

Antibacterial activities of plant-derived xanthenes

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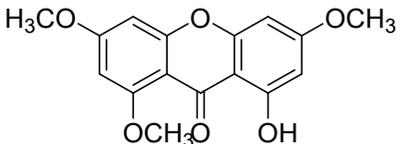
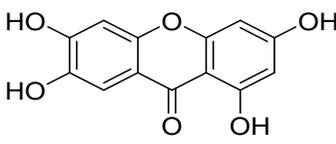
^b*Beijing Key Laboratory of Detection Technology for Animal-Derived Food Safety and Beijing Laboratory for Food Quality and Safety, China Agricultural University, Beijing 100193, China*

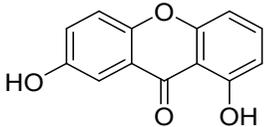
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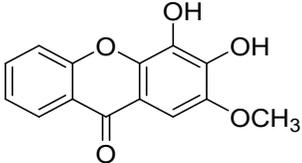
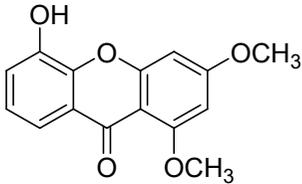
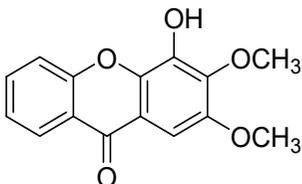
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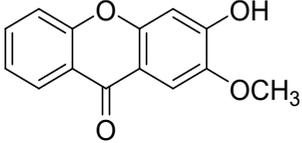
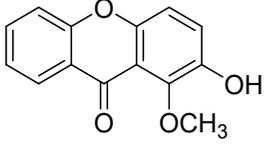
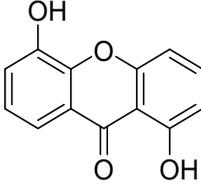
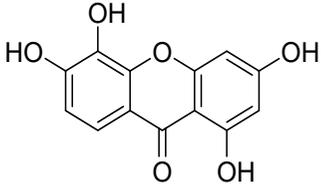
1. The detail information of all xanthenes.

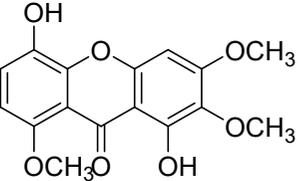
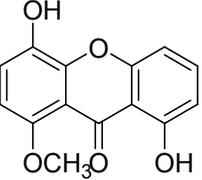
Table S1. The names, sources, structures, MIC values and bacteria species of the all xanthenes.

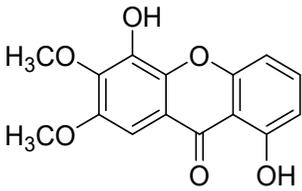
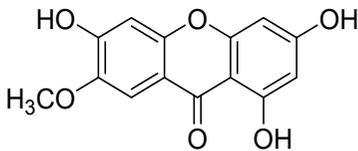
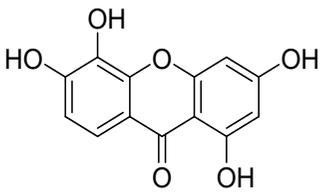
No.	Names	Sources	Structures	Strains	MICs	Ref.
Oxygen containing						
1	1-Hydroxy-3,6,8-trimethoxyxanthone	<i>Halenia elliptica</i>		<i>Staphylococcus aureus</i>	>100	1
				<i>Bacillus subtilis</i>	>100	
				<i>Escherichia coli</i>	256\>512	
				<i>Enterobacter aerogenes</i>	256\>512	
				<i>Klebsiella pneumoniae</i>	>512	
				<i>Providencia stuartii</i>	256\>512	
				<i>Pseudomonas aeruginosa</i>	>512	
2	Norathyriol	<i>Cratoxylum cochinchinense</i> , <i>Garcinia mangostana</i>		MRSA	18.75	8
				<i>Bacillus subtilis</i>	37.5	
				<i>Enterococcus faecalis</i>	300	
				VRE	>300	
				<i>Salmonella typhi</i>	>300	
				<i>Shigella sonnei</i>	>300	
				<i>Pseudomonas aeruginosa</i>	37.5	

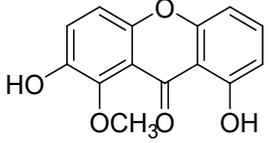
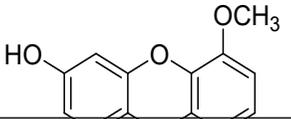
3	Euxanthone	<i>Garcinia dulcis</i>		MRSA	>128	18
				<i>Staphylococcus aureus</i>	≥128	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	\	
				<i>Micrococcus luteus</i>	32	
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	128	
				<i>Staphylococcus aureus</i>	>128	
				<i>Staphylococcus epidermidis</i>	32	
				<i>Escherichia coli</i>	16	
				<i>Staphylococcus typhimurium</i>	32	
				<i>Pseudomonas aeruginosa</i>	16	
				4	1,7-Dihydroxy-8-methoxyxanthone	
<i>Staphylococcus aureus</i>	37.5					
<i>Enterococcus faecalis</i>	300					
MRSA	75					
VRE	300					
<i>Salmonella typhi</i>	>300					

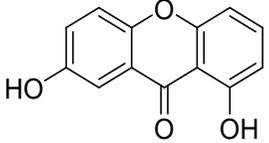
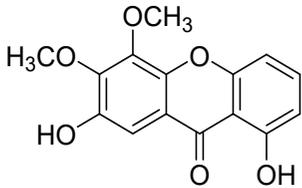
				<i>Shigella sonnei</i>	>300	
				<i>Pseudomonas aeruginosa</i>	300	
5	3,4-Dihydroxy-2-methoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	16-32\64	40
6	5-Hydroxy-1,3-dimethoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	64-128\>512	40
7	4-hydroxy-2,3-dimethoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	64-128\>512	40

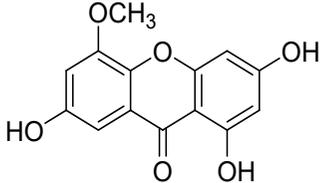
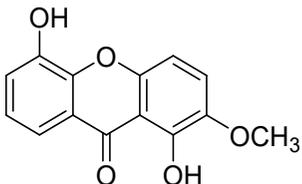
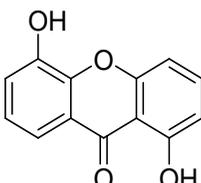
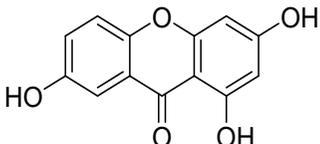
8	3-hydroxy-2-methoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	64\32	40
9	2-hydroxy-1-methoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	64\32\128	40
10	1,5-Dihydroxy-xanthone	the roots of <i>Garcinia propinqua</i>		<i>Bacillus cereus</i>	8	43
				<i>Bacillus subtilis</i>	32	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	128	
11	1,3,5,6-Tetrahydroxy-xanthone	<i>Garcinia fusca</i>		<i>Helicobacter pylori</i>	2.02\16.25	46
				<i>Micrococcus luteus</i>	128	
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	64	
				<i>Staphylococcus aureus</i>	128	
				<i>Staphylococcus epidermidis</i>	128	
				<i>Escherichia coli</i>	64	
				<i>Salmonella</i>	32	

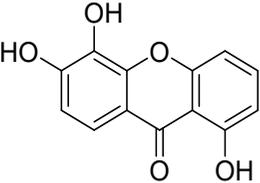
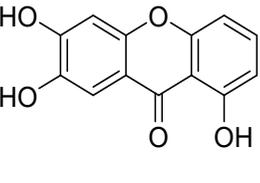
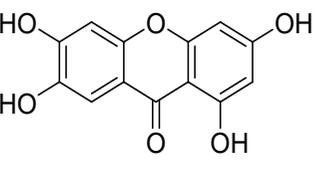
				<i>typhimurium</i>		
				<i>Pseudomonas aeruginosa</i>	128	
12	Cratosumatranone F	the twigs of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	128	51
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	128	
				<i>Staphylococcus aureus</i>	>128	
				<i>Staphylococcus epidermidis</i>	128	
				<i>Escherichia coli</i>	64	
				<i>Salmonella typhimurium</i>	32	
				<i>Pseudomonas aeruginosa</i>	128	
13	1,5-Dihydroxy-8-methoxy-xanthone	the twigs of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	32	51
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	128	
				<i>Staphylococcus aureus</i>	128	
				<i>Staphylococcus epidermidis</i>	32	
				<i>Escherichia coli</i>	32	
				<i>Salmonella typhimurium</i>	32	
				<i>Pseudomonas</i>	16	

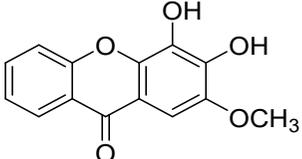
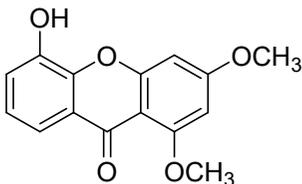
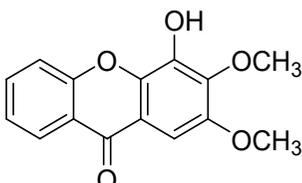
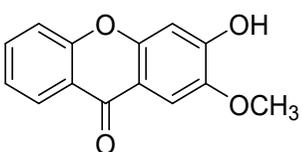
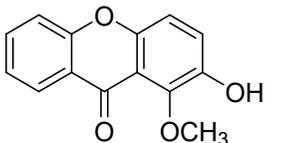
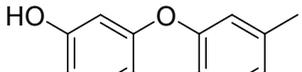
				<i>aeruginosa</i>		
14	1,5-Dihydroxy-6,7-dimethoxy-xanthone	the twigs of <i>Cratoxylum sumatranum</i>	 <p>The structure shows a xanthone core with hydroxyl groups at positions 1 and 5, and methoxy groups at positions 6 and 7.</p>	<i>Micrococcus luteus</i> <i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Staphylococcus aureus</i> <i>Staphylococcus epidermidis</i> <i>Escherichia coli</i> <i>Salmonella typhimurium</i> <i>Pseudomonas aeruginosa</i>	32 16 64 128 16 64 32 16	51
15	1,3,6-Trihydroxy-7-methoxy-xanthone	the twigs of <i>Cratoxylum sumatranum</i>	 <p>The structure shows a xanthone core with hydroxyl groups at positions 1, 3, and 6, and a methoxy group at position 7.</p>	<i>Micrococcus luteus</i> <i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Staphylococcus aureus</i> <i>Staphylococcus epidermidis</i> <i>Escherichia coli</i> <i>Salmonella typhimurium</i> <i>Pseudomonas aeruginosa</i>	128 128 128 >128 128 64 4 128	51
16	1,3,5,6-Tetrahydroxy-	the twigs of <i>Cratoxylum</i>	 <p>The structure shows a xanthone core with hydroxyl groups at positions 1, 3, 5, and 6.</p>	<i>Micrococcus luteus</i>	128	51

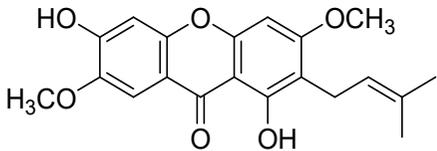
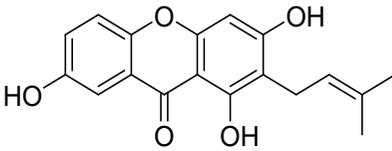
	xanthone	<i>sumatranum</i>		<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	64	
				<i>Staphylococcus aureus</i>	128	
				<i>Staphylococcus epidermidis</i>	128	
				<i>Escherichia coli</i>	64	
				<i>Salmonella typhimurium</i>	32	
				<i>Pseudomonas aeruginosa</i>	128	
17	2,8-Dihydroxy-1-methoxyxanthone	the twigs of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	64	51
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	128	
				<i>Staphylococcus aureus</i>	128	
				<i>Staphylococcus epidermidis</i>	64	
				<i>Escherichia coli</i>	16	
				<i>Salmonella typhimurium</i>	32	
				<i>Pseudomonas aeruginosa</i>	64	
18	Cratoxyarborenone F	the twigs of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	64	51
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	128	

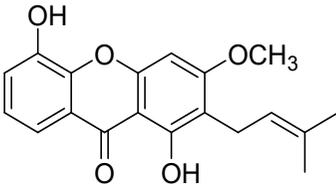
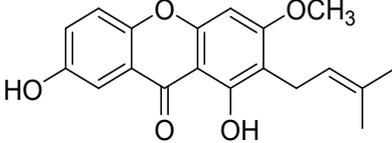
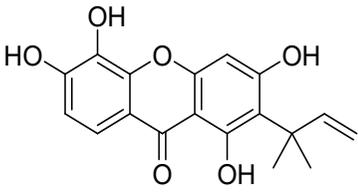
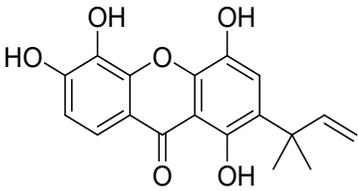
				<i>Staphylococcus aureus</i> 128 <i>Staphylococcus epidermidis</i> 64 <i>Escherichia coli</i> 32 <i>Salmonella typhimurium</i> 64 <i>Pseudomonas aeruginosa</i> 128	
19	1,7-Dihydroxyxanthone	<i>Harungana madagascariensis</i> , <i>Garcinia succifolia</i>		MRSA >25\6.25\>256 <i>Staphylococcus aureus</i> >25\6.25\>256 <i>Bacillus subtilis</i> >256 <i>Pseudomonas aeruginosa</i> >256 <i>Escherichia coli</i> >256 VRE >256	8
20	1, 7-dimethoxy-5,6-trihydroxyxanthone	<i>Hypericum sampsonii</i>		MRSA >128	63

