

Supplementary Material

**Medicinal plants used to treat infectious diseases in central part
and a northern district of Bangladesh - an ethnopharmacological
perception**

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Table S1: Chemical compounds isolated and antimicrobial activity reported from plants recommended by the respondents during the ethnopharmacological survey in Bangladesh

Plant name (Family)	Literature review	
	Phytochemistry- key compounds isolated	Antimicrobial activity reported
<i>Abroma augusta</i> (L.) L.f. (Fam. Malvaceae)	Taraxerol (Khanra et al., 2017)	Antibacterial activities against Gram-positive (<i>Bacillus subtilis</i> , <i>Bacillus megaterium</i> and <i>Staphylococcus aureus</i>) and Gram-negative (<i>E. coli</i> , <i>Shigella dysenteriae</i> , <i>Shigella sonnei</i> and <i>Salmonella typhi</i>) bacteria and antifungal activity against <i>Aspergillus flavus</i> , <i>Aspergillus niger</i> , <i>Candida albicans</i> , <i>Rhizopus oryzae</i> and <i>Aspergillus fumigatus</i> (Saikot, et al., 2012).
<i>Acmella oleracea</i> (L.) R.K. Jansen (Fam. Asteraceae)	(2E,5Z)-N-isobutylundeca-2,5-diene-8,10-diynamide. (Cheng et al., 2015); rhamnogalacturonan (Maria-Ferreira et al., 2014); spilanthol, (E)-N-isobutylundeca-2-en-8,10-diynamide and (R, E)-N-(2-methylbutyl)undeca-2-en-8,10-diynamide (Moreno et al., 2012); (2E)-N-(2-methylbutyl)-2-undecene-8,10-diynamide, (2E,7Z)-N-isobutyl-2,7-tridecadiene-10,12-diynamide, and (7Z)-N-isobutyl-7-tridecene-10,12-diynamide (Nakatani and Nagashima 1992).	Antimicrobial activity of crude extracts of <i>Acmella oleracea</i> against <i>Pseudomonas aeruginosa</i> , <i>Streptococcus salivarius</i> , <i>Streptococcus viridans</i> , <i>Streptococcus mutants</i> , <i>Bacillus megaterium</i> , <i>Neisseria catarrhalis</i> and <i>Neisseria catarrhalis</i> with ZIs of 9-27mm (Thompson et al., 2012).
<i>Aegle marmelos</i> (L.) Corrêa (Fam. Rutaceae)	Alkaloids and phenols (Mujeeb et al., 2014); 1-5, marmesiline, 6-(4-acetoxy-3-methyl-2-butenyl)-7-hydroxycoumarin, 6-(2-hydroxy-3-Hydroxymethyl-3-butenyl)-7-hydroxycoumarin, marmelonine and 8-hydroxysmyrindiol (Kothari et al., 2011); tannins, flavonoids, coumarins, saponins and triterpenoids (Chakthong et al., 2012)	Antibacterial activity against <i>B. subtilis</i> , <i>S. aureus</i> , <i>P. aeruginosa</i> with MIC 100, 75, 25µg/ml respectively (Rejiniemon et al., 2014)
<i>Allium sativum</i> L. (Fam. Amaryllidaceae)	Trisulfide, di-2-propenyl and diallyl disulphide (Londhe et al., 2011); Alliin (S-allyl cysteine sulfoxide) (Douiri et al., 2013); 1,2-dithiolane, diallyldisulfide, 3-vinyl-1,2-dithiacyclohex-5-ene, diallyl trisulfide, ursolic acid and β-amyrin (Wahid et al., 2017); Diallyl sulfide, diallyl tetrasulfide, and 3-vinyl-[4H]-1,2-dithiin (Plata et al., 2017); (Allyl(methylthio)methyl, (methylthio)methyl (Z)/(E)-1-propenyl and allyl 1-(methylthio)propyl disulfides), (heptyl methyl, methyl octyl, allyl hexyl, allyl octyl and propyl (propylthio)methyl sulfides) (Radulovic et al., 2015); Ajoene	Antibacterial activity against <i>S. mutans</i> (ZI 34.9 ± 0.58 mm; Mathai et al., 2017); Antibacterial activity against <i>P. aeruginosa</i> (MIC 67.00 µg/mL; Karuppiah and Rajaram et al., 2012); Antibacterial activity against <i>S. aureus</i> (ZI 14.8 mm), <i>P. aeruginosa</i> (ZI 21.1 mm), and <i>E. coli</i> (ZI 11.0 mm) (Casella et al., 2013); Antibacterial activity against <i>Bacillus subtilis</i> , <i>S. aureus</i> , <i>E. coli</i> and <i>Klebsiella pneumonia</i> with MICs of 100-150 µg/mL (Meriga et al 2012); Antibacterial activity against <i>E. coli</i> , <i>P. aeruginosa</i> , <i>B. subtilis</i> , <i>S.aureus</i> , <i>K. pneumoniae</i> , <i>S. sonnei</i> ,

	[(E,Z)-4,5,9 Trithiadodeca 1,6,11 Triene 9-oxide] and thiosulfinates (Ledezma and Aritz-Castro, 2006); S-allylcysteine, S-allyl mercaptocysteine, saponins, Nalpha-fructosyl arginine (Amagase 2006); N-trans-Coumaroyloctopamine, N-trans-feruloyloctopamine, guaiacylglycerol-beta-ferulic acid ether, and guaiacylglycerol-beta-caffeic acid ether (Ichikawa et al., 2003); 3-(allyltrisulfanyl)-2-aminopropanoic acid (Kang et al., 2010)	<i>Staphylococcus epidermidis</i> and <i>S. typhi</i> with MICs of 0.05- 1.0 mg/ml (Gull et al., 2012); Antibacterial activity against ten isolates of <i>Trichophyton rubrum</i> with MIC ₅₀ and MIC ₉₀ of allicin ranged between 0.78-12.5 µg/ml (Aala et al., 2012)
<i>Aloe vera</i> (L.) Burm.f. (Fam. Asphodelaceae)	5-(hydroxymethyl)-7-methoxy-2-methylchromone, 5-((4E)-2'-oxo-pentenyl)-2-hydroxymethylchromone, and 7-hydroxy-5-(hydroxymethyl)-2-methylchromone (Zhong et al., 2013); 1-((3-((4-O-beta-D-glucopyranosyl)-β-D-xylopyranosyloxymethyl)-1-hydroxy-8-alpha-L-rhamnopyranosyloxy)naphthalene-2-yl)-ethanone, 10-O-β-D-glucopyranosyl aloenin, aloenin B, aloesin, 8-C-glucosyl-(R)-aloesol, 8-C-glucosyl-7-O-methyl-(S)-aloesol, and isoaloesin D (Wu et al., 2013); 3-hydroxy-1-(1,7-dihydroxy-3,6-dimethoxynaphthalen-2-yl)propan-1-one (Kong et al., 2017); Aloins A and B, aloemodin (Kline et al., 2017); <i>Achromobacter aloeverae</i> sp. nov. (Kuncharoen et al., 2017); 9-dihydroxyl-2'-O-(Z)-cinnamoyl-7-methoxy-aloesin (Kim et al., 2017); P - coumaric acid, ascorbic acid, pyrocatechol and cinnamic acid (Lawrence et al., 2009)	Antibacterial activity against <i>Escherichia coli</i> with ZI 22.05 ± 0.06 mm and against <i>Staphylococcus aureus</i> with ZI 27.17 ± 0.02 mm (Subramani et al., 2018); Antibacterial activity against methicillin resistant <i>Staphylococcus aureus</i> (MRSA) with MIC ₉₀ (48±4) mg/L (Kong et al., 2017); Antibacterial activity against <i>Pseudomonas aeruginosa</i> with MIC ≤ 200 µg/mL (Goudarzi et al., 2015); Antibacterial activity against <i>Bacillus subtilis</i> , <i>Staphylococcus aureus</i> , <i>Escherichia coli</i> and <i>Klebsiella pneumoniae</i> with MIC MIC 0.195-1.56 mg/ml (Ndhlala et al., 2009)
<i>Alstonia scholaris</i> (L.) R. Br. (Fam. Apocynaceae)	Lupeol, betulin, 3-hydroxy-11-ursen-28,13-olide, betulinic acid, oleanolic acid and ursolic acid (Wang et al., 2016); Normavacurine-21-one (1), 5-hydroxy-19, 20-E-alschomine, and 5-hydroxy-19, 20-Z-alschomine (Liu et al., 2015); Flavonoids, proanthocyanidins and phenolics, proanthocyanidins (Ganjewala and Gupta, 2013)	Antibacterial activity of leaves against <i>E. faecalis</i> , <i>P. aeruginosa</i> with MIC 0.781 µg/mL and against <i>K. pneumonia</i> with MIC 1.56 µg/mL (Liu et al., 2015)
<i>Amaranthus spinosus</i> L. (Fam. Amaranthaceae)	(14E,18E,22E,26E)-methyl nonacos-14,18,22,26 tetraenoate, β-sitosterol (Mondal and Maity, 2016); Gallic acid (Tukun et al., 2014); 7-p-coumaroyl apigenin 4-O-β-D-glucopyranoside (spinoside), α-xylofuranosyl uracil, β-D-ribofuranosyl adenine and β-sitosterol glucoside (Shah et al., 2005); Amaranthine and isoamaranthine (betalains), hydroxycinnamates, quercetin and kaempferol glycosides (Stintzing et al., 2004).	Antibacterial effect of 14E,18E,22E,26E)-methyl nonacos-14,18,22,26 tetraenoate-against <i>S. aureus</i> ML-59, <i>Bacillus licheniformis</i> 10341, <i>Shigella boydii</i> 8, <i>Vibrio cholera</i> 811, <i>Vibrio cholera</i> 854 and <i>Vibrio alginolyteus</i> with MIC value of 25 µg/mL (Mondal and Maity, 2016)

