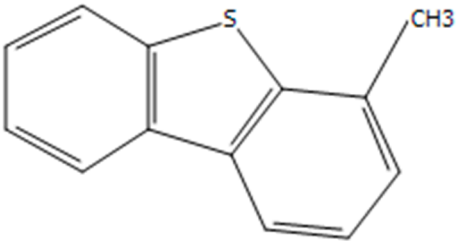
28.	(3b,21b)-12-Oleanene-3,21,28-triol 28-[arabinosyl-(1->3)-arabinosyl-(1->3)-arabinoside]	$C_{45}H_{74}O_{15}$		No biological activity reported.
29.	Chondrillasterol 3-[glucosyl-(1->2)-glucosyl-(1->2)-glucoside]	$C_{47}H_{78}O_{16}$		No biological activity reported.
30.	8,8-Diethoxy-2,6-dimethyl-2-octanol	$C_{14}H_{30}O_3$		Used in citrus fruit flavourin http://pubchem.ncbi.nlm.nih.gov/compound/hydroxylcitronellal_diethyl_acetal#section=Top. Repellent activities against *Tribolium castanenum* (Weiqing et al., 2009).

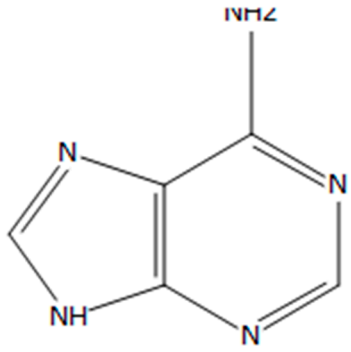
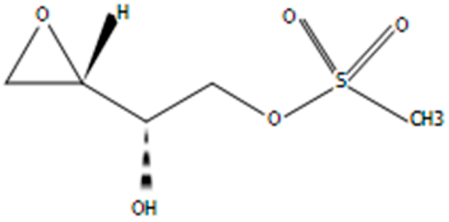
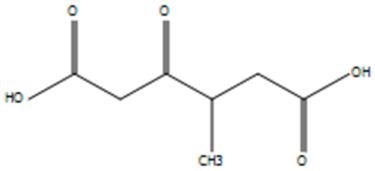
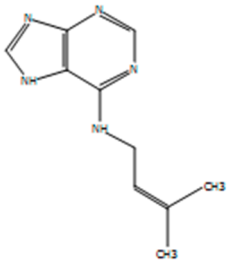
31.	Polidocanol	$C_{30}H_{62}O_{10}$		As a sclerosant for varicose veins (Collini, 2000). Antibacterial activity against *S. aureus* (Sadick et al., 1996). Exhibit excellent performance in improving scalp dryness, itching, micro-inflammation, and in normalizing disturbances of scalp lipids (Schweiger et al., 2013).
32.	Acetylenedicarboxylate	$C_4H_2O_4$		The catabolism of 2-butynedioic acid acts as a precursor of nicotinamide adenine dinucleotide (Heard et al., 1981).

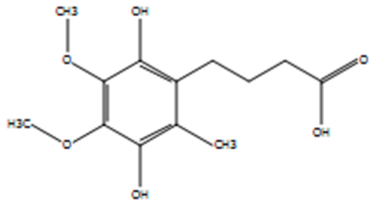
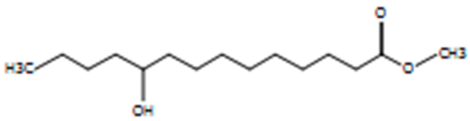
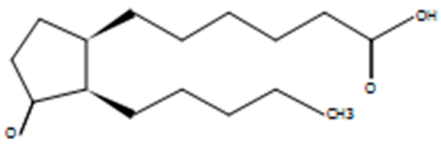
33.	Methimazole	$C_4H_6N_2S$		Anti-thyroid drug, normally used to treat Graves' disease, an inhibitor of the enzyme thyroid peroxidase (Sainis et al., 2016, Urquiza et al., 2013). Its derivatives exhibit antibacterial activity against *P. aeruginosa* and *E. coli* (Sainis et al., 2016). Antibacterial activity against *P. aeruginosa, E. coli, E. faecalis, S. aureus* and *S. epidermidis* bacteria (Urquiza et al., 2013).
34.	Pyrazineethanethiol	$C_6H_8N_2S$		Derivatives of pyrazine inhibiting 50% of the growth of *Streptococcus faecium* and *E. coli* (Bobek and Bloch, 1972).