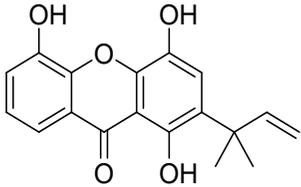
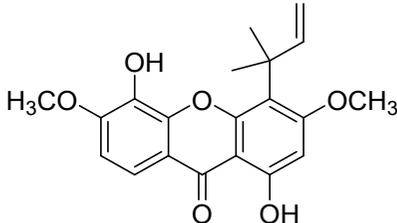
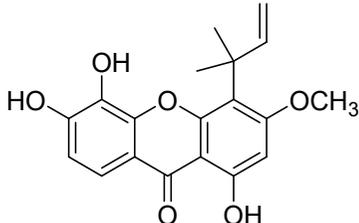
21	5-Methoxy-1,3,7-trihydroxyxanthone	<i>Hypericum sampsonii</i>		MRSA	>128	63
22	2-Methoxy-1,5-dihydroxyxanthone	<i>Hypericum sampsonii</i>		MRSA	>128	63
23	1,5-Dihydroxyxanthone	<i>Garcinia succifolia</i>		<i>Staphylococcus aureus</i>	>256	66
				<i>Bacillus subtilis</i>	>256	
				<i>Pseudomonas aeruginosa</i>	>256	
				<i>Escherichia coli</i>	>256	
				MRSA	>256	
				VRE	>256	
24	1,3,7-Trihydroxyxanthone	<i>Garcinia succifolia</i>		<i>Staphylococcus aureus</i>	>256	66
				<i>Bacillus subtilis</i>	>256	
				<i>Pseudomonas aeruginosa</i>	>256	
				<i>Escherichia coli</i>	>256	
				MRSA	>256	

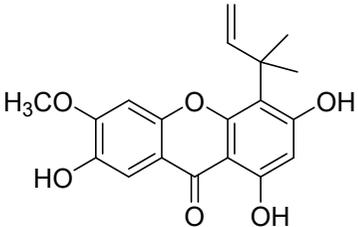
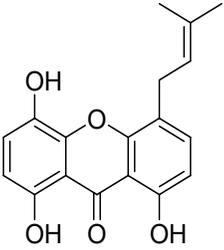
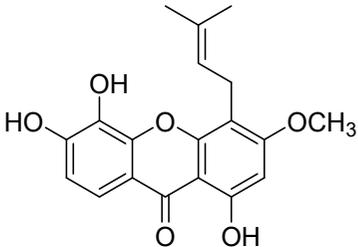
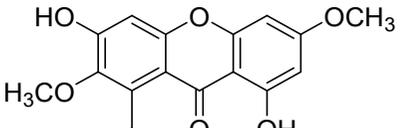
				VRE	>256	
25	1,5,6-Trihydroxyxanthone	<i>Garcinia succifolia</i>		<i>Staphylococcus aureus</i>	64	66
				<i>Bacillus subtilis</i>	64	
				<i>Pseudomonas aeruginosa</i>	>256	
				<i>Escherichia coli</i>	>256	
				MRSA	64	
				VRE	>256	
26	1,6,7-Trihydroxyxanthone	<i>Garcinia succifolia</i>		<i>Staphylococcus aureus</i>	64	66
				<i>Bacillus subtilis</i>	128	
				<i>Pseudomonas aeruginosa</i>	>256	
				<i>Escherichia coli</i>	>256	
				MRSA	64	
				VRE	>256	
27	1,3,6,7-Tetrahydroxyxanthone	<i>Garcinia succifolia</i>		<i>Staphylococcus aureus</i>	256	66
				<i>Bacillus subtilis</i>	256	
				<i>Pseudomonas aeruginosa</i>	>256	
				<i>Escherichia coli</i>	>256	
				MRSA	>256	

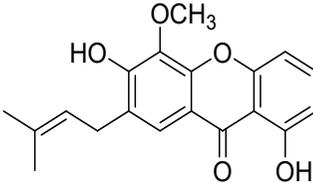
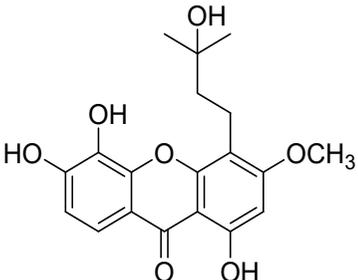
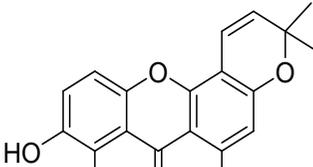
				VRE	>256	
28	3,4-dihydroxy-2-methoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	16\32\64	40
29	5-hydroxy-1,3-dimethoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	64\128\>512	40
30	4-hydroxy-2,3-dimethoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	64\128\>512	40
31	3-hydroxy-2-methoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	64\32	40
32	2-hydroxy-1-methoxy-xanthone	<i>Kielmeyera variabilis</i>		MRSA	64\128\32	40
33	Questin	<i>Cassia obtusifolia</i>		<i>Micrococcus luteus</i>	25	18
				<i>Staphylococcus</i>	25	

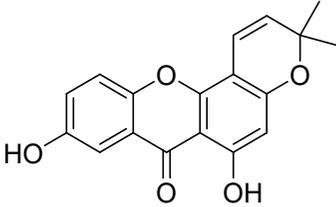
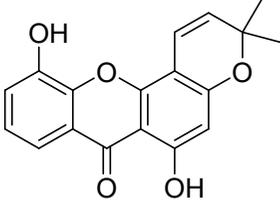
				<i>aureus</i> <i>Bacillus megaterium</i> <i>Bacillus anthracis</i> <i>Bacillus paratyphosum</i> MRSA <i>Pseudomonas aeruginosa</i> <i>Escherichia coli</i> <i>Enterobacter aerogenes</i>	 12.5 12.5 25 >100 50 50 50	
Monoprenyl group						
34	Cowagarcinone B	<i>Garcinia cowa</i>		MRSA Staphylococcus aureus Escherichia coli Salmonella typhimurium	>128 >128 128 128	1
35	1,3,7-trihydroxy-2-prenylxanthone	<i>Cudrania cochinchinensis</i> , the leaves of <i>Garcinia goudotiana</i>		<i>Bacillus subtilis</i> Staphylococcus aureus <i>Enterococci faecalis</i> <i>Mycobacterium smegmatis</i>	6.25 6.25 6.25\39 39	15,44, 60

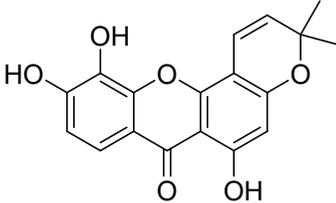
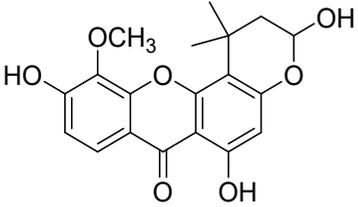
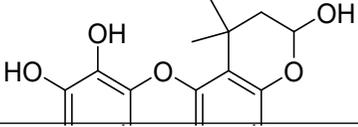
				<i>Staphylococcus lugdunensis</i>	78	
				MRSA	6.25	
				<i>Micrococcus lutes</i>	6.25	
36	1,5-dihydroxy-2-isoprenyl-3-methoxyxanthone	<i>Garcinia mangostana</i>		MRSA	25	54
				<i>Staphylococcus aureus</i>	12.5	
				<i>Escherichia coli</i>	25	
37	1,7-dihydroxy-2-isoprenyl-3-methoxyxanthone	<i>Garcinia mangostana</i>		MRSA	25	54
				<i>Staphylococcus aureus</i>	12.5	
				<i>Escherichia coli</i>	25	
38	Cudraxanthone S	<i>Cudrania cochinchinensis</i>		<i>Bacillus subtilis</i>	3.13	44,60
				<i>Staphylococcus aureus</i>	3.13	
				<i>Micrococcus lutes</i>	12.5	
				<i>Enterococci faecalis</i>	12.5\6.25\25	
				MRSA	3.13-6.25	
39	Subelliptenone F	<i>Garcinia subelliptica</i>		MRSA	25	54
				<i>Staphylococcus aureus</i>	25\12.5	
				<i>Escherichia coli</i>	25	

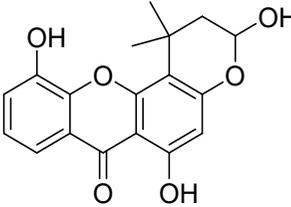
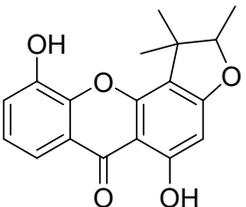
40	12-b-dihydroxy-des-D-garcigerin	<i>Garcinia subelliptica</i>		MRSA	12.5\3.13\6.25	54
				<i>Staphylococcus aureus</i>	25\6.25	
41	Vieillardixanthone B	the root of <i>Cratoxylum formosum</i>		<i>Bacillus subtilis</i>	300	29
				<i>Staphylococcus aureus</i>	300	
				<i>Enterococcus faecalis</i>	300	
				MRSA	300	
				VRE	300	
				<i>Salmonella typhi</i>	>300	
				<i>Shigella sonnei</i>	>300	
<i>Pseudomonas aeruginosa</i>	>300					
42	Isocudranixanthone B	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	>128	51
				<i>Bacillus cereus</i>	>128	
				<i>Bacillus subtilis</i>	\	
				<i>Staphylococcus aureus</i>	>128	
				<i>Staphylococcus epidermidis</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Salmonella typhimurium</i>	>128	

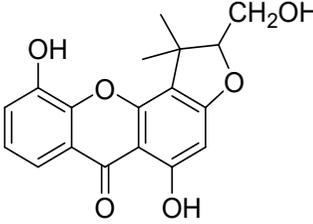
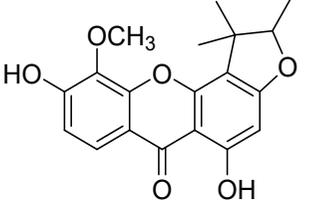
				<i>Pseudomonas aeruginosa</i>	>128	
43	Hypericumxanthone A	<i>Hypericum sampsonii</i>		MRSA	32	63
44	Caroxanthone	<i>Garcinia nobilis</i>		<i>Escherichia coli</i> <i>Enterobacter aerogenes</i> <i>Klebsiella pneumoniae</i> <i>Providencia stuartii</i> <i>Pseudomonas aeruginosa</i>	256\128\>512 >512 >512 >512 >512	21
45	Dulxanthone A	<i>Garcinia mangostana</i>		MRSA <i>Vibrio vulnificus</i> <i>Vibrio rotiferianus</i> <i>Vibrio campbellii</i>	3.9 15.6 15.6 31.2	38
46	Garcicowanone A	<i>Garcinia cowa</i>		<i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Micrococcus luteus</i>	0.25 2 4	2

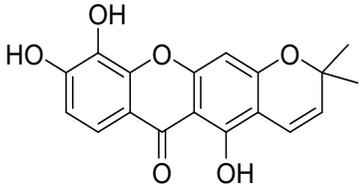
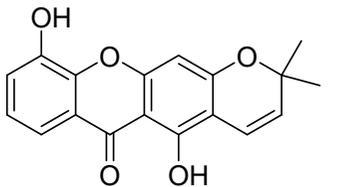
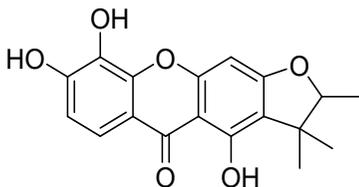
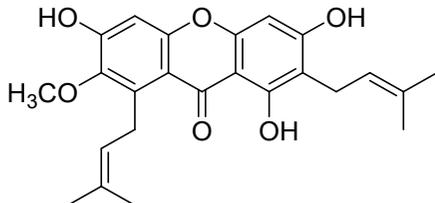
				<i>Staphylococcus aureus</i> 64 <i>Escherichia coli</i> 64 <i>Pseudomonas aeruginosa</i> 128 <i>Salmonella typhimurium</i> 64 <i>Staphylococcus epidermidis</i> 4	
47	Globulixanthone D	the root bark of <i>Symponia globulifera</i>		<i>Staphylococcus aureus</i> 0.80 <i>Bacillus subtilis</i> 12.5 <i>Vibrio anguillarum</i> >100 <i>Escherichia coli</i> >100	11
48	Nigrolineaxanthone T	the bark of <i>Garcinia mangostana</i>		MRSA 62.4 <i>Vibrio vulnificus</i> >125 <i>Vibrio rotiferianus</i> >125 <i>Vibrio campbellii</i> >125	38
49	Globulixanthone C	the root bark of <i>Symponia globulifera</i>		<i>Staphylococcus aureus</i> 14.05 <i>Bacillus subtilis</i> 8.24 <i>Vibrio anguillarum</i> \	11

				<i>Escherichia coli</i>	>100	
50	Nigrolineaxanthone F	the stem bark <i>Garcinia nigrolinaeta</i>		MRSA	2	20
51	6-deoxyiso-jacareubin	<i>Vismia laurentii</i>		<i>Citrobacter freundii</i>	19.53	32
				<i>Enterobacter aerogens</i>	\	
				<i>Enterobacter cloacae</i>	\	
				<i>Escherichia coli</i>	\	
				<i>Klebsiella pneumoniae</i>	39.06	
				<i>Morganella morganii</i>	78.12	
				<i>Proteus mirabilis</i>	78.12	
				<i>proteus vulgaris</i>	39.06	
				<i>Pseudomonas aeruginosa</i>	\	
				<i>Shigella dysenteriae</i>	\	
				<i>Shigella flexneri</i>	\	
				<i>Salmonella typhi</i>	\	
				<i>Streptococcus faecalis</i>	\	
				<i>Staphylococcus aureus</i>	39.06	

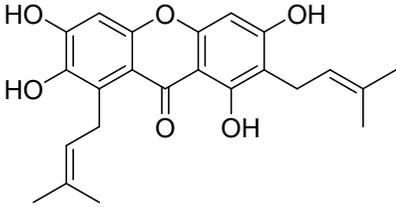
				<i>Bacillus cereus</i> 78.12 <i>Bacillus megaterium</i> \ <i>Bacillus stearothermophilus</i> 1.22 <i>Bacillus subtilis</i> 4.88	
52	Isojacareubin	<i>Garcinia fusca</i>		<i>Helicobacter pylori</i> 2.54	46
53	Cratosumatranone D	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i> 8 <i>Bacillus cereus</i> 8 <i>Bacillus subtilis</i> 16 <i>Staphylococcus aureus</i> 32 <i>Staphylococcus epidermidis</i> 8 <i>Escherichia coli</i> 64 <i>Salmonella typhimurium</i> 32 <i>Pseudomonas aeruginosa</i> 16	51
54	Cratosumatranone E	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i> >128 <i>Bacillus cereus</i> >128 <i>Bacillus subtilis</i> \	51