<p><i>Andrographis paniculata</i> (Burm.f.) Nees (Fam. Acanthaceae)</p>	<p>Roseoside, 5,4'-dihydroxyflavonoid-7-O-β-D-pyranglucuronatebutylester, 7,8-dimethoxy-2'-hydroxy-5-O-β-D-glucopyranosyloxyflavon, 14-deoxyandrographiside, and andrographolide. (Zhang et al., 2015)</p>	<p>Antibacterial and antibiofilm efficiency of ethyl acetate extract at 100 µg/ml of the extract was more effective in the strains of <i>E. coli</i> (Rasool et al., 2018)</p>
<p><i>Artemisia absinthium</i> L. (Fam. Asteraceae)</p>	<p>(-)-(3S,5Z)-2,6-dimethyl-2,3-epoxyocta-5,7-diene and (-)-(3S,5Z)-2,6-dimethylocta-5,7-dien-2,3-diol (Julio 2017); Artemetin and hydroxypelenolide (de Almeida 2016); Caruifolin D (Zeng et al., 2015); Trans-caryophyllene and dihydrochamazulene (Martínez-Díaz et al., 2015); Sabinene, sabinyl acetate and α-phellandrene (Mihajilov-Krstev et al., 2014); Alpha-pinene, sabinene, beta-pinene, α-phellandrene, p-cymene, chamazulene, alpha-phellandrene and chamazulene (Mohammadi et al., 2014); Anabsinthin, absinthin C and isoanabsinthin (Turak et al., 2014); Borneol, methyl hinokiate, isobornyl acetate, β-gurjunene and caryophyllene oxide. (Joshi 2013); Anabsin, anabsinthin, and 3'-hydroxyanabsinthin 9-geranyl-p-cymene and 9-geranyl-alpha-terpinene, 9-(15,16-dihydro-15-methylene)-geranyl-p-cymene and 9-(15,16-dihydro-15-methylene)-geranyl-alpha-terpinene, Thujones, rans-sabinyl acetate, myrcene, beta-pinene , linalool, trans-sabinol and 1,8-cineole (Judzentiene et al., 2009); (Z)-epoxyocimene and chrysanthenyl acetate (Juteau 2003)</p>	<p>Antibacterial activity of essential oil against wound and stool bacterial pathogen with MIC < 0.08 - 2.43 mg/mL and 0.08 - 38.80 mg/mL, respectively (Mihajilov-Krstev et al., 2014); Antibacterial activity against <i>M. luteus</i> with MIC 25 ± 4 µg/mL and MIC 58 ± 8, 65 ± 8, 84 ± 15 and 91 ± 13 µg/mL against <i>M. flavus</i>, <i>B. subtilis</i>, <i>P. chrysogenum</i> and <i>A. fumigatus</i> respectively. (Joshi 2013)</p>
<p><i>Azadirachta indica</i> A. Juss. (Fam. Meliaceae)</p>	<p>3-(Acetyloxy)-8-(3-furyl)-2a, 4a, 4b, 4c,5,5a, 6, 6a, 8, 9,9a, 10a,10b-13 hydrogen-2a,5a,6a,5-tetramethyl-3-[[[(2E)-2-methyl-1-oxo-2-butenyl]oxy]-methyl ester), azadirachta A, AZ-B, AZ-D, AZ-H, AZ-I, deacetylsalannin and azadiradione (Gao et al., 2017); endophytic actinomycetes (Verma et al., 2009); Mahmoodin and Naheedin (Siddiqui et al., 1992)</p>	<p>Antibacterial activity of Azadirachtin against <i>E. faecalis</i> with MBC 2.6% (Shah et al., 2016); Antibacterial activity against <i>Campylobacter jejuni</i>, <i>Carnobacterium spp.</i>, <i>Lactobacillus curvatus</i>, <i>Lactobacillus sakei</i> and <i>Leuconostoc sp.</i> with ZI 11.33 ± 0.58 to 22.67 ± 0.58 mm (Serrone et al., 2014); Antibacterial activity against <i>Salm. typhi</i>, <i>Escherichia coli</i> and <i>Vibrio cholera</i> with MIC 64 µg/ml and ZI 6.2- 12.3 mm (Baritkar et al., 2014);</p>

		Antibacterial activity of chloroform extracts against <i>L. monocytogenes</i> ATCC 43256 with MIC 4.0 mg/mL and against <i>L. monocytogenes</i> ATCC 49594 with 5.0 mg/mL; Antibacterial activity against multi-drug-resistant <i>Vibrio cholerae</i> of serotypes O1, O139 and non-O1, non-O139 with MBC values 2.5- > 5, and 10 mg/ml respectively (Thakurta et al., 2007)
<i>Boerhaavia diffusa</i> L. (Fam. Nyctaginaceae)	Punarnavine (Dhingra and Valecha 2014); boeravinone G (Aviello et al, 2011); eupalitin 3-O- β -D-galactopyranosyl-(1'' \rightarrow 2'')-O- β -D-galactopyranoside, 3,3',5-trihydroxy-7-methoxyflavone, 4',7-dihydroxy-3'-methylflavone and 3,4-dimethoxyphenyl-1-O- β -D-apiofuranosyl-(1'' \rightarrow 3')-O- β -D-glucopyranoside (Maurya et al., 2007); 3,4-dihydroxy-5-methoxycinnamoyl-rhamnoside, quercetin 3-O-rhamnosyl(1-->6)galactoside (quercetin 3-O-robinobioside), quercetin 3-O-(2''-rhamnosyl)-robinobioside, kaempferol 3-O-(2''-rhamnosyl)-robinobioside, 3,5,4'-trihydroxy-6,7-dimethoxyflavone 3-O-galactosyl(1 \rightarrow 2)glucoside [eupalitin 3-O-galactosyl(1-->2)glucoside], caffeoyltartaric acid, kaempferol 3-O-robinobioside, eupalitin 3-O-galactoside, quercetin and kaempferol (Ferrerres et al., 2005); Boeravinone D, boeravinone E, boeravinone G, boeravinone H (Borrelli et al., 2005); Liriodendrin and syringaresinol mono-beta-D-glucoside (Lami et al., 1991)	Antimicrobial activities of crude extracts against <i>S. aureus</i> , <i>S. dysenteriae</i> <i>Candida albicans</i> with average zone of inhibition ranging from 0-9.77 mm at concentration 500 μ g/disc (Apu et al., 2012).
<i>Bombax ceiba</i> L. (Fam. Bombacaceae)	Mangiferin (Xu et al., 2017); taraxeryl acetate, squalene, taraxerone, β -sitosterol palmitate, taraxerol, 4-methyl stigmast-7-en-3-ol, 1H-indole-3-carboxylic acid, 6-O-palmitoylsitosteryl-D-glucoside, 12- β -hydroxyl-pregnane-4, 16-diene-3, 20-dione, loliolide and 5-(hydroxymethyl) furfural (Wang et al., 2014); 3,4,5-trimethoxyphenol 1-O-beta-D-xylopyranosyl-(1 \rightarrow 2)- β -D-glucopyranoside (Faizi et al., 2011); Cholesterol, stigmasterol, campesterol and α -amyrin, linarin, saponarin, cosmetin, isovitexin, xanthomicrol and apigenin (Wang et al 2014); 1', 1''-bis-2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,7-dihydroxy-5-O-xylopyranosyloxy-2H-1-benzopyran (Saleem et al., 2003); 7-hydroxycadalene, 8-formyl-7-hydroxy-5-isopropyl-2-methoxy-3-	Antibacterial activity against <i>S. typhi</i> with ZI 19 mm and against <i>S.aureus</i> with ZI 24 mm (Rehman et al., 2017)

	<p>methyl-1,4-naphthoquinone, 7-hydroxy-5-isopropyl-2-methoxy-3-methyl-1,4-naphthoquinone (Sreeramulu, 2001); Isohemigossylic acid lactone-2-methyl ether (Puckhaber, Stipanovic, 2001), isohemigossypol-1-methyl ester, 2-O-methylisohemigossylic acid lactone, bombaxquinone B and lacinilene C (Zang et al., 2007)</p>	
<p><i>Cassia angustifolia</i> Vahl (Fam. Leguminosae)</p>	<p>Tinnevellin glycoside, isorhamnetin-3-O- β-gentiobioside, apigenin-6,8-di-C-glycoside, emodin-8-O- β-D-glucopyranoside, kaempferol, aloe emodin, D-3-O-methylinositol, sucrose (Wu et al., 2007); kampferol-3-rutinoside, calyxanthone, 3-methoxy-4-hydroxy-benzoic acid, p-dimethylaminobenzaldehyde, 3,4-dihydroxybenzoic acid, sennoside A and sennoside B (Dhanani et al., 2017); quercimeritrin, scutellarein and rutin (Ahmed et al., 2016); madagascin (3-Isopentenylxyemodin) and 3-geranyloxyemodine (Epifano et al., 2015); 3-O-$\{\beta$-D-glucuronopyranosyl-(1 \rightarrow 4)-$[\beta$-D-galactopyranosyl-(1 \rightarrow 2)]-β-D-xylopyranosyl-(1 \rightarrow 3)-β-D-glucopyranosyl}-2,16α-dihydroxy-4,20-hydroxy methyl olean-12-ene-28-oic acid (Khan and Srivastava, 2009)</p>	<p>The antimicrobial activity of <i>Cassia angustifolia</i> extracts against <i>Staphylococcus aureus</i>, <i>Streptococcus mutans</i>, <i>Lactobacillus casei</i>, <i>Lactobacillus acidophilus</i>, <i>Bacillus megaterium</i>, <i>Candida albicans</i>, <i>Aspergillus niger</i>, and <i>Rhizopus oryza</i> were evaluated (VijayaSekhar et al., 2016).</p>
<p><i>Cassia fistula</i> L. (Fam. Leguminosae)</p>	<p>Aspartic acid, glutamic acid, and lysine (Barthakurb et al., 1995); fistulaquinones A-C (Zhou et al., 2017); 2,9-dihydroxy-7-methoxy-4-methylnaphtha[1,2-b]furan-3(2H)-one, vanillic acid, naringenin, glyceryl-1-tetracosanoate, moracin J, 1,3,8-trihydroxyanthraquinone, esculetin, mauritianin, kaempferol 3-neohesperidoside, β-sitosterol and β-daucosterol (Wang et al., 2013); β-sitosterol, stigmasterol, ergosterol, betulinic acid, lupeol, fucosterol, alpha-amyrin and friedelin (Irshad et al., 2013); Benzyl 2-hydroxy-3,6-dimethoxybenzoate, dibenzyl 2,2'-dihydroxy-3,6,3'',6''-tetramethoxy-biphenyl-1,1'-dicarboxylate (Sartorelli et al., 2012); 5-(2-hydroxyphenoxyethyl)furfural, (2'S)-7-hydroxy-5-hydroxymethyl-2-(2'-hydroxypropyl)chromone, benzyl 2-hydroxy-3,6-dimethoxybenzoate, and benzyl 2β-O-D-glucopyranosyl-3,6-dimethoxybenzoate, 5-hydroxymethylfurfural, (2'S)-7-hydroxy-2-(2'-hydroxypropyl)-5-</p>	<p>Antibacterial activity of fruit pulp extracts with ZI 10–20 mm against <i>S. aureus</i>, <i>S. pyogenes</i>, <i>E. coli</i>, <i>P. aeruginosa</i> (Bhalodia et al., 2012)</p>

	methylchromone, chrysophanol and chrysophanein (Kuo et al., 2002).	
<i>Cassia tora</i> L. (Fam. Leguminosae)	Palmitic acid, linoleic acid, linolenic acid, margaric acid, melissic acid, and behenic acid (Shukla et al., 2018); ononitol monohydrate (Antonisamy et al., 2017); rotenoids, sumatrol, rotenone, tephrosin, rotenol, deguelin, and elliptone (Vats 2018); rhein (4, 5-dihydroxyanthraquinone-2-carboxylic acid) (Zhou et al., 2015); obtusifolin-2-glucoside , chryso-obtusin-6-glucoside , and norrubrofusarin- 6-glucoside, questin and chryso-obtusin (Park and Kim, 2011); emodin , alaternin , gluco-obtusifolin, cassiaside , gluco-aurantioobtusin, cassitoroside , toralactone gentiobioside and chrysophanol triglucoside, questin and 2-hydroxyemodin 1-methylether (Hyun et al., 2009); aurantio-obtusin, chryso-obtusin, obtusin, chryso-obtusin-2-O- β -D-glucoside, physcion, emodin, chrysophanol, obtusifolin and obtusifolin-2-O- β -D-glucoside (Jang et al., 2007); β -D-glucopyranosyl(1-->6)-O- β -D-glucopyranoside] (1) and toralactone 9-O-[β -D-glucopyranosyl-(1-->3)-O- β -D-glucopyranosyl-(1-->6)-O- β -D-glucopyranoside] (El-Halawany et al., 2007)	Antibacterial activity against <i>E. faecalis</i> , <i>E. aerogenes</i> , and <i>P. aeruginosa</i> with Zone of inhibition 29 mm (Mishra and Padhy, 2013)
<i>Ceiba speciosa</i> (A. St.-Hil) Ravenna (Fam. Bombacaceae)	Linoleic acid, palmitic acid, malvalic acid, sterculic acid and dihydrosterculic acid (Rosselli et al., 2020).	Antimicrobial activity was used the disc diffusion method against the bacteria <i>Escherichia coli</i> , <i>Shigella</i> spp and <i>Staphylococcus aureus</i> with ZIs of 6mm (Braga et al., 2019).
<i>Centella asiatica</i> (L.) Urb. (Fam. Umbelliferae)	Docosyl ferulates, bayogenin, 3 β -6- β -23-trihydroxyolean-12-en-28-oic acid, 3 β -6 β -23-trihydroxyurs-12-en-28-oic acid , D-gulonic acid (Yu et al., 2007); centellin, asiaticin and centellicin (Siddiqui et al., 2007); centellasaponins B, C, and D (Matsuda et al., 2001); asiaticoside (Nowwarote et al., 2013); centelloside, madecassoside, Brahmoside, brahminoside, thankuniside, sceffoleoside, centellose, asiatic-, brahmlic-, centellic- and madecassic acids (James and Dubery 2009);asiatic acid, madecassoside, quercetin, and isoquercetin (Lin et al., 2017)	Antibacterial activity of crude extracts against <i>Bacillus subtilis</i> and antifungal activity of <i>C. asiatica</i> (L.) (Rattanakom and Yasurin, 2014)