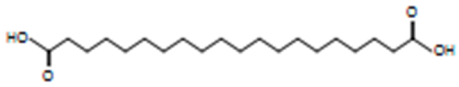
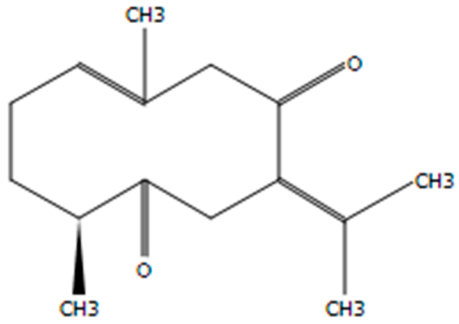
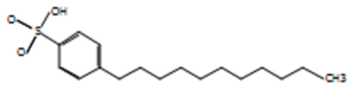
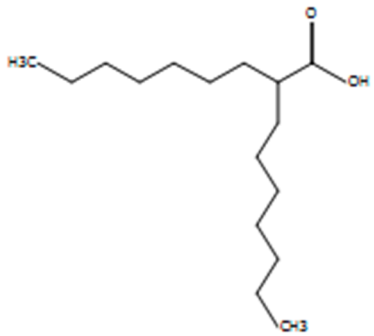
35.	Salmefamol	$C_{19}H_{25}NO_4$		Salmefamol is useful for treatment of respiratory diseases https://www.adooq.com/salmefamol.html. Used as a bronchodilator https://chem.nlm.nih.gov/chemidplus/rn/18910-65-1.
36.	7-hydroxy pelargonic acid	$C_9H_{18}O_3$		It is a saturated fatty acid used as flavourings, the derivative 4-nonanoylmorpholine is an ingredient in some pepper sprays and has antifungal activity, used as herbicide as well as in the preparation of plasticisers and lacquers https://pubchem.ncbi.nlm.nih.gov/compound/nonanoic_acid#section

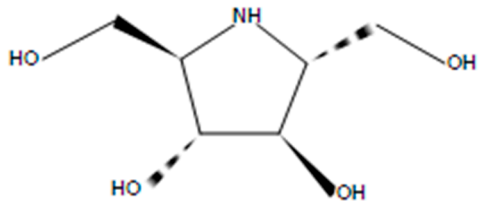
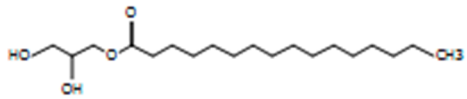
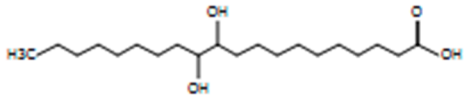
37.	Methyl jasmonate	$C_{13}H_{20}O_3$		A volatile organic compound used in plant defense and several developmental pathways such as germination of seed, root growth, flowering, fruit ripening, and senescence (Cheong and Do Choi, 2003). Jasmonate are oxylipin, a derivative of oxygenated fatty acid. Exhibit antibacterial activity against *E. coli, P. aeruginosa, S. aureus, S. epidermidis* and *C. albicans* (Andrys et al., 2018).
38.	Trimetazidine	$C_{14}H_{22}N_2O_3$		Treat angina pectoris inhibiter of long-chain 3-ketoacyl CoA thiolase activity (Kantor et al., 2000).