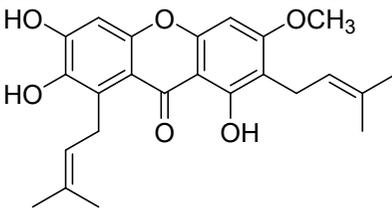
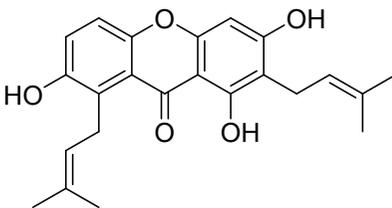
				<i>Staphylococcus aureus</i> >128 <i>Staphylococcus epidermidis</i> >128 <i>Escherichia coli</i> >128 <i>Salmonella typhimurium</i> >128 <i>Pseudomonas aeruginosa</i> >128	
55	Pruniflorone N	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i> 16 <i>Bacillus cereus</i> 32 <i>Bacillus subtilis</i> 32 <i>Staphylococcus aureus</i> 8 <i>Staphylococcus epidermidis</i> 16 <i>Escherichia coli</i> 32 <i>Salmonella typhimurium</i> 32 <i>Pseudomonas aeruginosa</i> 16	51
56	Pancixanthone B	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i> 32 <i>Bacillus cereus</i> 16 <i>Bacillus subtilis</i> 128 <i>Staphylococcus aureus</i> >128 <i>Staphylococcus</i> 32	51

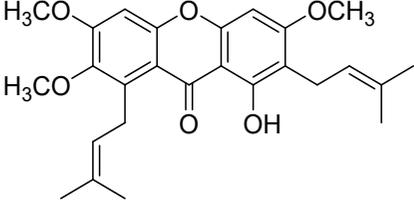
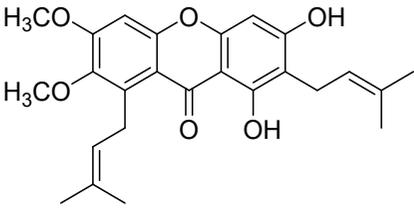
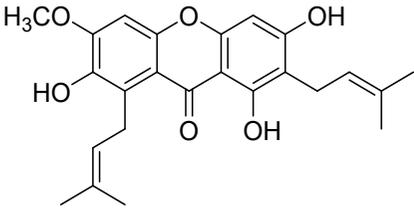
				<i>epidermidis</i>		
				<i>Escherichia coli</i>	32	
				<i>Salmonella typhimurium</i>	32	
				<i>Pseudomonas aeruginosa</i>	16	
57	Pruniflorone M	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	>128	51
				<i>Bacillus cereus</i>	>128	
				<i>Bacillus subtilis</i>	\	
				<i>Staphylococcus aureus</i>	>128	
				<i>Staphylococcus epidermidis</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Salmonella typhimurium</i>	>128	
				<i>Pseudomonas aeruginosa</i>	>128	
58	5-O-methyl-2-deprenylrheedixanthone B	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	>128	51
				<i>Bacillus cereus</i>	>128	
				<i>Bacillus subtilis</i>	\	
				<i>Staphylococcus aureus</i>	>128	
				<i>Staphylococcus epidermidis</i>	>128	
				<i>Escherichia coli</i>	>128	

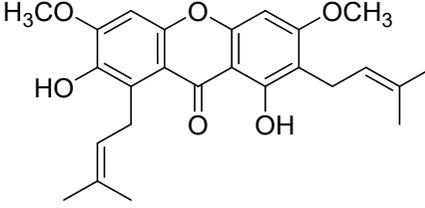
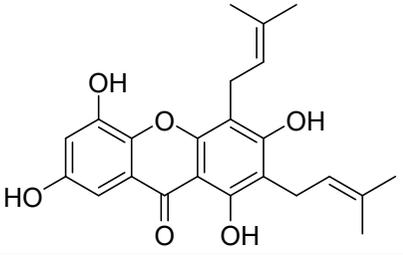
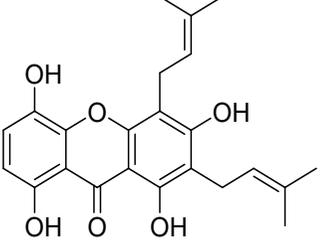
				<i>Salmonella typhimurium</i>	>128	
				<i>Pseudomonas aeruginosa</i>	>128	
59	Jacareubin	the twigs of <i>Garcinia staudtii</i>		MRSA	\	19
60	6-deoxyjacareubin	the stem bark <i>Garcinia nigrolinaeta</i>		MRSA	4	20
61	Toxyloxanthone C	<i>Cudrania cochinchinensis</i>		<i>Bacillus subtilis</i>	3.13	44,60
				MRSA	3.13-6.25	
				<i>Enterococci faecalis</i>	12.5-25	
				MRSA	3.13-6.25	
				<i>Micrococcus luteus</i>	12.5	
Biprenyl group						
62	α -mangostin	the fruits, inflorescences, flowers of <i>Garcinia cowa</i> ; the twigs of <i>Garcinia staudtii</i> ; <i>Tetragonula laeviceps</i> propolis; <i>Garcinia fusca</i> ; <i>Garcinia mangostana</i>		<i>Micrococcus luteus</i>	1\6.25	1-3,
				<i>Staphylococcus aureus</i>	64\4\3.13\25\12.5\8\794\64\128	8,13, 19,27,3
				<i>Staphylococcus epidermidis</i>	0.5\1.56	7, 46-47, 54-

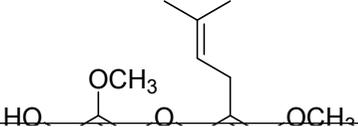
				<i>Bacillus cereus</i> MRSA <i>Listeria monocytogenes</i> <i>Streptococcus pyogenes</i> <i>Escherichia coli</i> <i>Serratia marcescens</i> <i>Helicobacter pylori</i> <i>Bacillus subtilis</i> <i>Salmonella typhimurium</i> <i>Pseudomonas aeruginosa</i> VRE <i>Enterococcus faecalis</i> <i>Salmonella typhi</i> <i>Shigella sonnei</i>	250\8\3.13\0.5 32\3.13\8\2\25\12.5\6.25\16\2.34 0.78 0.78 12.5\64\250\25\128 12.5 19\76.1 8\2.34\0.25 64\12.5\128 2.34\128\12.5 3.13\150 150 18.75 150	55
63	β -mangostine	the fruits, inflorescences and flowers of <i>Garcinia cowa</i> ; <i>Garcinia mangostana</i> ; <i>Garcinia fusca</i>		MRSA <i>Staphylococcus aureus</i>	8\6.25\4.68\>200\64 12.5\6.25\25\64\>128\128	1-2, 8, 13, 27, 46-47, 54-55

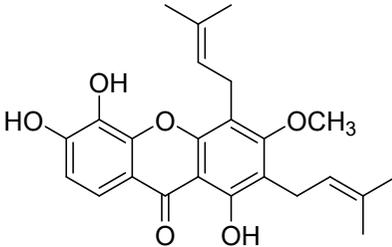
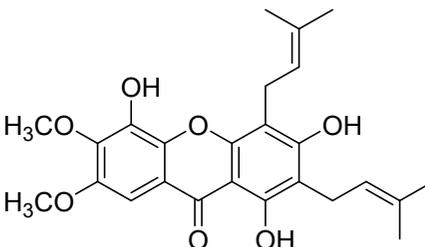
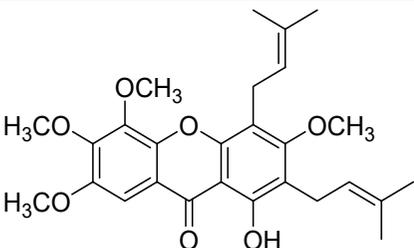
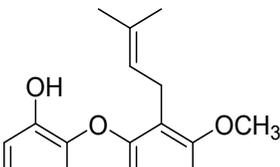
				<i>Escherichia coli</i> <i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Micrococcus luteus</i> <i>Pseudomonas aeruginosa</i> <i>Salmonella typhimurium</i> <i>Staphylococcus epidermidis</i> <i>Enterococcus faecalis</i> <i>Salmonella typhi</i> <i>Shigella sonnei</i> <i>Helicobacter pylori</i> VRE	>128\25 0.25\16 4\2..34 16 128\9.37 64 2 300 >300 >300 18.3\183\147.3 >200	
64	γ -mangostin	<i>Tetragonula laeviceps</i> propolis; <i>Garcinia mangostana</i>		MRSA <i>Bacillus subtilis</i> <i>Enterococcus faecalis</i> <i>Salmonella typhi</i> <i>Shigella sonnei</i> <i>Pseudomonas aeruginosa</i> <i>Bacillus cereus</i>	4.68\3.13\6.25\12.5 18.75 9.37 18.75 18.75 18.75\25 25	8,37, 54-55

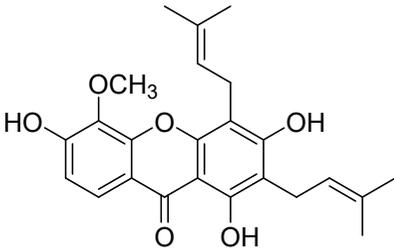
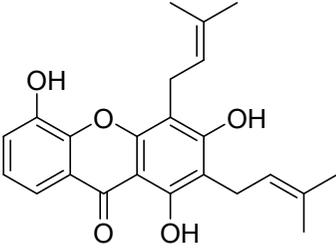
				<i>Listeria monocytogenes</i> <i>Micrococcus luteus</i> <i>Staphylococcus epidermidis</i> <i>Streptococcus pyogenes</i> <i>Escherichia coli</i> <i>Salmonella typhimurium</i> <i>Serratia marcescens</i> <i>Staphylococcus aureus</i> VRE	12.5 25 25 6.25 25 25 25 6.25\25 6.25	
65	Dulxisanthone			MRSA <i>Bacillus subtilis</i> <i>Enterococcus faecalis</i> VRE <i>Salmonella typhi</i> <i>Shigella sonnei</i> <i>Pseudomonas aeruginosa</i>	9.37 18.75 300 300 150 150 18.75	8
66	6-deoxy-γ-mangostin	Calophyllum; <i>Garcinia mangostana</i>		<i>Staphylococcus aureus</i>	250	16,55

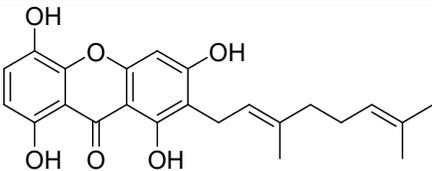
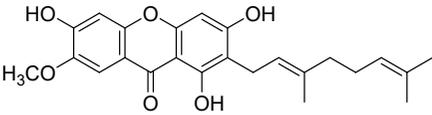
				MRSA	>250	
				VRE	>250	
67	Fuscaxanthone C	the fruits and flowers of <i>Garcinia cowa</i> ; <i>Garcinia mangostana</i>		<i>Bacillus subtilis</i>	128	1,47, 55
				<i>Pseudomonas aeruginosa</i>	128	
				<i>Bacillus cereus</i>	>128	
				<i>Staphylococcus aureus</i>	128	
				<i>Escherichia coli</i>	64	
				<i>Salmonella typhimurium</i>	128	
				MRSA	>200	
				VRE	>200	
68	Cowaxanthone B	the fruits of <i>Garcinia cowa</i>		MRSA	18.75\128	13
				<i>Bacillus subtilis</i>	75	
				<i>Enterococcus faecalis</i>	75	
				VRE		
				<i>Salmonella typhi</i>	150	
				<i>Shigella sonnei</i>	150	
				<i>Pseudomonas aeruginosa</i>	18.75	
				<i>Staphylococcus aureus</i>	128	
69	6-methoxy-γ-mangostin			MRSA	>200	55

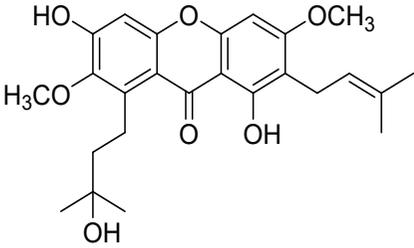
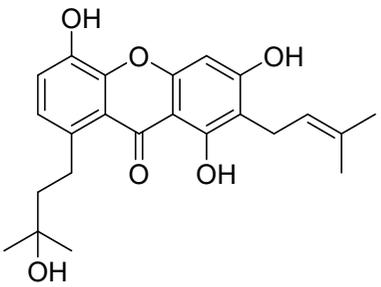
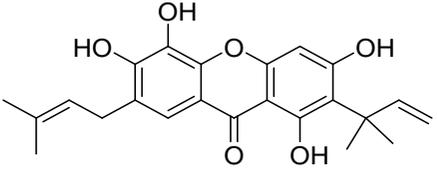
				<i>Bacillus subtilis</i> 75 <i>Enterococcus faecalis</i> 75 VRE >200 <i>Salmonella typhi</i> 37.5 <i>Shigella sonnei</i> 75 <i>Pseudomonas aeruginosa</i> 4.67		
70	3,6-di-O-methyl-γ-Mangostin	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i> 128 <i>Bacillus subtilis</i> 128 <i>Staphylococcus aureus</i> >128 <i>Escherichia coli</i> >128 <i>Salmonella typhimurium</i> 128 <i>Pseudomonas aeruginosa</i> 128	47	
71	Staudtixanthone A	the twigs of <i>Garcinia staudtii</i>		MRSA	16	19
72	Gartanin	the twigs of <i>Garcinia staudtii</i> ; <i>Tetragonula laeviceps</i> propolis; the bark of <i>Garcinia mangostana</i> ; the		MRSA	32\12.5\>125\>128 \25	19, 37-38, 42, 54