<i>Chrozophora prostrata</i> Dalzell & A.Gibson (Fam. Euphorbiaceae)	Glycosidessuch as 3,5,6,7,8-pentamethoxyxanthone-1-O-rhamnosyl (1 → 6) glucopyranoside, 3,5,8-trimethoxyxanthone-1-O-glucopyranoside and 2-acetonyl-5-methyl-7-hydroxy-6-C-glucopyranosyl chromone-2"-O-glucopyranoside Agrawal and Singh, 1988).	No report of antimicrobial activity
<i>Cissampelos pareita</i> L. (Fam. Menispermaceae)	Magnoflorine, magnocurarine, cissamine , curine , hayatinine and cycleanine (Bala et al., 2017); chalcone-flavone dimer 2-(4-hydroxy-3-methoxyphenyl)-7-(4-methoxyphenyl)-6-(2-hydroxy-4,6-dimethoxybenzoyl)-furano[3,2-g]benzopyran-4-one (Ramirez et al., 2003)	Antibacterial activity of crude extracts against <i>Staphylococcus aureus</i> (ZI= 20 mm), <i>Salmonella typhimurium</i> (ZI= 17 mm), <i>K. pneumoniae</i> (ZI=14 mm) and <i>E. coli</i> (ZI=9 mm) (Ngoci et al., 2014).
<i>Cuminum cyminum</i> L. (Fam. Apiaceae)	α -Pinene, limonene, 1,8-cineole, linalool, linalyl acetate and α -terpineole (Mohammadpour et al., 2012); cuminaldehyde, t-cinnamaldehyde, eucalyptol and eugenol. (Naveed et al., 2013)	Antidiarrheal effect in castor oil and prostaglandin E2 (PGE2) induced diarrhoea compared to standard group 3 mg/kg and atropine sulphate 5 mg/kg. (Sahoo et al., 2014)
<i>Curcuma longa</i> L. (Fam. Zingiberaceae)	Turmerone Q (Yuan et al., 2018); β -sesquiphellandrene and curcumenol (Abdel-Lateef et al., 2016); β -sesquiphellandrene, α -curcumene and p-mentha-1,4 (8)-diene (Hassan et al., 2016); eucalyptol, α -pinene, β -phellandrene, β -pinene, limonene, 1,3,8-p-menthatriene , ascaridole epoxide, 2-methylisoborneol, 5-isopropyl-6-methyl-hepta-3, dien-2-ol (Parveen et al., 2013); curcumin, demethoxycurcumin, bis-demethoxycurcumin (Pistelli et al., 2012); α -turmerone, β -turmerone, α -santalene and curcumene (Singh et al., 2010); α -zingiberene, 1,8-cineole and zerumbone, 1-(3-cyclopentylpropyl)-2,4-dimethylbenzene, β -sesquiphellandrene, germacrene (Hu et al., 1998); curdione, isocurcumenol, curcumenol, curzerene, β -elemene, curcumin, germacrone and curcumol (Chen et al., 2018)	Antibacterial activity of curcumin against <i>Mycobacterium abscessus</i> with MIC128 mg/L (Marini et al., 2018); Antibacterial activity of methanol extract against <i>Bacillus subtilis</i> and <i>Staph. Aureus</i> with MIC 16 μ g/mL and 128 μ g/mL respectively (Ungphaiboon et al., 2005); Antibacterial activity against <i>S. epidermis</i> ATCC 12228, <i>Staph. aureus</i> ATCC 25923, <i>Klebsiella pneumoniae</i> ATCC 10031, and <i>E. coli</i> with MIC 4 to 16 g/L (Niamsa and Sittiwet, 2009); Antibacterial activity of curcumin with MIC 125–250 μ g/mL against methicillin-resistant <i>Staph. aureus</i> (Mun et al., 2013); Antibacterial activity against <i>Staphylococcus aureus</i> with ZI 9- 21 mm (Gupta et al., 2015); Antibacterial activity against methicillin-resistant <i>Staphylococcus aureus</i> with MIC 0.125-2 mg/mL (Kim et al., 2005)
<i>Cynodon dactylon</i> (L.) Pers. (Fam. Poaceae)	2,3-dihydrobenzofuran, tricyclopentadeca-3,7-dien and 2,3-dihydro-3,5-dihydroxy-6-methyl-4H-pyran-4-one and diacetin, 5-hydroxymethylfurfural, maltol, retinol and phytol, 5-hydroxymethylfurfural, ethyl linoleate (Mozafari et al., 2018); cystibenetrimerol A and cystibenetrimerol B (Li et al., 2017); p-	Antibacterial activity of ethanolic extract against <i>Salmonella paratyphi</i> (ZI= 11mm), <i>S. aures</i> (ZI= 9mm), <i>P. aeruginosa</i> (ZI= 9mm) and <i>E. aerogens</i> (ZI= 9mm) at 50 μ gm/ml (Venkatachalam et al., 2018).

	coumaric acid (Karthikeyan et al., 2015); quercetin, kaempferol , rutin, catechin and myricetin, β -carotene, lutein, violaxanthin and zeaxanthin (Muthukrishnan et al., 2015)	
<i>Cynometra ramiflora</i> L. (Fam. Leguminosae)	No report of phytochemical investigation	Iron oxide nanoparticles of the leaf extracts exhibited effective inhibition against <i>E. coli</i> and <i>S. epidermidis</i> (Groiss et al., 2017)
<i>Diospyros malabarica</i> (Desr.) (Fam. Scaridae)	Dihydroflavonol glycoside 5, 7, 3, 5'-tetra hydroxyl-3'-methoxy flavones, 4'-O-a-L-rhamnopyranoside, anthocyanin, lup-20 (29)-3n-3a, 27-diol-29, lup-20 (29)-3n-3 β -diol-29, taraxerone, gallic acid, peregrinol, hexacosane, hexacosanol, β -sitosterol, betulin, betulinic acid, methyl ester acetate, methylester B-D-glycoside of β -sitosterol (Kaushik et al., 2013).	Antibacterial activity against <i>E. coli</i> strains and antifungal activity against <i>Candida albicans</i> (Kaushik et al., 2013).
<i>Eupatorium odoratum</i> L. (Fam. Asteraceae)	2'-hydroxy-4,4',5',6'-tetramethoxy chalcone and sosakuranetin. (Bose et al., 1973); Acoradiene, bornyl acetate, camphene, <i>p</i> -cymene and α -phellandrene; 1,6-dimethyl-4-(1-methylethyl)naphthalene (cadalene) and 5-hydroxy-7,4'-dimethoxyflavanone (Kouamé et al., 2013); Trans-caryophyllene ,delta-cadinene, alpha-copaene, caryophyllene oxide, germacrene-D, and delta-humulene. (Ling et al , 2013); Isosakuranetin (5,7-dihydroxy-4'-methoxyflavanone), persicogenin (5,3'-dihydroxy-7,4'-dimethoxyflavanone) , 5,6,7,4'-tetramethoxyflavanone and 4'-hydroxy-5,6,7-trimethoxyflavanone, 2'-hydroxy-4,4',5',6'-tetramethoxychalcone and 4,2'-dihydroxy-4',5',6'-trimethoxychalcone, acacetin (5,7-dihydroxy-4'-methoxyflavone) and luteolin (5,7,3',4'-tetrahydroxyflavone) (Suksamrarn et al., 2004); Pregeijerene , germacrene D , alpha-pinene , beta-caryophyllene , vestitenone , beta-pinene , delta-cadinene , geijerene , bulnesol , and transocimene, 7-Dihydroxy-6,4'-dimethoxyflavanone (Pisutthanan et al.,2006); kaempferol-3-methoxy, rhamnetin, tamarixetin , quercetin , kaempferol, apigenin, luteolin, dihydrokaempferide (Yuan et al., 2006)	Antibacterial activity against <i>Erwinia herbicola</i> (Lohnis) and <i>Pseudomonas putida</i> (Kris Hamilton) with MIC and MBC of 0.25–4.0 μ g/ ml. (Abhay et al., 2014)

<p><i>Feronia limonia</i> (L.) Swingle (Fam. Rutaceae)</p>	<p>(-)-(2S)-5,3'-dihydroxy-4'-methoxy-6",6"-dimethylchromeno-(7,8,2",3")- flavanone, psoralen, bergapten, 5,7,4'-trihydroxy-6,8-di-(3-methylbut-2-enyl)-flavanone, demethylsuberosin, 1-hydroxy-3-methoxy-N-methyl-acridan-9-one, isopimpinellin, xanthotoxin, (E)-5,8-diepoxy-24(ξ)-methylcholesta-6,22-dien-3-ol and 5-(3-acetoxypropenyl)-2-(4-hydroxy-3-methoxyphenyl)-7-methoxy-2,3-dihydroxybenzofuran-3ylmethyl acetate (Rahman and Gray, 2002); eudesma-4 ,11-diene, carvacrol and 1,5-cyclodecandine (Kumar et al., 2010)</p>	<p>Antimicrobial activities of compounds by a microdilution technique against Gram-positive, Gram-negative bacteria and fungi MICs in the range 25-100 µg/ml (Rahman and Gray, 2002)</p>
<p><i>Ficus heterophylla</i> L.f. (Fam. Moraceae)</p>	<p>No phytochemical investigation reported</p>	<p>No antimicrobial activity reported</p>
<p><i>Foeniculum vulgare</i> Mill. (Fam. Umbelliferae)</p>	<p>Trans-anethole, fenchone, estragole and limonene (Akhbari et al., 2018); O-cymene, α-phellandrene, α-pinene and estragole (Garzoli et al., 2018); syringin and 4-methoxycinnamyl alcohol (Lall et al 2015); α-pinene, α-phellandrene, limonene, α-cubebene, β-caryophyllene, estragole, α-humulene, trans-anethole, δ-cadinene and p-anisaldehyde (Xiao et al 2017); Trans-anethole; α-ethyl-p-methoxy-benzyl alcohol; p-anisaldehyde; carvone; 1-phenyl-penta-2,4-diyne and fenchyl butanoate (Sharopov et al., 2017)</p>	<p>Low antimicrobial activity of essential oils from <i>Foeniculum vulgare</i> (Miguel et.al., 2010).</p>
<p><i>Fumaria officinalis</i> L. (Fam. Fumariaceae)</p>	<p>Fuyuziphine, (+/-)-alpha-hydrastine (Pandey et al., 2008); Protopine nitrate and tetrahydrocoptisine hydrochloride, (+)-adlumidine, norsanguinarine. (Dasgupta et al., 1984)</p>	<p>Antimicrobial activity of aqueous extract against <i>Candida albicans</i>, <i>Pseudomonas vulgaris</i>, <i>P. aeruginosa</i> and <i>Klebsiella pneumoniae</i> (Stanojević et al., 2018).</p>
<p><i>Glycyrrhiza glabra</i> L. (Fam. Leguminosae)</p>	<p>Licorice (Ota et al., 2018); formononetin, glabridin, hemileiocarpin, hispaglabridin B, isoliquiritigenin, 4'-O-methylglabridin, and paratocarpin B (Chin et al., 2007); Macedonoside C (Hayashi et al., 2000); glucoliquiritin apioside, prenyllicoflavone A, shinflavone, shinpterocarpin, 1-methoxyphaseollin (Kitagawa et al., 1994); glycyrrhizin, stigmaterol, ergosterol, licochalcone and glabridin (Chakotiya et al., 2017); licochalcone C (Franceschelli et al., 2011); licoagrodione (Li et al., 1998)</p>	<p>Antibacterial activity of glycyrrhizic acid against <i>Pseudomonas aeruginosa</i> with MIC 200 and 100 µg /ml (Chakotiya et al., 2016); Antibacterial activity against <i>S. pyogenes</i> ATCC 19615 with MIC 39-156 µg/ml (Siriwattanasatorn et al., 2016); Antibacterial activity of ethanolic extract of leave with MIC 0.312-5 (mg/mL) and root extract MIC 2.5-5 (mg/mL) against <i>Staphylococcus aureus</i>, <i>Bacillus subtilis</i>, <i>Enterococcus faecalis</i>, <i>Candida albicans</i> (Irani et al., 2010); Antibacterial activity of Licochalcone A against all the</p>