39.	3-Butylidene-7-hydroxyphthalide	$C_{12}H_{12}O_3$		Antidiabetic activities, effective agent for the prevention or treatment of diabetes mellitus in a mammal. (D'orazio et al., 2007). Used traditionally for medicinal purposes in Asia, Europe, and North America (Leon et al., 2017). Phthalides display different biological activities including antibacterial, antifungal, insecticidal, cytotoxic, and anti-inflammatory effects (Leon et al., 2017).
40.	4-Methyldibenzothiophene	$C_{13}H_{10}S$		No biological activity reported.

41.	Adenine	$C_5 H_5 N_5$		Basic unit of DNA and RNA and involved in protein synthesis (Pardee, 1954).
42.	1,2-Epoxy-3,4-butanediol 4-methanesulfonate	$C_5 H_{10} O_5 S$		No biological activity reported.
43.	4-Methyl-3-oxoadipate	$C_7 H_{10} O_5$		An inducer of the *mml* gene cluster in *Pseudomonas reinekei* MT1 (Marín et al., 2010). Intermediate in the degradation of 4-ML by *P. reinekei* MT1(Marín et al., 2010).
44.	Isopentenyladenine	$C_{10} H_{13} N_5$		Promoting the growth of cytokinin-requiring tobacco (*Nicotiana tabacum*) callus (Laloue et al., 1977, Gajdošová et al., 2011).

				Isopentenyladenine and their ribosides exhibit anti-aging activities on skin cells and cause dedifferentiation and apoptosis in leukaemia cells (Bewley et al., 2006).
45.	Idebenone Metabolite (Benzenebutanoic acid, 2,5-dihydroxy-3,4-dimethoxy-6-methyl-)	$C_{13}H_{18}O_6$		Bioactive compound isolated from the extracts of *Casuarina equisetifolia* (Pawar and Nasreen, 2018). No biological reported activity.
46.	10-Hydroxymyristic acid methyl ester	$C_{15}H_{30}O_3$		These are rare hydroxylated fatty acid methyl esters isolated from aquatic microbial sources (Littlefield-Wyer et al., 2008).
47.	(1R,2R)-3-oxo-2-pentyl-cyclopentanehexanoic acid	$C_{16}H_{28}O_3$		No biological reported activity.

48.	Eicosanedioic acid	$C_{20}H_{38}O_4$		Also called arachidic acid, used for the production of detergents, photographic materials and lubricants (Shin, 2004). https://www.ebi.ac.uk/chebi/searchId.do?chebiId=CHEBI Exhibit antifungal activity (Pereira et al., 2016).
49.	Dehydrocurdione	$C_{15}H_{22}O_2$		Dehydrocurdione are terpenoids show remarkable antibacterial activity against *B. subtilis* (Diastuti et al., 2014)
50.	N-Undecylbenzenesulfonic acid	$C_{17}H_{28}O_3S$		Serve as disinfectant to reduce microbial growth in foods especially in seafoods (Mixon et al., 2008).
51.	2-heptyl-nonanoic acid	$C_{16}H_{32}O_2$		Nonanoate and its analogues exhibit board-spectrum antibacterial activities (Chakravorty et al., 2012).

52.	DMDP	$C_6H_{13}NO_4$		Naturally occurring sugar analogue, having activities against several plant parasitic nematode species (Birch et al., 1993).
53.	1-Monopalmitin	$C_{19}H_{38}O_4$		Exhibit bactericidal activities against *Helicobacter pylori* (Sun et al., 2003). No other reported activity.
54.	11,12-dihydroxy arachidic acid	$C_{20}H_{40}O_4$		Also called arachidic acid, used for the production of detergents, photographic materials and lubricants (Shin, 2004). https://www.ebi.ac.uk/chebi/searchId.do?chebiId=CHEBI Exhibit antifungal activity (Pereira et al., 2016).

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