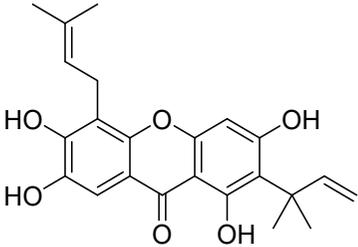
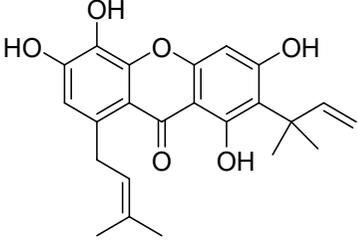
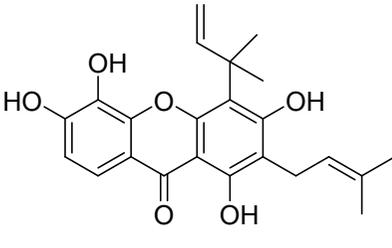
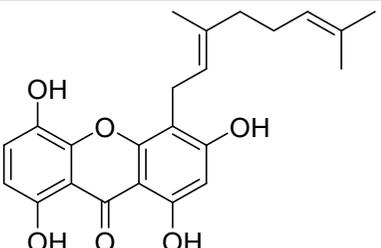
		twigs of <i>Garcinia propinqua</i> ; <i>Garcinia mangostana</i>		<i>Bacillus cereus</i>	25	
				<i>Listeria monocytogenes</i>	12.5	
				<i>Micrococcus luteus</i>	25	
				<i>Staphylococcus aureus</i>	12.5\128\>125	
				<i>Staphylococcus epidermidis</i>	25	
				<i>Streptococcus pyogenes</i>	6.25	
				<i>Escherichia coli</i>	25\128	
				<i>Pseudomonas aeruginosa</i>	25	
				<i>Salmonella typhimurium</i>	25	
				<i>Serratia marcescens</i>	25	
				<i>Vibrio vulnificus</i>	62.4	
				<i>Vibrio rotiferianus</i>	125	
				<i>Vibrio campbellii</i>	125	
				<i>Staphylococcus typhimurium</i>	128	
73	Doitunggarcinone C	the twigs of <i>Garcinia propinqua</i>		MRSA	128	42
				<i>Staphylococcus aureus</i>	128	

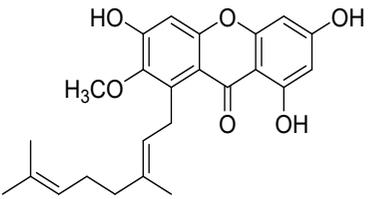
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	\	
74	Dulxanthone B	the twigs of <i>Garcinia propinqua</i>		MRSA	16	42
				<i>Staphylococcus aureus</i>	32	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	128	
75	Globuliferin	the seeds of <i>Symphonia globulifera</i>		<i>Staphylococcus aureus</i>	0.58	25
				<i>Streptococcus feacalis</i>	8.25	
				<i>Klebsiella pneumonia</i>	15.24	
				<i>Escherichia coli</i>	21.2	
76	3,5-Di-O-methylglobuliferin	the seeds of <i>Symphonia globulifera</i>		<i>Staphylococcus aureus</i>	\	25
				<i>Streptococcus feacalis</i>	\	
				<i>Klebsiella pneumonia</i>	\	
				<i>Escherichia coli</i>	\	
77	8-hydroxy-cudraxanthone G			<i>Escherichia coli</i>	>512\64\128	21
				<i>Enterobacter aerogenes</i>	>512\64\128	
				<i>Klebsiella</i>	>512	

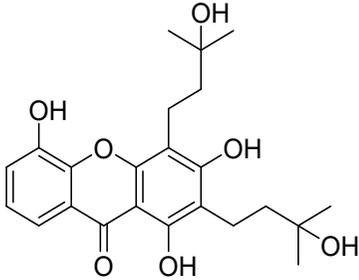
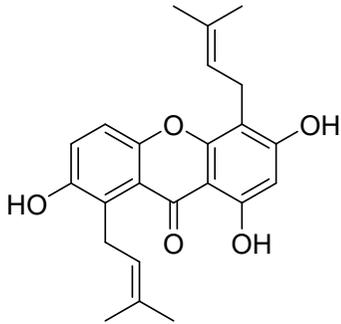
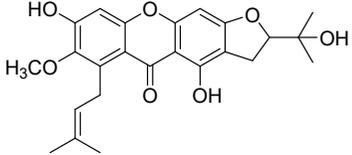
				<i>pneumoniae</i>		
				<i>Providencia stuartii</i>	>512	
				<i>Pseudomonas aeruginosa</i>	>512\256	
78	Doitunggarcinone D	the roots of <i>Garcinia propinqua</i>		<i>Bacillus cereus</i>	64	43
				<i>Bacillus subtilis</i>	16	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	128	
79	8-Deoxygartanin	the leaves of <i>Garcinia nigrolineata</i>		<i>Staphylococcus aureus</i>	16\128	48
				<i>Micrococcus luteus</i>	>128	
				<i>Streptococcus mutans</i>	128	
				<i>Staphylococcus epidermidis</i>	128	
				<i>Bacillus cereus</i>	128\3.13	
				MRSA	125\16	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Shigella flexneri</i>	128	

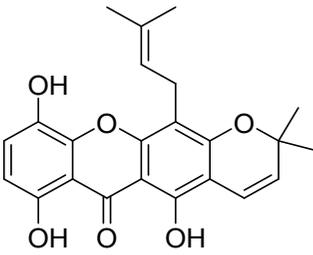
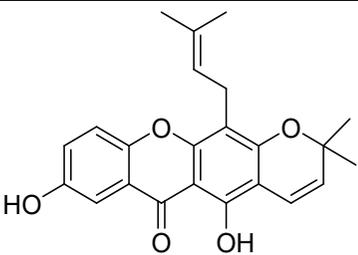
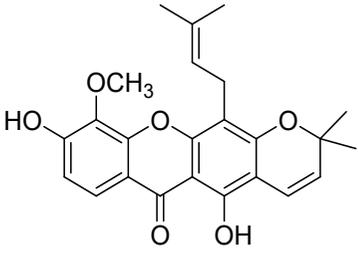
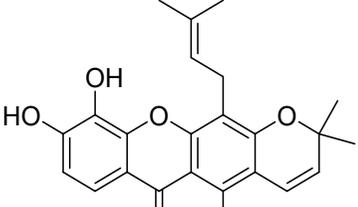
				<i>Vibrio vulnificus</i>	>125	
				<i>Vibrio rotiferianus</i>	>125	
				<i>Vibrio campbellii</i>	125	
80	Smeathxanthone A	<i>Garcinia smeathmannii</i>		<i>Escherichia coli</i>	128\64\32	21,53
				<i>Enterobacter aerogenes</i>	>512\256	
				<i>Klebsiella pneumoniae</i>	>512	
				<i>Providencia stuartii</i>	>512	
				<i>Pseudomonas aeruginosa</i>	>512\256	
				<i>Staphylococcus aureus</i>	32	
				<i>Enterococcus faecalis</i>	16	
				<i>Bacillus cereus</i>	64	
				<i>Salmonella typhimurium</i>	256	
81	Cowaxanthone	the fruits and flowers of <i>Garcinia cowa</i> ; <i>Garcinia fusca</i> ;		MRSA	16	1,
				<i>Staphylococcus aureus</i>	16\>128	46-47
				<i>Escherichia coli</i>	128\>128	
				<i>Salmonella typhimurium</i>	128	
				<i>Helicobacter pylori</i>	0.77\3.2\25.64	

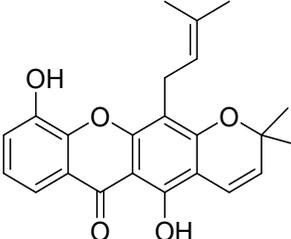
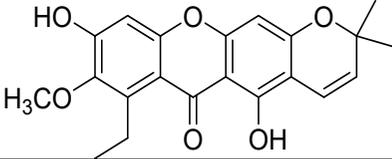
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	64	
				<i>Pseudomonas aeruginosa</i>	128	
82	Pruniflorone C	<i>Cratoxylum formosum</i>		MRSA	18.75	8
				<i>Bacillus subtilis</i>	9.37	
				<i>Enterococcus faecalis</i>	150	
				VRE	>300	
				<i>Salmonella typhi</i>	300	
				<i>Shigella sonnei</i>	300	
				<i>Pseudomonas aeruginosa</i>	18.75	
83	Nigrolineaxanthone N	<i>Garcinia nigrolineata</i>		MRSA	128	20
84	Isoalvaxanthone	<i>Cudrania cochinchinensis</i>		<i>Enterococci faecalis</i>	6.25\12.5	44,60
				<i>Bacillus subtilis</i>	12.5	
				<i>Staphylococcus aureus</i>	6.25	
				MRSA	3.13-6.25	

				<i>Micrococcus lutes</i>	6.25	
85	Cudraxanthone L	the roots of <i>Garcinia propinqua</i>		<i>Bacillus cereus</i>	8	43
				<i>Bacillus subtilis</i>	1	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	64	
86	Alvaxanthone	<i>Cudrania cochinchinensis</i>		<i>Enterococci faecalis</i>	12.5\6.25	44,60
				<i>Bacillus subtilis</i>	12.5	
				<i>Staphylococcus aureus</i>	6.25	
				MRSA	6.25\12.5	
				<i>Micrococcus lutes</i>	12.5	
87	Gerontoxanthone I	<i>Cratoxylum</i> species		<i>Enterococci faecalis</i>	6.25\3.13	32
				<i>Bacillus subtilis</i>	6.25\2.3	
				<i>Staphylococcus aureus</i>	3.13\1.1	
				MRSA	3.13\6.25	
				<i>Micrococcus lutes</i>	6.25	
				<i>Pseudomonas aeruginosa</i>	>50	
				<i>Salmonella faecalis</i>	4.6	
				<i>Salmonella typhi</i>	1.1	
88	Cheffouxanthone	<i>Garcinia smeathmannii</i> ; the twigs of		MRSA	64	14,53

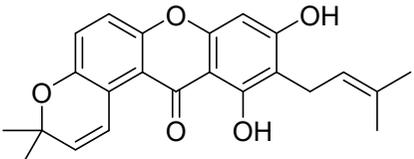
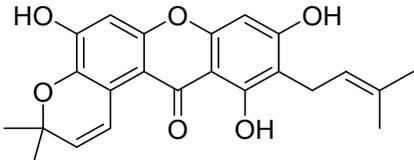
		<i>Garcinia hombroniana</i>		<i>Staphylococcus aureus</i> <i>Enterococcus faecalis</i> <i>Bacillus cereus</i> <i>Pseudomonas aeruginosa</i> <i>Escherichia coli</i> <i>Salmonella typhimurium</i>	16\64 8 32 128 64 \ 	
89	Rubraxanthone	the fruits and flowers of <i>Garcinia cowa</i> ; the stem bark of <i>Allanblackia monticola</i> ; <i>Garcinia dioica</i>		<i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Micrococcus luteus</i> <i>Staphylococcus aureus</i> <i>Escherichia coli</i> <i>Salmonella typhimurium</i> <i>Staphylococcus epidermidis</i> <i>Staphylococcus aureus</i> <i>Vibrio anguillarum</i> <i>Candida tropicalis</i> <i>Pseudomonas aeruginosa</i>	2\1000\0.313-1.25 1 2 >128\1000 64\794 64 4 12 \ \ 64	2-3, 12,47,5 4

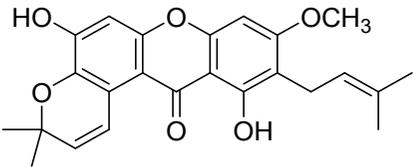
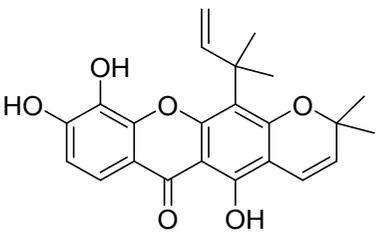
				MRSA	0.313\1.25	
90	Nigrolineaxanthone Z	<i>Garcinia nigrolinaeta</i>		<i>Micrococcus luteus</i>	>128	4
				<i>Streptococcus mutans</i>	128	
				<i>Staphylococcus epidermidis</i>	128	
				<i>Bacillus cereus</i>	128	
				<i>Staphylococcus aureus</i>	128	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	>128	
				<i>Escherichia coli</i>	128	
				<i>Shigella flexneri</i>	128	
91	Gerontoxanthone H (Cudraxanthone H)	<i>Cudrania cachinchinensis</i>		<i>Enterococci faecalis</i>	1.56	44,60
				<i>Bacillus subtilis</i>	1.56	
				<i>Staphylococcus aureus</i>	1.56	
				MRSA	1.56	
				<i>Micrococcus lutes</i>	1.56	
92	Dulcisxanthone G	the seeds of <i>Garcinia dulcis</i>		MRSA	>128	18
				<i>Staphylococcus aureus</i>	>128	

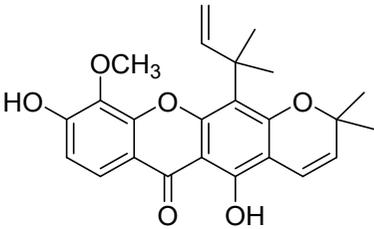
93	Morusignin			<i>Escherichia coli</i>	64\128	21
				<i>Enterobacter aerogenes</i>	>512	
				<i>Klebsiella pneumoniae</i>	>512	
				<i>Providencia stuartii</i>	>512	
				<i>Pseudomonas aeruginosa</i>	128\64	
94	Cudraxanthone Q	the roots of <i>Garcinia propinqua</i>		<i>Bacillus cereus</i>	128	43
				<i>Bacillus subtilis</i>	128	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	128	
95	5- <i>O</i> -methylxanthone V ₁	the twigs of <i>Garcinia propinqua</i>		MRSA	>128	42
				<i>Staphylococcus aureus</i>	>128	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	128	
96	Xanthone V ₁	the roots of <i>Cratoxylum formosum</i>		<i>Pseudomonas aeruginosa</i>	9.3	32
				<i>Bacillus subtilis</i>	1.1	
				<i>Staphylococcus aureus</i>	1.1	

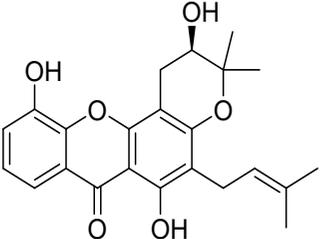
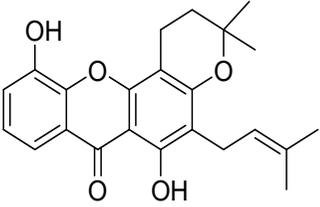
				<i>Streptococcus faecalis</i>	1.1	
				<i>Salmonella typhi</i>	1.1	
97	Toxyloxanthone A (Trapezifolixanthone)	<i>Garcinia tetralata</i>		<i>Micrococcus luteus</i>	128	4
				<i>Streptococcus mutans</i>	128	
				<i>Staphylococcus epidermidis</i>	128	
				<i>Bacillus cereus</i>	128	
				<i>Staphylococcus aureus</i>	128	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	128	
				<i>Escherichia coli</i>	>128	
				<i>Shigella flexneri</i>	128	
				<i>Bacillus cereus</i>	16	
				<i>Bacillus subtilis</i>	4	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	128	
98	9-hydroxy-calabaxanthone	the bark of <i>Garcinia mangostana</i> ; the inflorescences of <i>Garcinia cowa</i>		MRSA	>125\4	27, 38
				<i>Vibrio vulnificus</i>	>125	
				<i>Vibrio rotiferianus</i>	125	
				<i>Vibrio campbellii</i>	125	