		strains of <i>B. subtilis</i> with MIC 2 to 3 micrograms/ml (Tsukiyama et al., 2002)
<i>Hibiscus rosa-sinensis</i> L. (Fam. Malvaceae)	Kaempferol-7-O-[6"-O-p-hydroxybenzoyl- β -D-glucosyl-(1 \rightarrow 6)- β -D-glucopyranoside] and scutellarein-6-O- α -L-rhamnopyranoside-8-C- β -D-glucopyranoside) (Salib et al., 2011)	Antibacterial activity against <i>Staphylococcus sp. Bacillus sp. and Escherichia coli</i> with ZI 12.75 \pm 1.17 to 16.75 \pm 2.10 mm (Khan et al., 2014); Antibacterial activity against <i>S. mutans and L. acidophilus</i> with MIC 6.25- 25 μ g/ml (Nagarajappa et al., 2015); Antibacterial activity against <i>B. subtilis</i> with ZI 17.00 \pm 2.91 mm and against <i>E. coli</i> 14.50 \pm 1.71 mm (Ruban and Gajalakshmi, 2012)
<i>Holarrhena antidysenterica</i> (Roth) Wall. ex A.DC. (Fam. Apocynaceae)	Antidysentericine (3- β -dimethylaminocon-5-enin-18-one) (Kumar and Ali, 2000)	Antibacterial activity of methanolic extract of stem bark against <i>S. aureus</i> with MIC 95 μ g/ml (Chakraborty and Brantner 1999); Antidiarrheal activity of methanol extract at 200 and 400 mg/kg body wt equivalent to loperamide in castor oil and <i>E.coli</i> induced diarrhoea. (Sharma et al., 2015)
<i>Justicia adhatoda</i> L. (Fam. Acanthaceae)	Vasicine from ethanolic extract of the leaves. (Duraipandiyan et al., 2015); 2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl (Dhankhar et al., 2014); 2-acetyl benzylamine and vasicine acetate (Ignacimuthu and Shanmugam, 2010); Pyrroloquinazoline alkaloids- vasicine, vasicinone, vasicine acetate, 2-acetyl benzyl amine, vasicinolone (Singh and Sharma 2013).	Antibacterial activities against <i>M. luteus</i> (MIC 125 μ g/mL), <i>E. aerogenes</i> (MIC 125 μ g/mL), <i>S. epidermidis</i> (MIC 125 μ g/mL), and <i>P. aeruginosa</i> (MIC 125 μ g/mL). (Duraipandiyan et al., 2015); Hexane extract of leaves, inhibited <i>M. tuberculosis</i> and one multi-drug-resistant (MDR) strain and one sensitive strain at 200 and 50 μ g/ml, respectively (Ignacimuthu and Shanmugam, 2010); Antibacterial activity of vasicine against <i>E. coli</i> (MIC 20 μ g/ml) and antifungal activity against <i>C. albicans</i> (>55 μ g/ml) (Singh and Sharma 2013).
<i>Kalanchoe pinnata</i> (Lam.) Pers. (Fam. Crassulaceae)	[Quercetin 3-O- α -L-arabinopyranosyl (1 \rightarrow 2) α -L-rhamnopyranoside] (Ferreira et al., 2014); quercetin 3-O-beta-D-glucuronopyranoside and quercetin 3-O- β -D-glucopyranoside (Coutinho et al., 2012)	Aqueous extract of <i>K. pinnata</i> enhanced the activity of cefazolin to heal wounds infected with <i>S. aureus</i> and <i>P. aeruginosa</i> (Zakharchenko et al., 2017).

<p><i>Lagenaria siceraria</i> (Molina) Standl. (Fam. Cucurbitaceae)</p>	<p>(E)-4-hydroxymethyl-phenyl-6-O-caffeoyl-β-d-glucopyranoside , 1-(2-hydroxy-4-hydroxymethyl)-phenyl-6-O-caffeoyl-β-d-glucopyranoside , protocatechuic acid , gallic acid , caffeic acid and 3,4-dimethoxy cinnamic acid. (Mohan et al., 2012); 22-deoxocucurbitacin-D, and 22-deoxoisocucurbitacin , avenasterol, codisterol, elesterol, isofucasterol, stigmasterol, sitosterol, compesterol, spinasterol, leucines, phenylalanine, valine, tyrosine, alanine, threonine, glutamic acid, serine, aspartic acid, cystine, cystiene, arginine, and proline, thiamine, riboflavin, niacin and ascorbic acid, vitamin C, β-carotene, vitamin B-complex, pectin, C-friedooleanane-type triterpenes, 3 b-O-(E)-feruloyl-d:C-friedooleana-7, 9 (11)-dien-29-ol (1), 3b-O-(E)-coumaroyl-d:C-friedooleana-7,9(11)-dien-29-ol (2), 3b-O-(E) coumaroyl-d:C-friedooleana-7,9(11)-dien-29-oic acid (3), and methyl 2 b,3 b-dihydroxy-d:C-friedoolean-8-en-29-oate (Prajapati et al., 2010); methyl-α-d-galacturonate, 3-O-acetyl methyl-alpha-d-galacturonate, and beta-d-galactose (Ghosh et al., 2009); 3 Beta-O-(E)-feruloyl-D:C-friedooleana-7,9(11)-dien-29-ol , 3 beta-O-(E)-coumaroyl-D:C-friedooleana-7,9(11)-dien-29-ol , 3 beta-O-(E)-coumaroyl-D:C-friedooleana-7,9(11)-dien-29-oic acid , and methyl 2β,3β -dihydroxy-D:C-friedoolean-8-en-29-oate , 3-epikarounidiol , 3-oxo-D:C-friedooleana-7,9(11)-dien-29-oic acid, bryonolol, bryononic acid, and 20-epibryonolic acid (Chen et al., 2008); Methyl d-galacturonate, 2-O-methyl-D-xylose, and d-xylose (Ghosh et al., 2008).</p>	<p>Antimicrobial activity of crude extracts against <i>E. coli</i>, <i>Enterococcus faecalis</i>, <i>Klebsiella pneumonia</i>, <i>Salmonella typhi</i>, <i>Staphylococcus aureus</i> with ZIs of 6-15mm and antifungal activity of <i>Aspergillus flavus</i> and <i>Aspergillus oryzae</i> with ZIs of 4-14mm (Nagaraja et al., 2011)</p>
<p><i>Lavandula stoechas</i> L. (Fam. Lamiaceae)</p>	<p>Rosmarinic acid (Nunes et al., 2017); fenchone and comphor (Messaoud et al., 2012); fenchone, camphor, 1,8-cineole, and viridiflorol (Benabdelkader et al., 2011); α-fenchone, 1,8-cineole , camphor, and viridiflorol, myrtenyl acetate, α-pinene, pulegone, menthol, menthone (Goren et al., 2002); 18-hydroxy-27-norolean-12,14-dien-30-al-28-oic acid and 3 β-hydroxy-1-oxo-olean-12-ene-30-al-28-oic acid (Topçu et al., 2001)</p>	<p>Antibacterial activity against <i>Staphylococcus aureus</i> with MIC 31.2 μg/ml (Kirmizibekmez et al., 2009) and ZI 8-30 mm against MRSA and MSSA (Roller et al.,2009) Antibacterial activity against <i>Escherichia coli</i> O157:H7, <i>Listeria monocytogenes</i>, <i>Salmonella typhimurium</i>, and <i>Staphylococcus aureus</i> with P < 0.05 (Dadalioglu and Evrendilek, 2004).</p>

<p><i>Lawsonia intermis</i> L. (Fam. Lythraceae)</p>	<p>1,2,4-trihydroxynaphthalene-2-O-β-D-glucopyranoside (Dhouafli et al., 2017); lawsoinermone, inermidioic acid, and inermic acid (Yang et al., 2017); lawsone (2-hydroxy-1, 4-naphthoquinone) (Sarang et al., 2017); (Z)-4,4'-(prop-1-ene-1,3-diyl)diphenol, inermiscarbonates A and B, 4'-hydroxyflavanone, apigenine, kampferol, luteolin, quercetin, and (-)-catechin (Yang et al., 2016); N-hexadecane, (2E)-hexenal, limonene, carvol, geranyl acetone, (E)-caryophyllene, and (E)-anethole (Mengoni et al., 2016); bicoumarin A, biflavonoid A and a biquinone A (Li et al., 2014); 5-Diphenylpent-3-en-1-yne, lawsochylin A-C, lawsonaphthoate A-C (Liou et al., 2013)</p>	<p>Antibacterial activity against <i>Escherichia coli</i>, <i>Salmonella typhi</i>, <i>Klebsiella spp.</i>, <i>Shigella sonnei</i>, <i>Bacillus subtilis</i>, <i>Staphylococcus aureus</i>, <i>Staphylococcus epidermidis</i> with MICs 2.31- 9.27 mg/ml (Gull et al., 2012); Antibacterial activity against <i>Staphylococcus aureus</i> and <i>Pseudomonas aeruginosa</i> (Jeyaseelan et al., 2012); Antibacterial activity against <i>Fusarium oxysporum</i> with MIC 12 µg/mL and against <i>Aspergillus flavus</i> with MIC 50 µg/mL (Rahmoun et al., 2013); Antibacterial activity against <i>B. cereus</i>, <i>B. subtilis</i>, <i>S. aureus</i>, <i>E. coli</i>, <i>P. vulgaris</i>, and <i>P. aeruginosa</i> with ZI 3.8 cm (Sudharameshwari and Radhika, 2006)</p>
<p><i>Mentha x piperita</i> L. (Fam. Lamiaceae)</p>	<p>Menthol, menthofuran, menthyl acetate, menthone and 1,8-cineole (Marwa et al., 2017); linalool and epoxyocimene (Ramos et al., 2017); 5,6,4'-trihydroxy-7,8-dimethoxyflavone, 5,6,4'-trihydroxy-7,8,3'-trimethoxyflavone, 5,6-dihydroxy-7,3',4'-trimethoxyflavone, 5,6-dihydroxy-7,8,3',4'-tetramethoxyflavone and 5,6-dihydroxy-7,8,4'-trimethoxyflavone (Sato and Tamura, 2015); glucuronic acid, galacturonic acid, glucose, galactose and arabinose (Liu et al., 2014); eucalyptol, 3-octanol, borneol, dihydrocarveol, pulegone, carvone, caryophyllene, β-cuvebene, hexadecylene oxide, N-hexadecylene oxide, phytol, α-linolenic acid, 2-monopalmitin, α-amyrin, squalene and vitamin E (Hossain et al., 2014); dodecane, acetoin, acetol, citral, geraniol and octanoic acid (Riachi et al., 2012); linalyl acetate, limonene and p-menth-2-en-ol (Yang et al., 2010)</p>	<p>Antibacterial activity against <i>E.coli</i> with MIC 1.14 mg/mL (Ebani et al., 2018).</p>
<p><i>Musa acuminata</i> Colla (Fam. Musaceae)</p>	<p>Octadeca-9,12,15-trienoic acid, octadeca-9,12-dienoic acid, β-sitosterol, campesterol, stigmasterol (Vilela et al., 2014); Malvidin-3-rutinoside (Kitdamrongsont et al., 2008)</p>	<p>Antibacterial activity against <i>S. aureus</i>, <i>Citrobacter sp.</i>, <i>P. aeruginosa</i>, <i>P. mirabilis</i> and <i>E. aerogenes</i> with ZI 8.0-18.6 mm (Karuppiyah and Mustaffa, 2013)</p>
<p><i>Neolamarckia cadamba</i> (Roxb.) Bossier (Fam. Rubiaceae)</p>	<p>(4-O-methyl) glucuronoxylan (Zhao et al., 2017), Neolamarckines A and B (Qureshi et al., 2011)</p>	<p>Antibacterial activities of crude extracts and phenolic compounds against <i>S. aureus</i> and <i>E.coli</i> (Acharyya et al., 2011)</p>