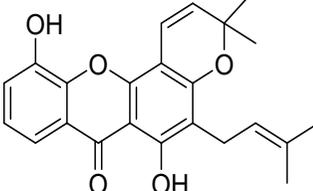
				<i>Staphylococcus aureus</i>	4	
99	Demethylcalabaxanthone	the twigs of <i>Garcinia staudtii</i>		MRSA	128	19
100	Garciniacowone E	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i>	128	47
				<i>Bacillus subtilis</i>	128	
				<i>Staphylococcus aureus</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	128	
101	6-O-methylmangostanin	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i>	128	47
				<i>Bacillus subtilis</i>	128	
				<i>Staphylococcus aureus</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Salmonella typhimurium</i>	64	
				<i>Pseudomonas aeruginosa</i>	128	

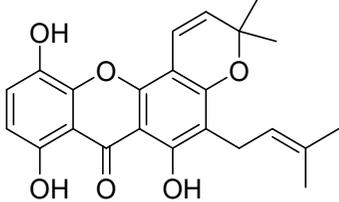
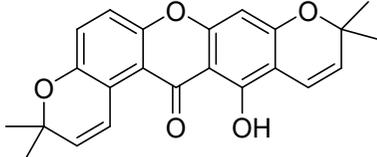
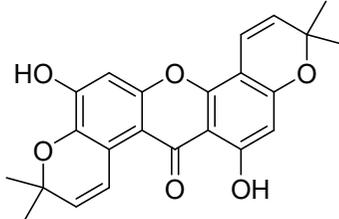
102	Calothwaitesixanhone	Calophyllum		<i>Staphylococcus aureus</i>	\	16
103	Garcinone B	the twigs of <i>Garcinia staudtii</i> ; the root of <i>Cratoxylum formosum</i> ; <i>Tetragonula laeviceps</i> propolis		MRSA	128\150\6.25	19, 29, 37
				<i>Bacillus subtilis</i>	75	
				<i>Staphylococcus aureus</i>	75\6.25	
				<i>Enterococcus faecalis</i>	75	
				VRE	75	
				<i>Salmonella typhi</i>	>300	
				<i>Shigella sonnei</i>	>300	
				<i>Pseudomonas aeruginosa</i>	>300\25	
				<i>Bacillus cereus</i>	3.13	
				<i>Listeria monocytogenes</i>	6.25	
				<i>Micrococcus luteus</i>	3.13	
				<i>Staphylococcus epidermidis</i>	3.13	
				<i>Streptococcus pyogenes</i>	1.56	
<i>Escherichia coli</i>	25					
<i>Salmonella</i>	25					

				<i>typhimurium</i>		
				<i>Serratia marcescens</i>	25	
104	Cowaxanthone D	the fruits and flowers of <i>Garcinia cowa</i>		MRSA	128	1-2, 47
				<i>Staphylococcus aureus</i>	>128	
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	128	
				<i>Micrococcus luteus</i>	64	
				<i>Escherichia coli</i>	>128	
				<i>Pseudomonas aeruginosa</i>	128	
				<i>Salmonella typhimurium</i>	64	
				<i>Staphylococcus epidermidis</i>	32	
105	Macluraxanthone	<i>Garcinia propinqua</i>		MRSA	4	29,32, 42, 43
				<i>Staphylococcus aureus</i>	4	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	\	
				<i>Bacillus cereus</i>	4	
				<i>Bacillus subtilis</i>	4	
				<i>Escherichia coli</i>	128	

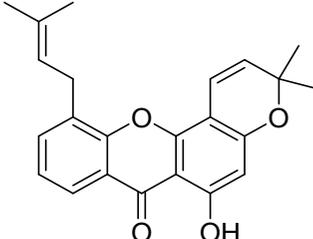
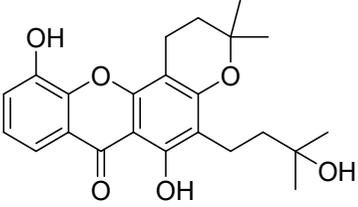
				<i>Micrococcus luteus</i> <i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Staphylococcus aureus</i> <i>Staphylococcus epidermidis</i> <i>Escherichia coli</i> <i>Staphylococcus typhimurium</i> <i>Pseudomonas aeruginosa</i>	>128 >128 \ >128 >128 >128 >128 >128	
106	10-O-methylmaclura-xanthone	<i>Garcinia bracteata</i>		MRSA <i>Staphylococcus aureus</i> <i>Escherichia coli</i> <i>Staphylococcus typhimurium</i> <i>Micrococcus luteus</i> <i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Staphylococcus aureus</i> <i>Staphylococcus</i>	4 2 128 128 >128 >128 \ >128 >128	42

				<i>epidermidis</i>		
				<i>Escherichia coli</i>	>128	
				<i>Staphylococcus typhimurium</i>	>128	
				<i>Pseudomonas aeruginosa</i>	>128	
107	Nigrolineaxanthone X	<i>Garcinia nigrolineata</i>		<i>Micrococcus luteus</i>	>128	4
				<i>Streptococcus mutans</i>	>128	
				<i>Staphylococcus epidermidis</i>	128	
				<i>Bacillus cereus</i>	128	
				<i>Staphylococcus aureus</i>	128	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Shigella flexneri</i>	>128	
108	Nigrolineaxanthone Q	<i>Garcinia nigrolineata</i>		<i>Micrococcus luteus</i>	8	4
				<i>Streptococcus mutans</i>	32	
				<i>Staphylococcus epidermidis</i>	128	
				<i>Bacillus cereus</i>	32	

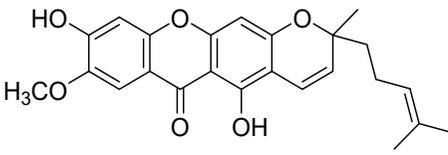
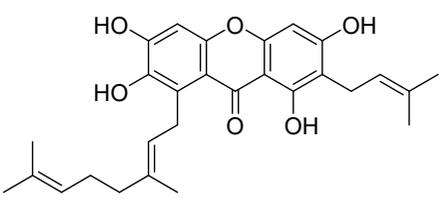
				<i>Staphylococcus aureus</i>	128	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	128	
				<i>Escherichia coli</i>	128	
				<i>Shigella flexneri</i>	128	
109	Ananixanthone	the leaves of <i>Garcinia nigrolineata</i> ; <i>Garcinia smeathmannii</i>		<i>Micrococcus luteus</i>	32	4,48,
				<i>Streptococcus mutans</i>	32	53
				<i>Staphylococcus epidermidis</i>	128	
				<i>Bacillus cereus</i>	32	
				<i>Staphylococcus aureus</i>	128\32	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	128	
				<i>Escherichia coli</i>	>128	
				<i>Shigella flexneri</i>	>128	
				MRSA	32	
				<i>Enterococcus faecalis</i>	2	
				<i>Pseudomonas</i>	64	

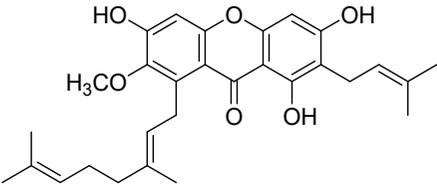
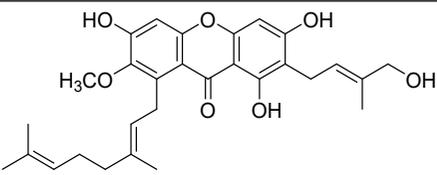
				<i>aeruginosa</i>		
110	Morusignin J	the seeds of <i>Garcinia dulcis</i>		<i>Staphylococcus aureus</i>	>128	18
				MRSA	>128	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	\	
111	Thwaitesixanthone	<i>Calophyllum thwaitesii</i>		<i>Staphylococcus aureus</i>	\	16
112	Brasilixanthone	the stem bark of <i>Garcinia nigrolineata</i> ; the root of <i>Cratoxylum formosum</i>		<i>Bacillus subtilis</i>	300	29
				<i>Staphylococcus aureus</i>	300	
				<i>Enterococcus faecalis</i>	>300	
				MRSA	300	
				VRE	2	
				<i>Salmonella typhi</i>	300	
				<i>Shigella sonnei</i>	>300	
				<i>Pseudomonas aeruginosa</i>	>300	
<i>Bacillus subtilis</i>	>300					

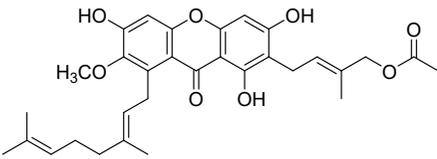
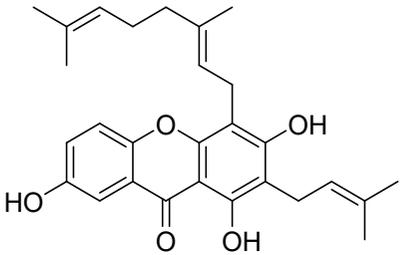
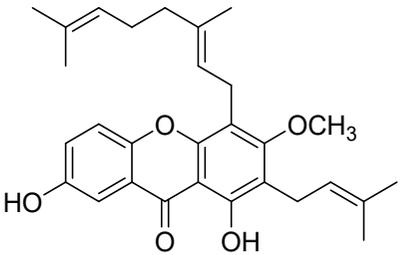
117	Nigrolineaxanthone G	the stem bark <i>Garcinia nigrolinaeta</i>		MRSA	4	20
118	Staudtiixanthone C	<i>Garcinia staudtii</i>		MRSA	128	19
119	Hypericumxanthone B	<i>Hypericum sampsonii</i>		MRSA	32	63
120	3-O-methylmangostenone	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i>	128	47
				<i>Bacillus subtilis</i>	\	
				<i>Staphylococcus aureus</i>	128	
				<i>Escherichia coli</i>	>128	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	>128	
121	Nigrolineaxanthone Q	<i>Garcinia nigrolineata</i>		<i>Micrococcus luteus</i>	8	4
				<i>Streptococcus mutans</i>	32	

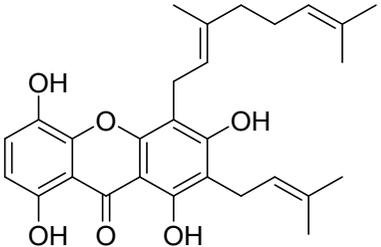
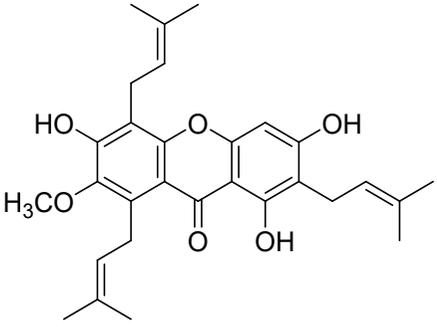
				<i>Staphylococcus epidermidis</i> <i>Bacillus cereus</i> <i>Staphylococcus aureus</i> <i>Salmonella typhimurium</i> <i>Pseudomonas aeruginosa</i> <i>Escherichia coli</i> <i>Shigella flexneri</i>	128 32 128 128 128 128 128	
122	Laurentixanthon A	the roots of <i>Vismia laurentii</i>		<i>Candida glabrata</i>	1	17
123	Nigrolineaxanthon Y	<i>Garcinia nigrolinaeta</i>		<i>Micrococcus luteus</i> <i>Streptococcus mutans</i> <i>Staphylococcus epidermidis</i> <i>Bacillus cereus</i> <i>Staphylococcus aureus</i> <i>Salmonella</i>	32 128 128 64 128 >128	4

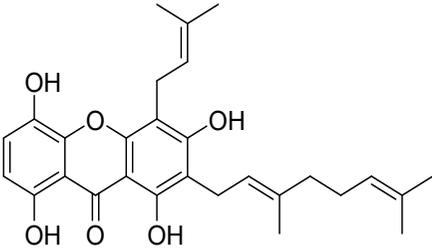
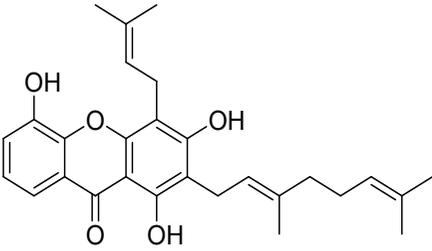
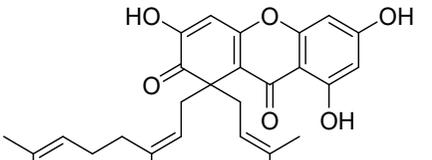
				<i>aureus</i>		
128	Nigrolineaxanthon I	the stem bark <i>Garcinia nigrolinaeta</i>		MRSA	4	20
129	Staudtiixanthon D	the twigs of <i>Garcinia staudtii</i>		MRSA	64	19
130	Mangostanin	<i>Tetragonula laeviceps</i> propolis; the fruits of <i>Garcinia cowa</i>		<i>Bacillus cereus</i>	12.5\4\8	13,37,4
				<i>Listeria monocytogenes</i>	0.78	7
				<i>Bacillus subtilis</i>	2	
				<i>Micrococcus luteus</i>	25\4	
				<i>Staphylococcus aureus</i>	12.5\64\4	
				<i>Staphylococcus epidermidis</i>	25	
				<i>Streptococcus pyogenes</i>	3.13	
				MRSA	12.5\4	
				<i>Escherichia coli</i>	25	

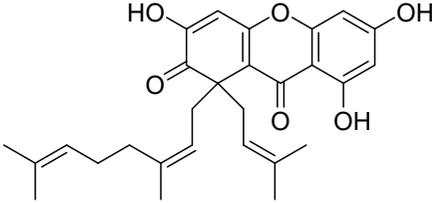
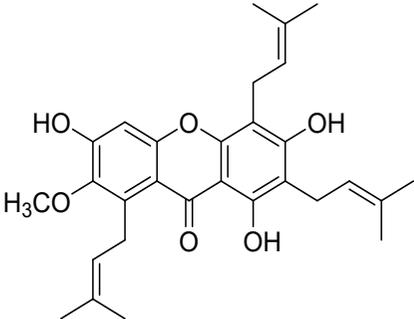
				<i>Bacillus subtilis</i> 8 <i>Salmonella typhimurium</i> 128 <i>Pseudomonas aeruginosa</i> 128	
131	Garciniacowone C	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i> 32 <i>Bacillus subtilis</i> 64 <i>Staphylococcus aureus</i> >128 <i>Escherichia coli</i> >128 <i>Salmonella typhimurium</i> 128 <i>Pseudomonas aeruginosa</i> 128	47
Triprenyl group					
132	Norcowanin	<i>Garcinia cowa</i> ; the root of <i>Cratoxylum formosum</i>		<i>Escherichia coli</i> 64 <i>Salmonella typhimurium</i> 128 <i>Bacillus subtilis</i> 4.7 <i>Staphylococcus aureus</i> 9.37\8 <i>Enterococcus faecalis</i> 9.37 MRSA 18.75\16 VRE 75	1,29

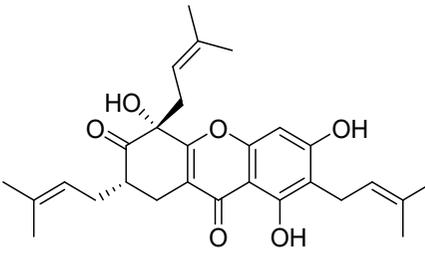
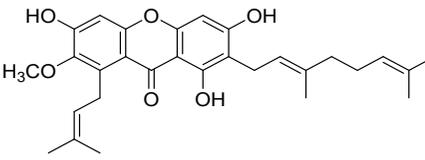
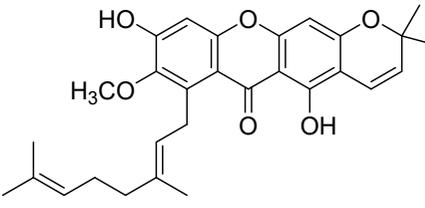
				<i>Salmonella typhi</i> <i>Shigella sonnei</i> <i>Pseudomonas aeruginosa</i>	>300 >300 300	
133	Cowanin	the fruits, inflorescences of <i>Garcinia cowa</i> ; <i>Garcinia fusca</i>		<i>Staphylococcus aureus</i> MRSA <i>Escherichia coli</i> <i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Micrococcus luteus</i> <i>Pseudomonas aeruginosa</i> <i>Salmonella typhimurium</i> <i>Staphylococcus epidermidis</i> <i>Helicobacter pylori</i>	32\128\>128 2\>128 128\>128 32 4 4 128 64 2 29.89\3.73	1-2, 13,27,4 6
134	Cowanol	the fruits, inflorescences of <i>Garcinia cowa</i> , <i>Garcinia fusca</i>		MRSA <i>Staphylococcus aureus</i> <i>Escherichia coli</i> <i>Salmonella typhimurium</i>	2\>128 8\>128 128 128	1,13,27 ,46

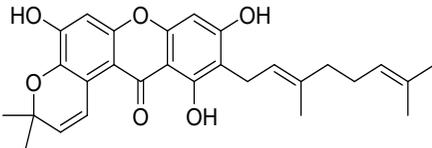
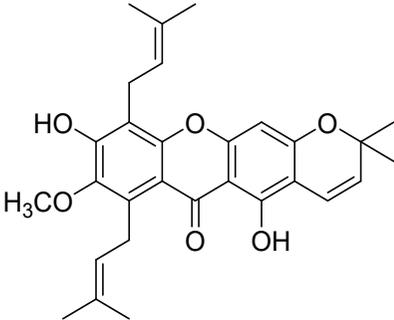
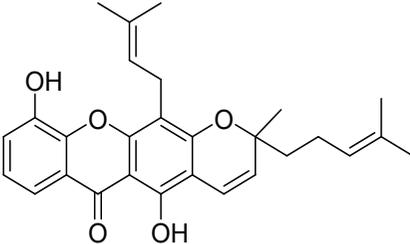
				<i>Helicobacter pylori</i>	3.84\30.87	
135	Cowagarcinone E	<i>Garcinia cowa</i>		<i>MRSA</i>	8	1-2
				<i>Staphylococcus aureus</i>	>128	
				<i>Escherichia coli</i>	128	
				<i>Salmonella typhimurium</i>	128	
136	Cochinchinone A	the root of <i>Cratoxylum formosum</i>		<i>Bacillus subtilis</i>	150	29
				<i>Staphylococcus aureus</i>	150	
				<i>Enterococcus faecalis</i>	150	
				<i>MRSA</i>	9.37	
				<i>VRE</i>	150	
				<i>Salmonella typhi</i>	>150	
				<i>Shigella sonnei</i>	>150	
137	Pruniflorone L	the root of <i>Cratoxylum formosum</i>		<i>Bacillus subtilis</i>	>300	29
				<i>Staphylococcus aureus</i>	>300	
				<i>Enterococcus faecalis</i>	>300	
				<i>MRSA</i>	>300	
				<i>VRE</i>	>300	
				<i>Salmonella typhi</i>	>300	

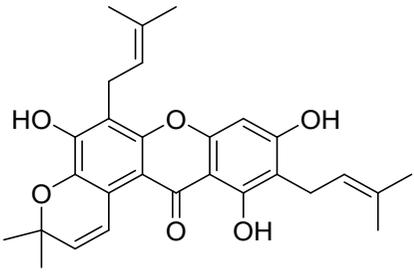
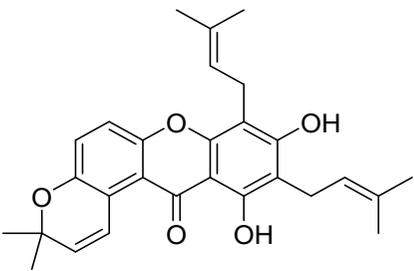
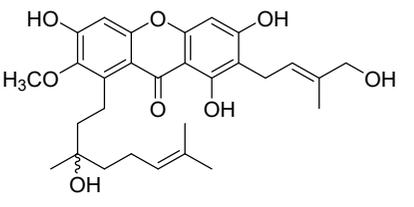
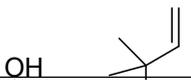
				<i>Shigella sonnei</i>	>300	
				<i>Pseudomonas aeruginosa</i>	>300	
138	1,3,5,8-tetrahydroxy-2-(3-methylbut-2-enyl)-4-(3,7-dimethyl-octa-2,6-dienyl)-xanthone	<i>Garcinia smeathmannii</i>		<i>Staphylococcus aureus</i>	64	53
				<i>Enterococcus faecalis</i>	8	
				<i>Bacillus cereus</i>	256	
				<i>Pseudomonas aeruginosa</i>	16	
				<i>Escherichia coli</i>	32	
				<i>Salmonella typhimurium</i>	64	
139	7-O-methyl-garcinone E	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i>	32	13,47
				<i>Bacillus subtilis</i>	32	
				<i>Staphylococcus aureus</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Salmonella typhimurium</i>	128	
				<i>Pseudomonas aeruginosa</i>	128	
				MRSA	64	
140	Garcinone E	the bark of <i>Garcinia mangostana</i> ; <i>Garcinia mangostana</i>		MRSA	3.9\25\62.4	38,54
				<i>Staphylococcus</i>	25\12.5	

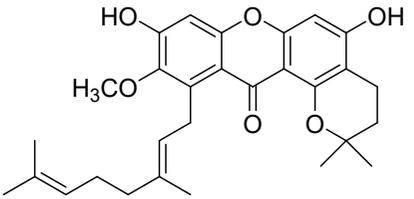
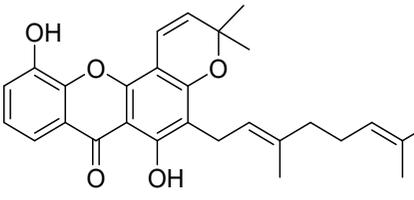
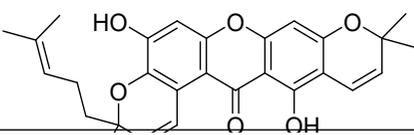
				<i>aureus</i>		
				<i>Escherichia coli</i>	25	
				<i>Vibrio vulnificus</i>	15.6	
				<i>Vibrio rotiferianus</i>	15.6	
				<i>Vibrio campbellii</i>	31.2	
141	4-prenyl-2-(3,7-dimethyl-2.6-octadienyl)-1,3,5,8-tetrahydroxy-xanthone			<i>Escherichia coli</i>	64\128	21
				<i>Enterobacter aerogenes</i>	128\256\64	
				<i>Klebsiella pneumoniae</i>	512	
				<i>Providencia stuartii</i>	64\256	
				<i>Pseudomonas aeruginosa</i>	64\128	
142	Formoxanthone A	the roots of <i>Cratoxylum formosum</i>		<i>Pseudomonas aeruginosa</i>	>50	32
				<i>Bacillus subtilis</i>	18.7	
				<i>Staphylococcus aureus</i>	37.5	
				<i>Streptococcus faecalis</i>	>50	
				<i>Salmonella typhi</i>	>50	
143	Garcinianone B	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i>	2	47
				<i>Bacillus subtilis</i>	2	
				<i>Staphylococcus aureus</i>	64	

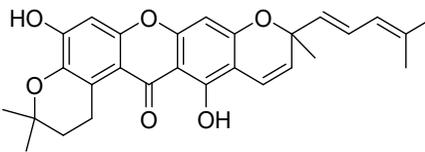
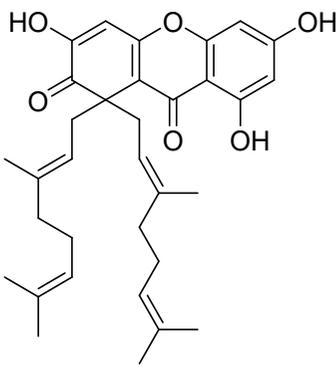
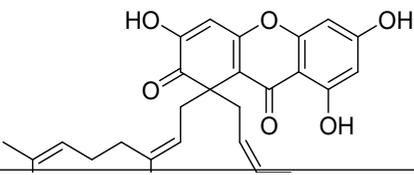
				<i>Escherichia coli</i> 64 <i>Salmonella typhimurium</i> 64 <i>Pseudomonas aeruginosa</i> 128	
144	Garcinianone A	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i> 4 <i>Bacillus subtilis</i> 2 <i>Staphylococcus aureus</i> 64 <i>Escherichia coli</i> 64 <i>Salmonella typhimurium</i> 64 <i>Pseudomonas aeruginosa</i> 128 <i>Staphylococcus aureus</i> 16 MRSA 26	47
145	mangostanaxanthone II	<i>Garcinia mangostana</i>		<i>Escherichia coli</i> 794 <i>Bacillus cereus</i> 1000 <i>Staphylococcus aureus</i> 1000	3

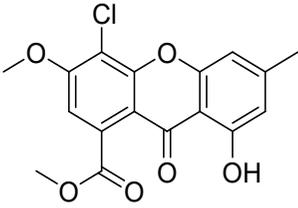
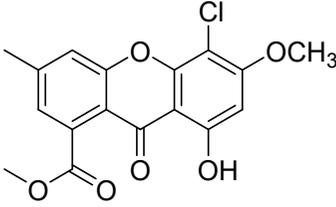
146	Garciniacowone	<i>Garcinia cowa</i>		MRSA	2	1
				<i>Staphylococcus aureus</i>	2	
				<i>Escherichia coli</i>	128	
				<i>Salmonella typhimurium</i>	128	
147	2-(3,7-Dimethyl-2,6-octadien-1-yl)-1,3,6-trihydroxy-7-methoxy-8-(3-methyl-2-buten-1-yl)-9H-xanthen-9-one	<i>Cratoxylum cochinchinense</i>		MRSA	>128	2
				<i>Staphylococcus aureus</i>	>128	
				<i>Escherichia coli</i>	>128\64	
				<i>Salmonella typhimurium</i>	128	
				<i>Bacillus cereus</i>	>128	
				<i>Bacillus subtilis</i>	128	
				<i>Pseudomonas aeruginosa</i>	128	
148	Fuscaxanthone A	the fruits and flowers <i>Garcinia cowa</i> ; <i>Garcinia fusca</i>		MRSA	>128\8	1-2, 46-47
				<i>Staphylococcus aureus</i>	>128	
				<i>Micrococcus luteus</i>	64	
				<i>Escherichia coli</i>	>128\64	
				<i>Salmonella typhimurium</i>	64	
				<i>Staphylococcus</i>	64	

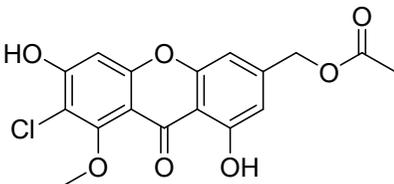
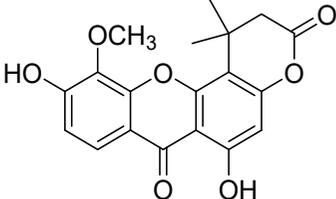
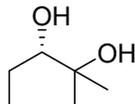
				<i>epidermidis</i>		
				<i>Helicobacter pylori</i>	3.70\7.76\29.76	
				<i>Bacillus cereus</i>	64	
				<i>Bacillus subtilis</i>	64	
				<i>Pseudomonas aeruginosa</i>	128	
149	Allanxanthone B	the stem bark of <i>Allanblackia monticola</i>		<i>Staphylococcus aureus</i>	\	12
				<i>Vibrio anguillarum</i>	\	
				<i>Candida tropicalis</i>	\	
150	Cowaxanthone C	the fruits of <i>Garcinia cowa</i>		<i>Staphylococcus aureus</i>	128	13
				MRSA	128	
151	Pruniflorone K	the root of <i>Cratoxylum formosum</i>		<i>Bacillus subtilis</i>	300	29
				<i>Staphylococcus aureus</i>	>300	
				<i>Enterococcus faecalis</i>	>300	
				MRSA	>300	
				VRE	>300	

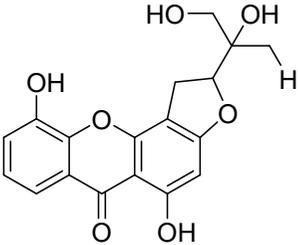
				<i>Salmonella typhi</i>	>300	
				<i>Shigella sonnei</i>	>300	
				<i>Pseudomonas aeruginosa</i>	>300	
152	Tovophyllin A	the stem bark of <i>Allanblackia monticola</i>		<i>Staphylococcus aureus</i>	\	12
				<i>Vibrio anguillarum</i>	\	
				<i>Candida tropicalis</i>	\	
153	Batukinaxanthone	<i>Calophyllum</i>		<i>Staphylococcus aureus</i>	\	16
154	Fuscaxanthone I	<i>Garcinia fusca</i>		<i>Helicobacter pylori</i>	7.99\3.99\320	46
155	Cratosumatranone C	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	>128	51
				<i>Bacillus cereus</i>	>128	