<p><i>Nigella sativa</i> L. (Fam. Ranunculaceae)</p>	<p>Thymoquinone, thymohydroquinone, dithymoquinone, thymol, nigellicine, carvacrol, nigellimine, nigellidine, and alpha-hederin (Eid et al., 2017); 1,4-cyclohexadiene, longifolene, caryophyllene (Mohammed et al., 2016); pinene, <i>p</i>-cymene, thymol, carvacrol, carvone, 4-terpineol, limonenes, and citronellol (Mollazadeh et al., 2017); Kaempferol, <i>p</i>-coumaroyl acid derivative, thymol-O-sophoroside (Kadam and Lele, 2017); linoleic acid and oleic acid (Ghahramanloo et al., 2017); 3-O-[β-D-xylopyranosyl-(1\rightarrow2)-alpha-L-rhamnopyranosyl-(1\rightarrow2)-beta-D-glucopyranosyl]-11-methoxy-16,23-dihydroxy-28-methylolean-12-enoate, stigma-5,22-dien-3-β-D-glucopyranoside and cycloart-23-methyl-7,20,22-triene-3beta,25-diol (Mehta et al., 2009)</p>	<p>Antibacterial activity against <i>S. aureus</i> with ZI 0-28mm, <i>E. coli</i> (ZI 0-28mm) and <i>B. subtilis</i> (ZI 15-26mm) in combination with <i>Eucalyptus tereticornis</i> (Rasool et al., 2018); Antibacterial activity with MIC 128 μg/mL against <i>Aggregatibacter actinomycetemcomitans</i> (Maraghehpour et al., 2016); Antibacterial activity with ZI 22.3 mm at 0.2 mg/ml against <i>S. mutans</i> (MTCC 497) (Besra and Kumar 2018); Antibacterial activity of thymoquinone with MIC 8-16 μg/ml and MIC₉₀ of 16 μg/ml against MRSA strains (Hariharan et al., 2016); Antibacterial activity of thymoquinone with MIC 8 to 32 μg/ml against <i>Staphylococcus aureus</i> ATCC 25923 and <i>Staphylococcus epidermidis</i> CIP 106510 (Chaieb et al., 2011)</p>
<p><i>Nyctanthes arbor-tristis</i> L. (Fam. Oleaceae)</p>	<p>Hentriacontane, tritriacontane, tetratriacontane and nonacosane, tritriacontane (Biswas et al., 2014); arbortristoside A, B and C, calceolarioside A, 4-hydroxyhexahydrobenzofuran-7one and β-sitosterol (Agarwal and Pal, 2013); Iridoid glycosides, phenylpropanoid glycoside, β-sitosterol (Gadgoli and Shelke 2010).</p>	<p>Antibacterial activity with ZI 0-39 mm against <i>Bacillus subtilis</i>, <i>Bacillus cereus</i>, <i>Bacillus megaterium</i>, <i>Staphylococcus aureus</i>, <i>Streptococcus sp.</i>, <i>Sarcina lutea</i>, <i>Escherichia coli</i>, <i>Shigella dysenteriae</i>, <i>Shigella shiga</i>, <i>Shigella boydii</i>, <i>Shigella sonnei</i>, <i>Pseudomonas aeruginosa</i>. (Khatune et al., 2001)</p>
<p><i>Nymphaea nouchali</i> Burm.f. (Fam. Nymphaeaceae)</p>	<p>Nymphayol (25,26-dinorcholest-5-en-3b-ol), corilagin, gallic acid, gallic acid methyl ester, isokaempferide, kaempferol, quercetin-3-methyl ether, quercetin, 2,3,4,6-tetra-o-galloyl dextroglucose, and 3-o-methylquercetin-3'-o-beta dextroxylopyranoside, apomorphine, nuciferine, and nornuciferine (Raja et al., 2010)</p>	<p>Antibacterial activity against <i>P. aeruginosa</i> with ZI 25 mm, <i>S. aureus</i> with ZI 20 mm and <i>C. albicans</i> with ZI 19 mm, MIC 0.03 mg/ml against <i>K. pneumoniae</i>, <i>S. dysenteriae</i> and <i>E. coli</i>. (Parimala and Shoba 2014); Antibacterial activity against <i>B. subtilis</i> (FO 3026) and <i>S. lutea</i> (IFO 3232) with MIC 128-2048 μg/ml (Dash et al., 2013)</p>
<p><i>Ocimum tenuiflorum</i> L. (Fam. Lamiaceae)</p>	<p>Methyl isovalerate, ethyl isovalerate, tricyclene, thujene, α-pinene, camphene, sabinene, β-pinene, Octen-3-ol, myrcene, phellandrene, terpinene, limonene, eucalyptol, ocimene, terpinene, sabinene hydrate, terpinolene, carene, fenchone, linalool, camphor, camphene hydrate, isoborene, borneol, terpinen-4-ol, terpineol, estragol, eugenol, copaene, zingiberene, bourbonene, elemene, guaiene, β-caryophyllene, bergamotene, sesquiphellandrene, farnesene, sesquisabinene, humulene, bicyclogermacrene, germacrene, longipinene, bisabolene, murolene, β-bisabolene, cadinene, α-bisabolene, cubebene,</p>	<p>Antibacterial activity against <i>Aggregatibacter actinomycetemcomitans</i> and <i>Porphyromonas gingivalis</i> with ZI 40.10 \pm 0.90, 33.79 \pm 1.82 mm respectively (Jayanti et al., 2018); Antibacterial activity against <i>Actinobacillus actinomycetemcomitans</i> with ZI 22 mm (Eswar et al., 2016); Antibacterial activity against <i>E. coli</i>, <i>S. aureus</i>, <i>E. faecalis</i>, <i>Shigella flexneri</i> MIC 0.125-32 μL/mL (Saharkhiz et al., 2015); Antibacterial activity against <i>Streptococcus mutans</i> with ZI 22 mm (Agarwal et al., 2010).</p>

	<p>amorphene, caryophyllene oxide (Yamani et al., 2016); 6-allyl-3',8-dimethoxy-flavan-3,4'-diol, 6-allyl-3-(4-allyl-2-methoxyphenoxy)-3',8-dimethoxyflavan-4'-ol, 5-allyl-3-(4-allyl-2-methoxyphenoxy)-3-(4-hydroxy-3-methoxyphenyl)-7-methoxy-2,3-dihydrobenzofuran, 1,2-bis(4-allyl-2-methoxyphenoxy)-3-(4-hydroxy-3-methoxyphenyl)-3-methoxypropane, 1-(4-hydroxy-3-methoxyphenyl)-1,2,3-tris(4-allyl-2-methoxyphenoxy)propane, 1-allyl-4-(5-allyl-2-hydroxy-3-methoxyphenoxy)-3-(4-allyl-2-methoxyphenoxy)-5-methoxybenzene, and 3-(5-allyl-2-hydroxy-3-methoxyphenyl)-1-(4-hydroxy-3-methoxyphenoxy)-prop-1-ene (Suzuki et al., 2009); Ocimunosides A and B, ocimarin, apigenin, apigenin-7-O-β-D-glucopyranoside, apigenin-7-O-beta-D-glucuronic acid, apigenin-7-O-β-d-glucuronic acid 6"-methyl ester, luteolin-7-O-β-D-glucuronic acid 6"-methyl ester, luteolin-7-O-β-D-glucopyranoside, luteolin-5-O-β-D-glucopyranoside, and 4-allyl-1-O-β-D-glucopyranosyl-2-hydroxybenzene (Gupta et al., 2007).</p>	
<p><i>Paederia foetida</i> L. (Fam. Rubiaceae)</p>	<p>Iridoids, flavonoids, volatile oil (Wang et al., 2014)</p>	<p>Antibacterial activity of ethanolic leaf extract against against enteropathogenic bacteria, <i>Enterobacter aerogenes</i>, <i>Escherichia coli</i>, <i>Klebsiella pneumoniae</i>, <i>Salmonella paratyphi</i>, <i>S. typhi</i>, <i>Shigella dysenteriae</i>, <i>S. sonnei</i> and <i>Vibrio cholera</i> with MIC 1.5-50mg/ml (Rath and Padhy, 2015)</p>
<p><i>Peperomia pellucida</i> Kunth (Fam. Piperaceae)</p>	<p>Dillapiole (Rojas-Martínez et al., 2013); Peperomins A, B, C, and E, 7,8-trans-8,8'-trans-7',8'-cis-7,7'-bis(5-methoxy-3,4-methylenedioxyphenyl)-8-acetoxymethyl-8'-hydroxymethyltetrahydrofuran, 7,8-trans-8,8'-trans-7',8'-cis-7-(5-methoxy-3,4-methylenedioxyphenyl)-7'-(4-hydroxy-3,5-dimethoxyphenyl)-8,8'-diacetoxymethyltetrahydrofuran, sesamin, and isoswertisin (Xu et al., 2006); pellucidin A (Bayma et al., 2000)</p>	<p>Bactericidal activity at MIC 0.20 mg/mL against <i>S. aureus</i> and MIC 0.15 mg/mL against <i>L. ivanovii</i> (Okoh et al., 2017); Antibacterial activity with MICs 31.25-125 mg/L against <i>Edwardsiella tarda</i>, <i>Escherichia coli</i>, <i>Flavobacterium sp.</i>, <i>Pseudomonas aeruginosa</i> (Wei et al., 2011)</p>
<p><i>Phyllanthus niruri</i> L. (Fam. Phyllanthaceae)</p>	<p>Lignans, alkaloids, flavonoids, benzenoids, coumarins, tannins, diterpenes, triterpenes, sterols, phytallates (Than et al., 2006)</p>	<p>Antibacterial activities of extracts against <i>Solanum nigrum</i>, <i>Streptococcus sanguis</i>, <i>Streptococcus salivarius</i>, <i>Streptococcus oralis</i> and <i>Streptococcus mutans</i> with zones of inhibition (ZI) of 9.7-11.6 mm (Sunitha et al., 2017).</p>