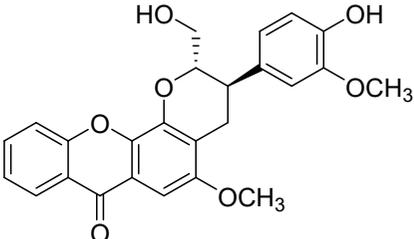
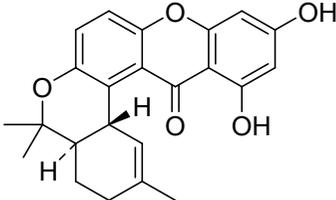
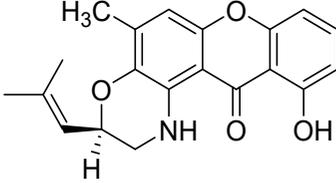
				<i>Bacillus subtilis</i> \ <i>Staphylococcus aureus</i> >128 <i>Staphylococcus epidermidis</i> >128 <i>Escherichia coli</i> >128 <i>Salmonella typhimurium</i> >128 <i>Pseudomonas aeruginosa</i> >128	
156	Fuscaxanthone G	<i>Garcinia fusca</i>		<i>Helicobacter pylori</i> 7.46\3.72\29.87	46
157	Formoxanthone B	the roots of <i>Cratoxylum formosum</i>		<i>Pseudomonas aeruginosa</i> >50 <i>Bacillus subtilis</i> 4.6 <i>Staphylococcus aureus</i> 2.3 <i>Streptococcus faecalis</i> 18.7 <i>Salmonella typhi</i> 4.6	32
158	Garciniacowone D	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i> 64 <i>Bacillus subtilis</i> 128 <i>Staphylococcus</i> >128	47

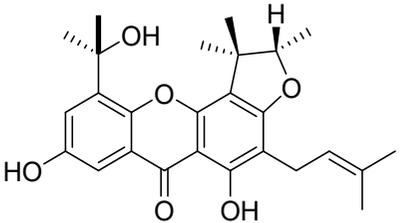
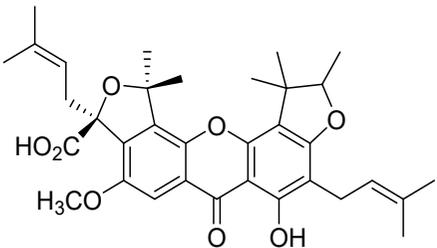
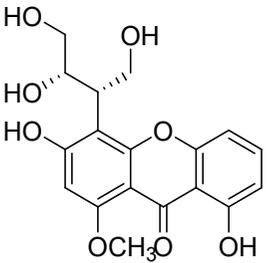
				<i>aureus</i> <i>Escherichia coli</i> <i>Salmonella typhimurium</i> <i>Pseudomonas aeruginosa</i>	 >128 64 128	
159	Garcicowanone B	<i>Garcinia cowa</i>		<i>Bacillus cereus</i>	>128	2
Tetraprenyl group						
160	Garciniacowone A	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Staphylococcus aureus</i> <i>Escherichia coli</i> <i>Salmonella typhimurium</i> <i>Pseudomonas aeruginosa</i>	8 8 >128 >128 64 128	47
161	Garciniacowone B	the fruits and flowers of <i>Garcinia cowa</i>		<i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Staphylococcus aureus</i>	8 8 64	47

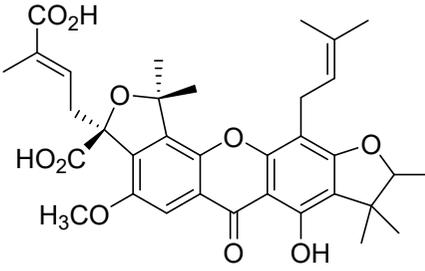
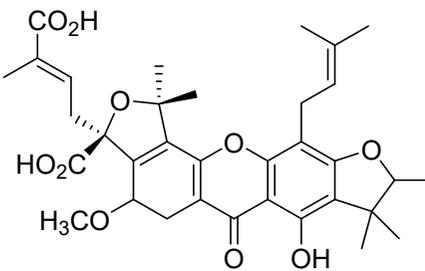
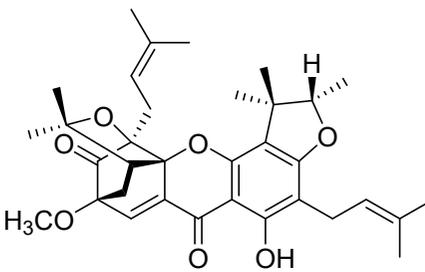
				<i>Escherichia coli</i>	64	
				<i>Salmonella typhimurium</i>	64	
				<i>Pseudomonas aeruginosa</i>	129	
Others						
162	Chloroisosulochrin dehydrate			MRSA	50	41
				<i>Staphylococcus aureus</i> ATCC 25923	50	
				<i>Escherichia coli</i> ATCC 25922	50	
				<i>Bacillus cereus</i> ATCC 11778	50	
				<i>Vibrio alginolyticus</i> ATCC 17749	50	
				<i>Vibrio parahaemolyticus</i> ATCC 17802	50	
163	4-chloro-1-hydroxy-3-methoxy-6-methyl-8-methoxycarbonyl-xanthen-9-one	fungus <i>Penicillium citrinum</i> HL-5126		MRSA	>17.4	41
				<i>Staphylococcus aureus</i>	>17.4	
				<i>Escherichia coli</i>	>17.4	
				<i>Bacillus cereus</i>	>17.4	
				<i>Vibrio alginolyticus</i>	>17.4	

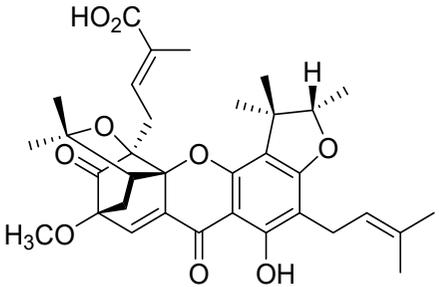
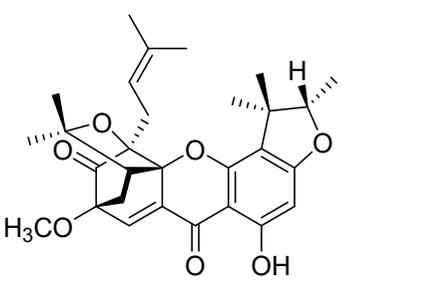
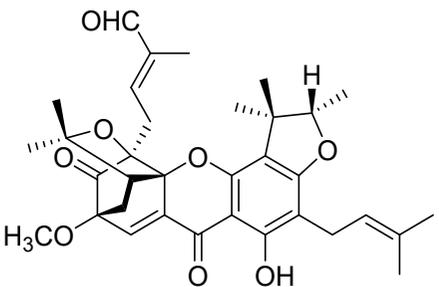
				<i>Vibrio parahaemolyticus</i>	>17.4	
164	2'-acetoxy-7-chloro-citreorosein	fungus <i>Penicillium citrinum</i> HL-5126		MRSA	>18.2	41
				<i>Staphylococcus aureus</i>	8.30	
				<i>Escherichia coli</i>	>18.2	
				<i>Bacillus cereus</i>	>18.2	
				<i>Vibrio alginolyticus</i>	>18.2	
				<i>Vibrio parahaemolyticus</i>	3.64	
165	Neriifolone B	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	>128	51
				<i>Bacillus cereus</i>	>128	
				<i>Bacillus subtilis</i>	\	
				<i>Staphylococcus aureus</i>	>128	
				<i>Staphylococcus epidermidis</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Salmonella typhimurium</i>	>128	
				<i>Pseudomonas aeruginosa</i>	>128	
166	14-Hydroxyltjixanthone hydrate	the fungus <i>Emericella</i> sp. XL029		<i>Micrococcus luteus</i>	25	62
				<i>Staphylococcus aureus</i>	25	

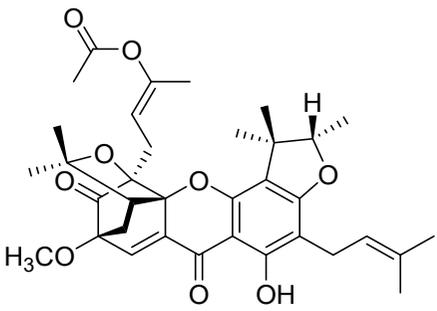
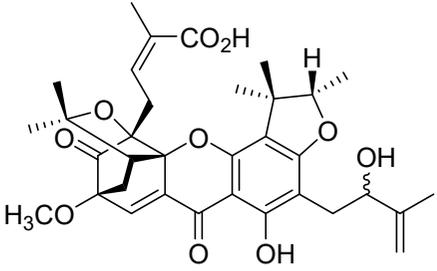
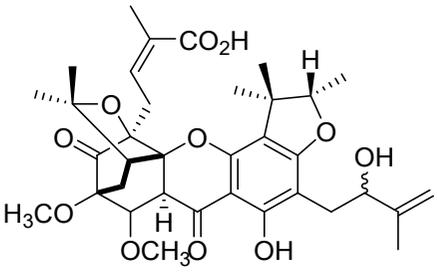
				<i>Bacillus megaterium</i> 25 <i>Bacillus anthracis</i> 25 <i>Bacillus paratyphosum</i> 25 MRSA >100 <i>Pseudomonas aeruginosa</i> 50 <i>Bacillus cereus</i> 50 <i>Enterobacter aerogenes</i> 50	
167	<i>O</i> -demethyl-3',4'-deoxysorospermin-3',4'-diol	<i>Vismia laurentii</i>		<i>Citrobacter freundii</i> \ 32 <i>Enterobacter aerogens</i> \ <i>Enterobacter cloacae</i> 19.53 <i>Escherichia coli</i> \ <i>Klebsiella pneumoniae</i> 78.12 <i>Morganella morganii</i> 39.06 <i>Proteus mirabilis</i> 19.53 <i>proteus vulgaris</i> \ <i>Pseudomonas aeruginosa</i> \ <i>Shigella dysenteriae</i> \ <i>Shigella flexneri</i> 39.06	

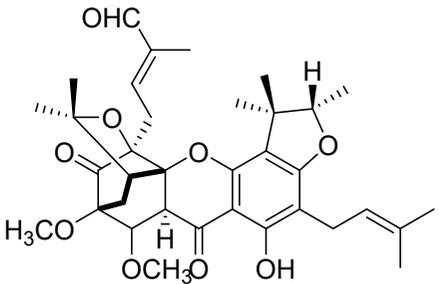
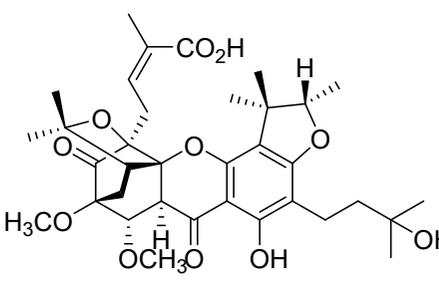
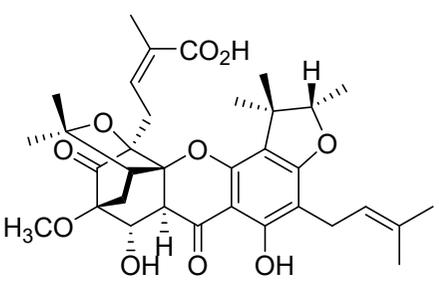
				<i>Salmonella typhi</i>	\	
				<i>Streptococcus faecalis</i>	78.12	
				<i>Staphylococcus aureus</i>	19.53	
				<i>Bacillus cereus</i>	\	
				<i>Bacillus megaterium</i>	\	
				<i>Bacillus stearothermophilus</i>	\	
				<i>Bacillus subtilis</i>	1.22	
168	Kielcorin	<i>Kielmeyera variabilis</i>		MRSA	>512	40
169	Calozeyloxanthone	Calophyllum		<i>Staphylococcus aureus</i>	4.1-8.3	16
				VRE	6.25	
				VSE	12.5	
170	Fusarioxazin	<i>Fusarium oxysporum</i>		<i>Staphylococcus aureus</i>	5.3	22
				<i>Bacillus cereus</i>	3.7	

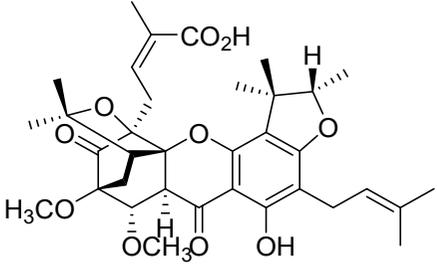
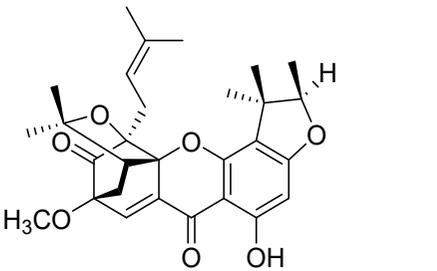
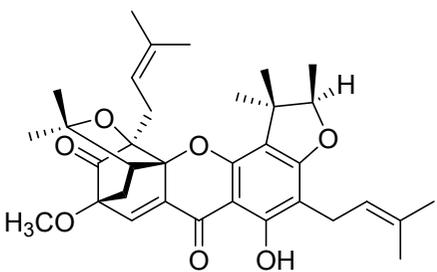
171	Scortechinone U	the fruits of <i>Garcinia scortechinii</i>		MRSA	>127.95	34-35
172	Scortechinone V	the fruits of <i>Garcinia scortechinii</i>		MRSA	35.20	34-35
173	Isosecostrigmatocystin	fungus <i>Aspergillus nidulans</i>		<i>Escherichia coli</i>	\	36
			<i>Micrococcus luteus</i>	\		
			<i>Vibrio vulnificus</i>	\		
			<i>Vibrio anguillarum</i>	\		
			<i>Vibrio alginolyticus</i>	\		
			<i>Ed ictalurid</i>	16		
			<i>Vibrio parahaemolyticus</i>	\		