<p><i>Piper betle</i> L. (Fam. Piperaceae)</p>	<p>Hydroxychavicol (Singh et al., 2018); eugenol, isoeugenol and allylpyrocatechol 3,4-diacetate (Ali et al., 2018); 4-allylbenzene-1,2-diol (Kavitha et al., 2017); 1-n-dodecanyloxy resorcinol , desmethylenesqualenyl deoxy-cepharadione-A (Atiya et al., 2018); ethyl diazoacetate, tris(trifluoromethyl)phosphine, heptafluorobutyrate, 3-fluoro-2-propylenitrite, 4-(2-propenyl)phenol (Valle et al., 2016a); Piperocerebrosides A and B (Chen et al., 2013); pellitorine , N-isobutyl-2E,4E-dodecadienamide , dehydropiperonaline , piperdardine , piperolein-B , guineensine , (2E,4E)-N-isobutyl-7-(3',4'-methylenedioxyphenyl)-2,4-heptadienamide , syringaresinol-O- β-D-glucopyranoside, pinoresinol (Huang et al., 2010); 6 β-hydroxystigmast-4-en-3-one, β-sitosterol , stigmasterol, oleanolic acid , 23-hydroxyursan-12-en-28-oic acid, β-sitosterol-3-O- β-D-glucoside-6'-O-palmitate, β-daucosterol, (2S) -4'-hydroxy- 2,3-dihydroflavonone-7-O- β-D-glucoside and α-ethyl glucoside (Yin et al., 2009); 4-allyl resorcinol, stigmast-4-en-3,6-dione (Ghosh and Bhattacharya, 2005)</p>	<p>Antibacterial activity against <i>Streptococcus mutans</i> and <i>Streptococcus intermedius</i> with ZI of 11.0 ± 0.1 and 11.3 ± 0.4 mm (Phumat et al., 2018); Antibacterial activity against <i>Candida albicans</i> DMST 8684, <i>C. albicans</i> DMST 5815, <i>Streptococcus gordonii</i> DMST 38731 and <i>Streptococcus mutans</i> DMST 18777 with MICs 0.50, 1.00, 0.50 and 1.00 mg/mL (Phumat et al., 2017); Antibacterial activity against <i>Pseudomonas aeruginosa</i> and <i>Acinetobacter baumannii</i> with MIC $19\mu\text{g/ml}$ - $1250\mu\text{g/ml}$ (Valle et al., 2016b); Antibacterial activity of essential oil with MIC 0.7 microl/ml against <i>A.flavus</i> (Prakash et al., 2010)</p>
<p><i>Pistacia integerrima</i> J. L. Stewart ex Brandis (Fam. Anacardiaceae)</p>	<p>Pistagremic acid (Rauf and Patel, 2017); Naringenin and dihydrokaempferol (Rauf et al., 2016); Integrisedes A and B (Ullah et al., 2013); 2'-hydroxyisoorientin, echioidinin 2'-O- β-D-(6"-O-acetyl) glucopyranoside, chrysoeriol, and diandraflavone A (Ullah et al., 2012); Ethyl gallate (Mehla et al., 2011).</p>	<p>Aqueous fractions showed antibacterial activity against <i>B. subtili</i> (Bibi et al., 2011)</p>
<p><i>Portulaca grandiflora</i> Hook. (Fam. Portulacaceae)</p>	<p>Betaxanthins, portulacaxanthin II and portulacaxanthin III (Trezza and Zrýd, 1991)</p>	<p>Antimicrobial activities of crude ethanolic extract against <i>Bacillus subtilis</i>, <i>E. coli</i>, <i>Pseudomonas aeruginosa</i>, <i>Candida albicans</i>, and <i>Aspergillus niger</i> (Shinde et al., 2014).</p>
<p><i>Psidium guajava</i> L. (Fam. Myrtaceae)</p>	<p>(E)-trans-caryophyllene, α-humulene, trans-nerolidol, β-bisabolene, β-Bisabolol, and hinesol (De Souza et al., 2018); quercetin, quercetin-3-O-α-D-arabinopyranoside, quercetin-3-O-</p>	<p>Antibacterial activity of aqua and ethanolic extract against <i>P. gingivalis</i> with MIC $75\mu\text{L/mL}$ and against <i>A. actinomycetemcomitans</i> with MICs $3.12\mu\text{L/mL}$ and $50\mu\text{L/mL}$</p>

α -D-ribofuranoside, quercetin-3-O- β -D-galactopyranoside, quercetin-3-O- α -D-glucopyranoside, and quercetin-3-O- α -D-xylopyranoside (Zhao et al., 2018); β -caryophyllene, γ -gurjunene, τ -cadinol and calamenene (Wang et al., 2017); Psiguajavadials A, B, guajadial B, guajadial C, and guajadial F (Qin et al., 2017); gallic acid, catechin, chlorogenic acid, caffeic acid, epicatechin, rutin, quercitrin, isoquercitrin, kaempferol, glycosylated campeferol, tocopherol, β -carotene and lycopene (Araújo et al., 2015); betulinic acid and lupeol (Ghosh et al., 2010); Morin, morin-3-O-lyxoside, morin-3-O-arabinoside, quercetin-3-O-arabinoside (Rattanachaikunsopon and Phumkhachorn, 2007); 6,10,14-trimethyl-2-pentadecanone, phytyl-acetate, cubenol, eucalyptin, n-docosanoic acid-p-hydroxy-phenethylol ester, 8-methyl-5,7-dihydroxy-flavonone, 6-methyl-5,7-dihydroxy-flavonone, betulinic acid, carnosol and 2,4,6-trihydroxy-3,5-dimethyl-diphenylketone-4-O-(6"-O-galloyl)- β -D-glucoside (Ouyang et al., 2015); morin-3-O- α -L-arabopyranoside, 2,6-dihydroxy-4-O- β -D-glucopyranosyl-benzophenone, casuarictin, 2,6-dihydroxy-3,5-dimethyl-4-O-(6"-O-galloyl)- β -D-glucopyranosyl)-benzophenone, globulisin A, and kaempferol-3-O- β -D-(6"-galloyl) galactopyranoside (Chen et al., 2015); (+) - Globulol, clovane-2 β , 9 α -diol, 2 β -acetoxyclovan-9 α -ol, (+) - caryolane-1,9 β -diol, ent-T-muurolol, clov-2-ene-9 α -ol, isophytol, tamarixetin, gossypetin, guajaverin, avicularin, chrysin 6-C-glucoside, 3'-O-methyl-3,4-methylenedioxyellagic acid 4'-O-beta-D-glucopyranoside, p-hydroxy-benzoic acid, guavinoside A and guavinoside B (Shao et al., 2014); 1-O-(1,2-propanediol)-6-O-galloyl-beta-D-glucopyranoside, ellagic acid, ellagic acid-4-O-beta-D-glucopyranoside and quercetin-3-O-(6"-galloyl) beta-D-galactopyranoside (Shu et al., 2010); ursolic acid, 1 β , 3 β -dihydroxyurs-12-en-28-oic acid, 2 α ,3 β -dihydroxyurs-12-en-28-oic acid, 3 β ,19 α -dihydroxyurs-12-en-28-oic acid, 19 α -hydroxyurs-12-en-28-oic acid-3-O- α -L-arabinopyranoside, 3 β , 23-dihydroxy urs-12-en-28-oic acid, 3 β , 19 α , 23 β -tri-hydroxyurs-12-en-28-oic acid, 2 α , 3 β , 19 α , 23 β -

(Shetty et al., 2018); Antibacterial activity of *Psidium guajava* combined with *Acacia nilotica*, *Murrayakoenigii* (Linn.) Sprengel, *Eucalyptus* with ZI 23.5 \pm 2.17 mm and 19.83 \pm 1.33 mm against *S. mutans* and *S. sanguis* respectively (Shekar et al., 2016); Antibacterial activity of methanolic extract of leaf with ZI 8.27 and 12.3 mm, and mean ZI of 6.11 and 11.0 mm against *B. cereus* and *S. aureus*, respectively (Biswas et al., 2013); Antibacterial activity with MIC 153 μ g/mL against *E.coli* (Masadeh et al., 2013); Antibacterial activity with MIC <0.076 mg/mL against *S. mutans* (Jebashree et al., 2011); Antibacterial activity with MIC 0.78 μ g/ml against *E. coli* (Dhiman et al., 2011); Antibacterial activity with MIC 62.5 mg/ml against *S.aureus* (Cheruiyot et al., 2009); Antibacterial activity of methanolic and aqueous with MIC 625 μ g/ml and 7.5 mg/ml against *Staphylococcus aureus* (Anas et al., 2008)

	tetrahydroxyurs-12-en-28-oic acid, 3 α ,19 α ,23,24-tetrahydroxyurs-12-en-28-oic acid (Shu et al., 2009); 3 β -p-E-coumaroyloxy-2 α -methoxyurs-12-en-28-oic acid (Begum et al., 2004)	
<i>Quercus infectoria</i> G.Olivier (Fam. Fagaceae)	Ellagic acid-4-O-.[β -D-glucopyranosyl]-10-O-.[β -D-glucopyranosyl]-(4 \rightarrow 1)- β -D-rhamnopyranoside and 2-methyl-3-hydroxymethylene-4,5,6,7,8-pentahydroxynaphthalene (Hamid et al., 2005)	Antibacterial activity against <i>S. aureus</i> and <i>S. sanguis</i> with MIC 0.1563 and 0.0781- 0.1563 mg/ml (Vermani et al., 2009); Antibacterial activity against <i>Staphylococcus aureus</i> , <i>Pseudomonas aeruginosa</i> with MIC 0.0391 mg/mL and against <i>Escherichia coli</i> , <i>Candida albicans</i> with MIC 0.0781 and 0.0195 mg/mL respectively (Sreekanth et al., 2013)
<i>Saraca indica</i> L. (Fam. Leguminosae)	3',5-Dimethoxy epicatechin, 3'-deoxyepicatechin-3-O- β -D-glucopyranoside, 3'-deoxycatechin-3-O- α -L-rhamnopyranoside and epigallocatechin (Ahmad et al., 2016); saracoside, icaraside E3, (+)5'methoxyisolarciresinol-9'-O- β -D-glucopyranoside and nudiposide, 3,4,5-trimethoxyphenyl- β -D-glucopyranoside (Mukherjee et al.,2012); Saracin (Ghosh et al., 1999)	Antibacterial activity against <i>Staphylococcus aureus</i> , <i>Escherichia coli</i> , <i>Pseudomonas aeruginosa</i> , <i>Bacillus cereus</i> , <i>Klebsiella pneumoniae</i> , <i>Proteus mirabilis</i> , <i>Salmonella typhimurium</i> and <i>Streptococcus pneumoniae</i> (Sainath et al., 2009)
<i>Santalum album</i> L. (Fam. Santalaceae)	α -Santalol and β -santalol (Kim et al., 2017); <i>E,E</i> -farnesol, α -bisabolol, dendrolasin (Moniodis et al., 2017); allohydroxy-L-proline (Radhakrishna et al., 1961); Gamma-L-glutamyl-S-(trans-1-propenyl)-L-cysteine sulfoxide (Kuttan et al., 1974); 9(10)Z, α -trans-bergamotenol (Yu et al., 1993); (+)- α -nuciferol, (+)-citronellol, and geraniol (Kim et al., 2005); (Z)-2 β -hydroxy-14-hydro- β -santalol , (Z)-2 α -hydroxy-albumol , 2R-(Z)-campherene-2,13-diol , (Z)-campherene-2beta,13-diol, (Z)-7-hydroxynuciferol and (Z)-1 β -hydroxy-2-hydrolanceol, (Z)- α -santalol , (Z)- β -santalol , (Z)-lanceol , α -santaldiol , and β -santaldiol (Ochi et al., 2005); (7R,8R)-5-O-demethylbilagrewin (Matsuo and Mimaki 2010); vicenin-2 , vitexin , isovitexin , orientin , isoorientin . chrysin-8-C- β -D-glucopyranoside , chrysin-6-C- β -D-glucopyranoside and isorhamnetin (Yan et al., 2011); (9S,10E)-9-hydroxy- α -santalol, (10R,11S)-10,11-dihydroxy- α -santalol,	Antibacterial activity of stem extract against <i>E.coli</i> with ZI 0.6mm, <i>Staphylococcus aureus</i> (ZI 0.4mm) and <i>Pseudomonas</i> (ZI 1.0mm) (Kumar et al., 2006); Antibacterial activity against nine Gram-negative and five Gram-positive bacterial strains with MIC 0.078-5 μ g /ml (Misra and Dey 2012)

	(9E)-11,13-dihydroxy- α -santalol, and (10E)-12-hydroxy- α -santalalic acid (Matsuo and Mimaki 2012)	
<i>Sphaeranthus indicus</i> L. (Fam. Asteraceae)	5 α -hydroperoxy-7 α -hydroxy-isosphaerantholide and (11 α ,13-dihydro-7 α -hydroxyfrullanolide-13-yl)- adenine (Emani et al., 2017); 11,13-dihydro-3-O-(β -digitoxopyranose)-7 α -hydroxy eudasman-6,12-olide (Mishra et al., 2016); Spaeranthine, methyl chavicol, δ -cadinene, α -ionone, para-methoxycinnamaldehyde, α -terpinene, citral, geraniol, geranyl acetate, β -ionone, oscimene, eugenol, sphaeranthene, sphaeranthol, estragole, indicusene, β -Sitosterol, n-triacontanol, phenylurethane, n-pentacosane, stigmasterol and β -sitosterol, 7 α -hydroxyeudesm-4-en-6, 12-olide, 2-hydroxycostic acid, β -eudesmol, ilicic acid, β -D-glucoside of (24S)-24-ethylcholesta-4,22-dien-3- β -ol 7-hydroxyfrullanolide (7HF), sphaeranthanolide, 11 α ,13-dihydro-3 α ,7 α -dihydroxyfrullanolide , 11 α ,13-dihydro-7 α ,13-dihydroxyfrullanolide and 11 α ,13-dihydro-7 α -hydroxy-13-methoxy frullanolide, 7-hydroxy-3',4',5,6-tetramethoxy flavone 7-O- β -D-diglucoside, 5,4'- dimethoxy-3'- prenylbiochanin 7-O- β -D-galactoside (Ramachandran, 2013); 11 α ,13-dihydro-3 α ,7 α -dihydroxy-4,5-epoxy-6 β ,7-eudesmanolide, 11 α ,13-dihydro-7 α -acetoxo-3 β -hydroxy-6 β ,7-eudesm-4-enolide and 3-keto-beta-eudesmol (Pujar et al, 2000)	Antibacterial activity of crude extracts and isolated compounds against <i>Bacillus cereus</i> var. <i>mycoides</i> , <i>Bacillus pumilus</i> , <i>Bacillus subtilis</i> , <i>Bordetella bronchiseptica</i> , <i>Micrococcus luteus</i> , <i>S. aureus</i> , <i>Staphylococcus epidermidis</i> , <i>Klebsiella pneumoniae</i> , <i>Streptococcus faecalis</i> , <i>Salmonella paratyphi A</i> , <i>Salmonella paratyphi B</i> , <i>Salmonella paratyphi C</i> , <i>Shigella Flexneri</i> , <i>Salmonella Enteritidis</i> , <i>Salmonella typhimurium</i> , <i>Shigella sonnei</i> and <i>Vibrio cholera</i> (Garg and Kasera, 1983).
<i>Solanum nigrum</i> L. (Fam. Solanaceae)	(+)-pinoresinol , (+)-syringaresinol , (+)-medioresinol , scopoletin, tetracosanoic acid and β -sitosterol (Zhao et al., 2010); 6-methoy-hydroxycoumarin, syringaresinol-4-O-beta-D-glucopyranoside, pinoresinol-4-O- β -D-glucopyranoside,3,4-dihydroxhbenzoic acid, p-hydroxybenzoic acid, 3-methoxy-4-hydroxyienzoic acid, adenosine (Wang et al., 2007); Solasodine-3-O- β -D-glucopyranoside (Chang et al., 2017); Solanine A (Zhao et al., 2018); solamargine (Zhang et al., 2018); gentisic acid, luteolin, apigenin, kaempferol, and m-coumaric acid (Huang et al., 2010)	Antibacterial activity against <i>Streptococcussanguis</i> , <i>Streptococcus salivarius</i> , <i>Streptococcus oralis</i> and <i>Streptococcus mutans</i> with ZI 12.3-14.6 mm (Sunitha et al., 2017) Antibacterial activity against azole-resistant <i>Candida albicans</i> with MICs of 32 μ g/ml (Chang et al., 2017)

<p><i>Solanum xanthocarpum</i> Schrad. & H. Wendl. (Fam. Solanaceae)</p>	<p>Benzyl benzoate and (E,E)-geranyl linalool, heptacosane, palmitic acid, heptacosane and linoleic acid (Satyal et al., 2015); solasonine, solamargine and khasianine (Shanker et al., 2011); diosgenin and β-sitosterol (Heble et al., 1968); Carpesterol (Singh et al., 2007)</p>	<p>Antibacterial activity against <i>S. aureus</i>, <i>P. aeruginosa</i> with MIC 6.25 mg/mL and 16 mg/mL and against <i>E. coli</i> with MIC 12.5 mg/mL (Kajaria et al., 2012)</p>
<p><i>Swertia chirayita</i> (Roxb.) H.Karst. (Fam. Gentianaceae)</p>	<p>Secoiridoids and xanthenes, i.e. swertiamarin, mangiferin, amarogentin and amaroswerin, gentiopicroside, mangiferin, amarogentin, amaroswerin and amaronitidin (Kumar et al., 2015); swertiachiralatone A, swertiachoside A, swertiachirdiol A and swertiachoside B. (Zhou et al., 2015); Swerchirin, decussatin, 1,8-dihydroxy-3,5,7-trimethoxyxanthone, 1-hydroxy-3,5,7,8-tetramethoxyxanthone, bellidifolin, 1-hydroxy-3, 7-dimethoxyxanthone, methylswertianin, 1-hydroxy-3,5-dimethoxyxanthone, erythrodiol, oleanolic acid, gnetiolactone, scopoletin, sinapaldehyde, syringaldehyde, and β-sitosterol (You et al., 2017); 1,2,8-trihydroxy-6-methoxyxanthone and 1,2-dihydroxy-6-methoxyxanthone-8-O-β-D-xylopyranosyl (Mahendran et al., 2014).</p>	<p>Antibacterial activity against <i>Staphylococcus aureus</i> with zone of inhibition 19 mm (Alam et al., 2009)</p>
<p><i>Tagetes erecta</i> L. (Fam. Asteraceae)</p>	<p>2-hydroxymethyl-non-3-ynoic acid 2-[2,2']-bithiophenyl-5-ethyl ester, coumaric acid, caffeic acid, sinapic acid and ferulic acid. (Ayub et al., 2017); Quercetagetin, the major flavonoid (Wang et al., 2016); Catellatospora tagetis sp. (Zhou et al., 2015); Piperitone and terpinolene. (Armas et al., 2012); 3,4-di-O-[syringate]-alpha-D-glucopyranose, 3,4-di-O-[syringate]-beta-D-glucopyranose and syringic acid (Zhou et al., 2012); 4'-methoxy-eupatolitin-3-O-glucoside, kaempferitrin, rutin, β-sitosterol, daucosterol and gallic acid (Zhang et al., 2010); 2-hydroxymethyl-non-3-ynoic acid 2-[2,2']-bithiophenyl-5-ethyl ester (Gupta and Vasudeva 2010); Zeaxanthin, lutein, lutein esters (Hadden et al., 1999)</p>	<p>Antibacterial activity of root extract with increasing polarity against three gram positive, two Gram-negative bacterial and two fungal strains with MIC 12.5-100 μg/mL (Gupta and Vasudeva 2010)</p>

<p><i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn. (Fam. Combretaceae)</p>	<p>Arjunolic acid, arjunic acid (Singh et al., 2002); arjungenin, arjunoside I, II (Honda et al., 1976); terminoltin (Singh et al., 1995); 2α,19α-Dihydroxy-3Oxo-Olean-12-En28-Olic acid 28-O-β-d-glucopyranoside (Choubey and Srivastava, 2001); arjunetosie (3-O-β-d-glucopyranosyl-2α, 3β, 19α-trihydroxyolean-12-en-28-oic acid 28-O-β-d-glucopyranoside) (Upadhyay et al., 2001); terminic acid, β-sitosterol, oleanolic acid, terminic acid (Anjaneyulu and Prasad, 1983); arjunin, arjunic acid, arjunetin (Row et al., 1970); 2α,3β-dihydroxyurs-12,18-oic acid 28-O-β-d-glucopyranosyl ester, 2α,3β,23-trihydroxyurs-12,18-dien-28-oic acid 28-O-β-glucopyranosyl ester, qudranoside VIII, kajichigoside, 2α,3β,23-trihydroxyurs-23-trihydroxyurs-12,19-dien-28-oic acid 28-O-β-d-glucopyranosyl ester, 3-O-methyl ellagic acid 4'-O-α-l-rhamnophranoside (-)-epicatechin (Wang et al., 2010); arjunolone, arjunone (Sharma et al, 1982); arjunaphthanoloxide (Ali et al, 2003); quercetin(+)-catechin, (+)-gallocatechin and (-) epigallocatechin (Saha and Pawar, 2012); olean-3β, 22β-diol-12-en-28 β-D-glucopyranosie-oic acid (Patnaik et al., 2007); terminarjunoside I and II (Alam et al., 2009); terminoside A, Termionic acid (Ahmad et al., 1983); Arjunolitin (Tripathi et al, 1992); galactopyranoside (Yadava and Rathore, 2000); arjunglucoside IV and V, arjunasides A-E (Wang et al., 2010); luteolin, 14,16-dianhydrogitoxigenin 3-β-d-xylopyranosyl-(1\rightarrow2)-O-β-d- (Pettit et al., 1996)</p>	<p>Antibacterial activity of bark extract against <i>Bacillus subtilis</i>, <i>Staphylococcus aureus</i>, <i>Eschericia coli</i>, <i>Klebsiella pneumoniae</i>, <i>Pseudomonas aeruginosa</i> and <i>Salmonella typhi</i> with ZI 15.0 \pm 0.7 mm, 15.5 \pm 0.7 mm, 15.0 \pm 1.5 mm, 15.5 \pm 0.7 mm, 15.0 \pm 0.7 mm, 15.0 \pm 0.7 mm; antibacterial activity of leave extract against <i>B. subtilis</i>, <i>S. aureus</i>, <i>E. coli</i>, <i>K. pneumoniae</i>, <i>P. aeruginosa</i>, <i>S. typhi</i> with ZI 13.5 \pm 0.7 mm, 16.5 \pm 0.7 mm, 14.0 \pm 0.5 mm, 15.0 \pm 0.5 mm, 13.5 \pm 0.7 mm, 14.0 \pm 0.7 mm (Kumar et al., 2017); Antibacterial activity against <i>E. coli</i>, <i>P. aeruginosa</i> and <i>S. aureus</i> with MBC 25 mg/ml against (Gupta and Kumar 2016)</p>
<p><i>Terminalia chebula</i> Retz. (Fam. Combretaceae)</p>	<p>Methyl gallate (Acharya et al.,2015); Gallotannin 1,2,6-tri-O-galloyl-β-D-glucopyranose (Bag and Chattapadhyay 2017); Kaempferol-3-O-rutinoside , Pyrogallol (Singh and Kumar 2013)</p>	<p>Antibacterial activity against <i>Enterobacter aerogenes</i> with ZI 31 mm and MIC 0.039 mg/ml (Singh and Kumar 2013); Antibacterial activity against <i>Helicobacter pylori</i> with MIC 125 mg/L and MBC 150 mg/l (Malekzadeh et al., 2001)</p>
<p><i>Tinospora cordifolia</i> (Fam. Menispermaceae)</p>	<p>N-formylasimilobine 2-O-β-d-glucopyranosyl-(1\rightarrow2)-β-d-glucopyranoside (tinoscorside A) and N-acetylasimilobine 2-O-β-d-glucopyranosyl-(1\rightarrow2)-β-d-glucopyranoside (tinoscorside B), clerodane diterpene, tinoscorside C and sinapyl 4-O-β-d-apiofuranosyl-(1\rightarrow6)-O-β-D-glucopyranoside (tinoscorside D)</p>	<p>Antibacterial activity against <i>Staphylococcus aureus</i>, <i>Pseudomonas aeruginosa</i>, <i>Klebsiella pneumoniae</i>, <i>Escherichia coli</i>, <i>Bacillus subtilis</i> and <i>Proteus mirabilis</i> with MICs 5- 125 μg/mL. (Chakraborty et al., 2014)</p>

	(Phan et al., 2010); 11-hydroxymustakone, <i>N</i> -methyl-2-pyrrolidone, <i>N</i> -formylannonain, cordifolioside A, magnoflorine, tinocordiside, syringin (Sharma et al., 2012)	
<i>Tribulus terrestris</i> L. (Fam. Zygophyllaceae)	Flavonoids, alkaloids, saponins, lignin, amides and glycosides (Shahid et al., 2016)	Antimicrobial activity against <i>Staphylococcus aureus</i> , <i>Streptococcus sanguis</i> , <i>Actinomyces viscosus</i> <i>Escherichia coli</i> and <i>Enterococcus faecalis</i> with the MIC 35.0 to 20mg/ml. (Soleimanpour et al., 2015)
<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomson (Fam. Apocynaceae)	Alkaloids such as tylophorine, tylophorinine, tylophrinidine and septidine isolated from the leaves and roots (Rao et al., 1971)	<i>In vitro</i> antifungal activities of two phenanthroindolizidine alkaloids, tylophorinidine and tylophorinine, against <i>Candida</i> species with MICs of 2-4 µg/ml (dhilman et al., 2012).
<i>Uraria picta</i> (Jacq.) DC. (Fam. Fabaceae)	5,7-Dihydroxy-2'-methoxy-3',4'-methylenedioxyisoflavanone and 4',5-dihydroxy-2',3'-dimethoxy-7-(5-hydroxyoxochromen-7yl)-isoflavanone (Rahman et al., 2007)	Antibacterial activity of isoflavones against bacteria (both Gram positive and Gram negative) and fungi with MIC 12.5–200 µg/ml. (Rahman et al., 2007)
<i>Vateria indica</i> L. (Fam. Dipterocarpaceae)	Vateriaphenol F, vateriosides A (resveratrol dimer) and B (resveratrol tetramer) (Ito et al., 2010)	<i>In vitro</i> antibacterial activity of the <i>V. indica</i> resin based herbal ointments revealed significant activity against <i>E. coli</i> . (Kavitha and Geethu, 2018)
<i>Viola odorata</i> L. (Fam. Violaceae)	Rutin, isovitexin, and kaempferol-6-glucoside (Orhan et al., 2015); ethyl hexanoate and (2E,6Z)-nona-2,6-dienol, (E,E)-hepta-2,4-dienal, hexanoic acid, limonene, tridecane, and eugenol (Saint-Lary et al., 2014); butyl-2-ethylhexylphthalate (30.10%) and 5,6,7,7a-tetrahydro-4,4,7a-trimethyl-2(4H)-benzofuranone (Akbari et al., 2012); violacin A (Ireland et al., 2006)	Antibacterial activity against <i>S. aureus</i> with MIC 1.6 mg/ml (Zarrabi et al., 2013)
<i>Vitex negunda</i> L. (Fam. Lamiaceae)	6-Hydroxy-4-(4-hydroxy-3-methoxyphenyl)-3-hydroxymethyl-7-methoxy-3,4-dihydro-2-naphthaldehyde, vitedoin A, vitexdoin F, detetrahydroconidendrin, vitexdoin E, 4-oxosamin, L-sesamin, (+)-beechenol, ligballinol, 2-(4-hydroxyphenyl)-6-(3-methoxy-4-hydroxyphenyl)-3,7-dioxabicyclo[3.3.0]octane, (-)-pinoresinol, balanophonin, thero-guaiacylglycerol-β-coniferyl aldehyde ether,	Antibacterial activity against <i>Candida albicans</i> with ZI 14mm, against <i>Bacillus subtilis</i> and <i>Staphylococcus aureus</i> with ZI 12mm (Nagarsekar et al., 2010).

trans-p-coumaryl aldehyde, coniferyl aldehyde, 5,7-dihydroxycoumarin, trans-3,5-dimethoxy-4-hydroxy-cinnamic aldehyde, frambinone and alternariol 4-methyl ether (Li et al., 2016); cannabilignin and isocannabilignin (Li et al., 2017); vitexnegheteroins E-G and vitexnegheteroin H (Hu et al., 2016); (3R,4S)-6-hydroxy-4-(4-hydroxy-3-methoxyphenyl)-5,7-dimethoxy-3,4-dihydro-2-naphthaldehyde-3a-O- β -D-glucopyranoside, 6,7,4'-trihydroxy-3'-methoxy-2,3-cyclolign-1,4-dien-2a,3a-olide (Nie et al., 2016); caffeic acid, neochlorogenic acid, cryptochlorogenic acid, isochlorogenic acid B, isochlorogenic acid A, isochlorogenic acid C, schaftoside, isoschaftoside, flavosativaside, vitexin 2''-rhamnoside, and kaempferol 3-(6''-malonylglucoside) (Huang et al., 2015); 2 α , 3 α , 24-trihydroxyurs-12, 20(30)-dien-28-oic acid-28-O- β -D-glucopyranosyl ester, corosolic acid, vulgarsaponin A and 2 α , 3 α , 24-trihydroxyurs-12-en-28-oic acid-28-O- β -D-glucopyranosyl ester (Chen et al., 2014); 2-Methyl pyromeconic acid 3-O- β -D-glucopyranoside-6'-(O-4''-hydroxybenzoate), 6'-O-p-hydroxybenzoyl-gardoside (Huang et al., 2013); (3S, 5S, 8R, 9R, 10S, 13S, 16S)-3-acetoxy-9, 13-epoxy-16-hydroxy-labda-15, 16-olide, and (3S, 5S, 8R, 9R, 10S, 13S, 16R)-3-acetoxy-9, 13-epoxy-16-hydroxy-labda-15, 16-olide (Zheng et al., 2012); negunfurol, negundoal, negundonorins A and B, 3-formyl-4,5-dimethyl-8-oxo-5H-6,7-dihydronaphtho[2,3-b]furan and 3-epi-corosolic acid (Zheng et al., 2012); 1,4a,5,7a-tetrahydro-1-beta-D-glucosyl-7-(3',4'-dihydroxybenzoyloxymethyl)-5-ketocyclopenta[c]pyran-4-carboxylic acid, luteolin-7-O- β -D-glucoside, nishindaside, negundoside, and agnuside (Sharma et al., 2009); viridiflorol, β -caryophyllene, sabinene, 4-terpineol, gamma-terpinene, caryophyllene oxide, 1-oceten-3-ol, and globulol (Singh et al., 1999); 3 β -acetoxyolean-12-en-27-oic acid, 2 α , 3 α -dihydroxyoleana-5,12-dien-28-oic acid, 2- β ,3 α -

	diacetoxyoleana-5,12-dien-28-oic acid, and 2 α ,3 β -diacetoxy-18-hydroxyoleana-5,12-dien-28-oic acid (Chawla et al., 1992)	
<i>Zingiber montanum</i> (J.Koenig) Link ex A.Dietr. (Fam. Zingiberaceae)	Sabinene, (E)-1-(3',4'-dimethoxyphenyl)buta-1,3-diene, terpinen-4-ol, γ -terpinene and β -phellandrene (Verma et al., 2018); Zerumbone (Al-amin et al., 2012)	Antibacterial activity against Gram-positive strains with MIC 125-500 μ g/ml (Verma et al., 2018)
<i>Zingiber zerumbet</i> (L.) Roscoe ex Sm. (Fam. Zingiberaceae)	Zerumbone (Sithara et al., 2018); α -caryophyllene, humulene epoxide II, camphene and fenchene (Wu et al., 2017); catechin, quercetin, rutin, luteolin, myricetin, kaempferol; gallic acid, ferulic acid, caffeic acid, cinnamic acid (Ghasemzadeh et al., 2016); α -Humulene, kaempferol, kaempferol-3-O-methylether and 3'',4''-O-diacetylafzelin (Ajish et al., 2015); 5-hydroxy zerumbone (5-hydroxy-2E,6E,9E-humulatrien-8-one) and zerumbone oxide (Jang et al., 2005); 6-methoxy-2E,9E-humuladien-8-one and stigmast-4-en-3-one (Jang and Seo 2005); p-hydroxybenzaldehyde, vanillin, kaempferol-3,4',7-O-trimethylether (3), kaempferol-3-O-methylether (4), kaempferol-3,4'-O-dimethylether (5), 4''-O-acetylafzelin (6), kaempferol-3-O-(4-O-acetyl-alpha-L-rhamnopyranoside)], 2'',4''-O-diacetylafzelin (7), kaempferol-3-O-(2,4-O-diacetyl-alpha-L-rhamnopyranoside)], and 3'',4''-O-diacetylafzelin (8), kaempferol-3-O-(3,4-O-diacetyl-alpha-L-rhamnopyranoside)] (Jang et al., 2004)	Antibacterial activity against <i>S. aureus</i> with MIC of 30.0 μ g/mL (Ghasemzadeh et al., 2016); Antibacterial activity against <i>V. parahaemolyticus</i> with MIC 128 μ g/mL (Kader et al., 2011)
<i>Ziziphus jujube</i> Mill (Fam. Rhamnaceae)	3-O-(trans-p-coumaroyl)-aliphilic acid, 3-O-(cis-p-coumaroyl)-aliphilic acid, 3 β -O-(trans-p-coumaroyl)-maslinic acid, pomonic acid, 2-oxo-pomolic acid, benthamic acid, terminic acid, oleanic acid, betulinic acid, quercetin 3-O-rutinoside, quercetin 3-O-robinobioside, apigenin, traumatic acid, (Z)-4-oxotetradec-5-enoic acid, 7(E)-9-keto-hexadec-7-enoic acid, 9(E)-11-oxo-octadecenoic acid and magnoflorine (Bai et al., 2016); quercetin-3-O-rutinoside, zizyphus saponins I and II, ceanothic acid,	Antibacterial activity against <i>Escherichia coli</i> with MIC 0.65 \pm 0.22 mg/ml and against <i>Staphylococcus aureus</i> with MIC 2.26 \pm 0.68 mg/ml, against <i>Candida albicans</i> with MIC 2.35 \pm 0.38 and against <i>Aspergillus fumigatus</i> with 2.86 \pm 0.7 mg/ml (Daneshmand et al., 2013); Antibacterial activity against <i>Phomopsis azadirachtae</i> with MIC 7.65 μ g/mL and against <i>Staphylococcus aureus</i> with MIC 28.8 μ g/mL (Daneshmand et al., 2013)

	<p>alphitolic acid, maslinic acid, 2α-hydroxyursolic acid, zizyberanalic acid, epiceanothic acid, ceanothenic acid, betulinic acid, and oleanolic acid (Guo et al., 2011); jujuboside D, jujuboside A, 5,7,4'-trihydroxyflavonol-3-O-beta-D-rhamnopyranosyl-(1->6)-beta-D-glucopyranoside , 6'''-coumaroylspinosin and phenylalanine (Liu et al., 2004); jujuboside E, jujuboside B , jujuboside A, betulic acid, stearic acid and inosine (Bai et al., 2003); Jubanines F-J, nummularine B, daechuine-S3 and mucronine K (Kang et al., 2015); Snakin-Z (Daneshmand et al., 2013); 1,3-di-O-[9(Z)-octadecenoyl]-2-O-[9(Z),12(Z)-octadecadienoyl]glycerol , 3-O-[9(Z)-octadecenoyl]betulinic acid , and betulinic acid (Su et al., 2002)</p>	
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