174	Scortechinone W	<i>Garcinia scortechinii</i>		MRSA	34.86	34
175	Scortechinone X	<i>Garcinia scortechinii</i>		MRSA	>127.73	34
Caged xanthones						
176	Scortechinone L	the stem bark of <i>Garcinia scortechinii</i>		<i>Staphylococcus aureus</i> <i>Staphylococcus aureus</i>	>64 >64	49

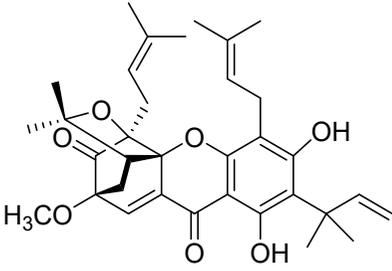
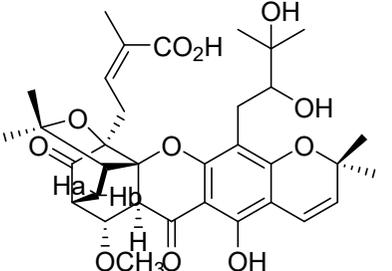
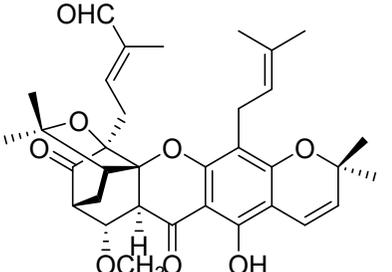
177	Scortechinone F	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone F is a complex polycyclic molecule. It features a central benzene ring fused to a five-membered ring containing a ketone group and a methoxy group. This is further fused to a six-membered ring with a hydroxyl group and a methyl group. A side chain with a terminal isopropenyl group is attached to the six-membered ring. Another side chain with a terminal carboxylic acid group and a methyl group is attached to the five-membered ring. Stereochemistry is indicated with wedged and dashed bonds.</p>	<i>Staphylococcus aureus</i>	16\4	49
178	Scortechinone E	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone E is similar to Scortechinone F but lacks the carboxylic acid group. It features a central benzene ring fused to a five-membered ring containing a ketone group and a methoxy group. This is further fused to a six-membered ring with a hydroxyl group and a methyl group. A side chain with a terminal isopropenyl group is attached to the six-membered ring. Another side chain with a terminal methyl group is attached to the five-membered ring. Stereochemistry is indicated with wedged and dashed bonds.</p>	<i>Staphylococcus aureus</i>	>256	49
179	Scortechinone H	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone H is similar to Scortechinone F but lacks the methyl group on the side chain with the carboxylic acid group. It features a central benzene ring fused to a five-membered ring containing a ketone group and a methoxy group. This is further fused to a six-membered ring with a hydroxyl group and a methyl group. A side chain with a terminal isopropenyl group is attached to the six-membered ring. Another side chain with a terminal carboxylic acid group is attached to the five-membered ring. Stereochemistry is indicated with wedged and dashed bonds.</p>	<i>Staphylococcus aureus</i>	>64\4	49

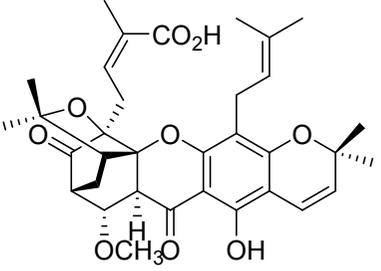
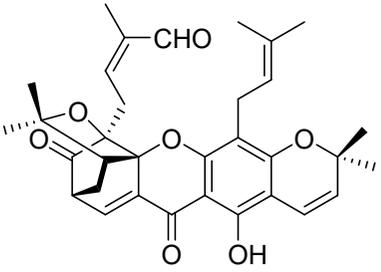
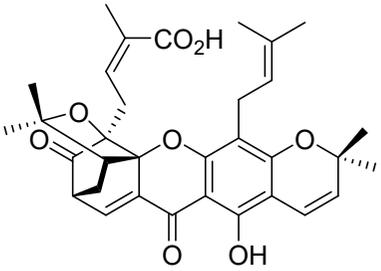
180	Scortechinone G	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone G is a complex polycyclic molecule. It features a central benzene ring with a hydroxyl group (-OH) at the 4-position and a methoxy group (-OCH₃) at the 6-position. This benzene ring is fused to a five-membered ring containing a carbonyl group (=O) and a methoxy group (-OCH₃). Another five-membered ring is fused to the benzene ring at the 1-position, containing a hydroxyl group (-OH) and a hydrogen atom (-H) with specific stereochemistry. A side chain is attached to the benzene ring at the 2-position, consisting of a propyl chain with a terminal isoprenyl group (-CH₂-CH₂-CH₂-C(CH₃)=CH₂). A complex ester group is attached to the five-membered ring containing the carbonyl group.</p>	<i>Staphylococcus aureus</i>	>64	49
181	Scortechinone C	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone C is similar to Scortechinone G. It has the same core polycyclic system. However, the side chain at the 2-position of the benzene ring is different, featuring a propyl chain with a terminal isoprenyl group and a carboxylic acid group (-CO₂H) at the 3-position of the propyl chain. The stereochemistry of the hydroxyl and hydrogen atoms is also specified.</p>	<i>Staphylococcus aureus</i>	32	49
182	Scortechinone S	the fruits of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone S is similar to Scortechinone C. It has the same core polycyclic system. The side chain at the 2-position of the benzene ring is a propyl chain with a terminal isoprenyl group and a carboxylic acid group (-CO₂H) at the 3-position. Additionally, there is a methoxy group (-OCH₃) at the 6-position of the benzene ring. The stereochemistry of the hydroxyl and hydrogen atoms is also specified.</p>	MRSA	64	34-35

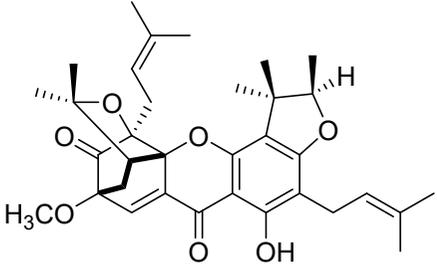
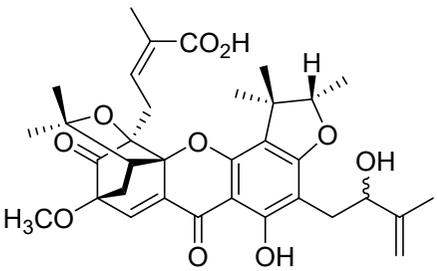
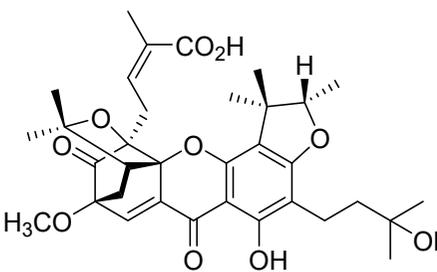
183	Scortechinone T	the fruits of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone T is a complex polycyclic molecule. It features a central benzene ring fused to a five-membered ring containing a ketone group and a methoxy group (H₃CO). This is further fused to a six-membered ring with a hydroxyl group (OH) and a methoxy group (OCH₃). A side chain with a terminal hydroxyl group (OHC) and a methyl group is attached to the six-membered ring. Another side chain with a terminal hydroxyl group (OH) and a methyl group is attached to the benzene ring. The structure is highly substituted with various stereocenters indicated by wedged and dashed bonds.</p>	MRSA	>63.87	34-35
184	Scortechinone O	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone O is similar to Scortechinone T but with a carboxylic acid group (CO₂H) instead of a hydroxyl group at the top of the side chain. It also features a side chain with a terminal hydroxyl group (OH) and a methyl group, and a methoxy group (H₃CO) on the six-membered ring. The structure is highly substituted with various stereocenters indicated by wedged and dashed bonds.</p>	<i>Staphylococcus aureus</i>	>128	49
185	Scortechinone P	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone P is similar to Scortechinone T but with a hydroxyl group (OH) instead of a methoxy group on the six-membered ring. It also features a side chain with a terminal hydroxyl group (OH) and a methyl group, and a methoxy group (H₃CO) on the six-membered ring. The structure is highly substituted with various stereocenters indicated by wedged and dashed bonds.</p>	<i>Staphylococcus aureus</i>	32\16	49

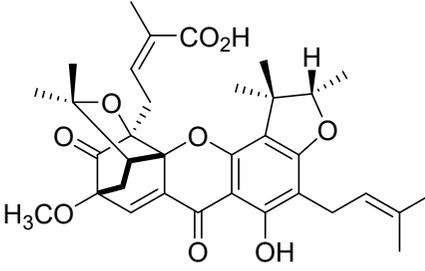
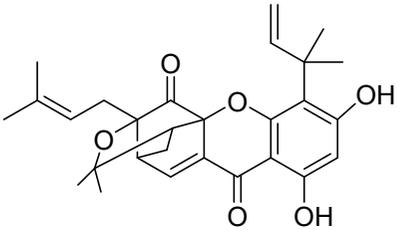
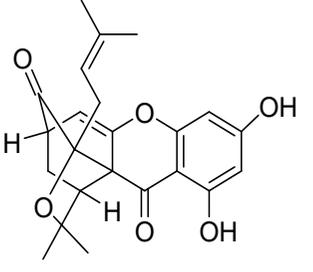
186	Scortechinone I	the stem bark and fruits of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone I is a complex polycyclic molecule. It features a central benzene ring fused to a five-membered ring containing a ketone group and a methoxy group (H₃CO). This is further fused to a six-membered ring with a hydroxyl group (OH) and a methoxy group (OCH₃). A side chain with a terminal carboxylic acid group (CO₂H) and a methyl group is attached to the six-membered ring. Another side chain with a terminal methyl group and a double bond is attached to the five-membered ring. Stereochemistry is indicated with wedged and dashed bonds.</p>	MRSA	7.99	34-35, 49
187	Scortechinone D	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone D is similar to Scortechinone I but lacks the carboxylic acid group. It features a central benzene ring fused to a five-membered ring containing a ketone group and a methoxy group (H₃CO). This is further fused to a six-membered ring with a hydroxyl group (OH). A side chain with a terminal methyl group and a double bond is attached to the five-membered ring. Stereochemistry is indicated with wedged and dashed bonds.</p>	<i>Staphylococcus aureus</i>	>256	49
188	Scortechinone A	the stem bark of <i>Garcinia scortechinii</i>	 <p>The chemical structure of Scortechinone A is identical to Scortechinone I. It features a central benzene ring fused to a five-membered ring containing a ketone group and a methoxy group (H₃CO). This is further fused to a six-membered ring with a hydroxyl group (OH) and a methoxy group (OCH₃). A side chain with a terminal carboxylic acid group (CO₂H) and a methyl group is attached to the six-membered ring. Another side chain with a terminal methyl group and a double bond is attached to the five-membered ring. Stereochemistry is indicated with wedged and dashed bonds.</p>	MRSA	128.2	49

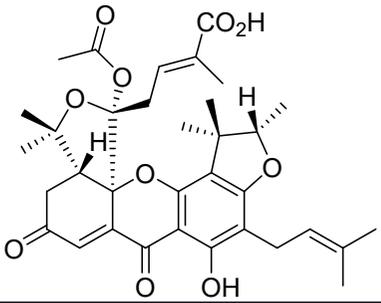
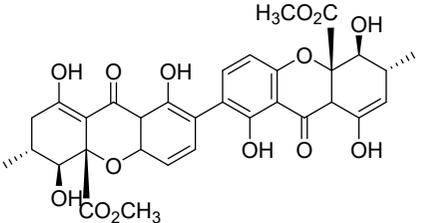
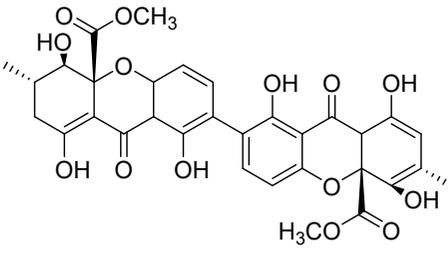
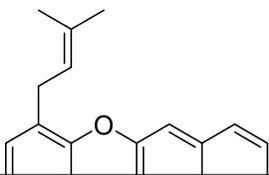
189	Scortechinone Q	the fruits of <i>Garcinia scortechinii</i>		MRSA	>130.45	34-35
190	Scortechinone R	the fruits of <i>Garcinia scortechinii</i>		MRSA	>127.7	34-35
191	Bractatin	the roots of <i>Garcinia propinqua</i>		<i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Staphylococcus typhimurium</i>	8 1 128 128	43

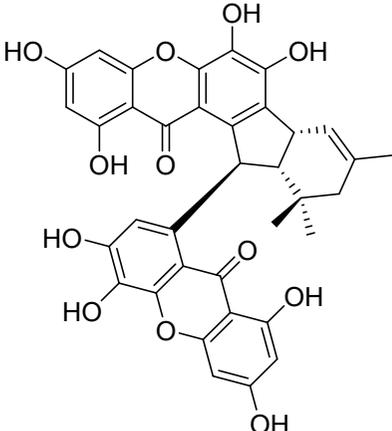
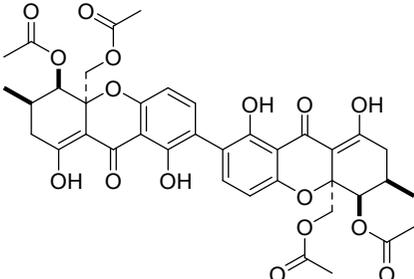
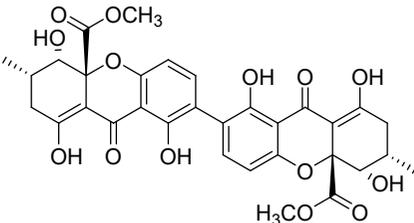
192	Scortechinone J	the stem bark of <i>Garcinia scortechinii</i>	 <p>The structure of Scortechinone J is a complex polycyclic molecule. It features a central chromone core with a fused benzene ring. The chromone ring has a methoxy group (H₃CO) at the 7-position and a methyl group at the 4-position. The benzene ring is substituted with a methyl group at the 6-position and a propenyl group at the 5-position. The propenyl group is further substituted with a methyl group at the 3-position. The chromone ring also has a methyl group at the 2-position and a methyl group at the 3-position. The structure is shown with stereochemistry indicated by wedged and dashed bonds.</p>	<i>Staphylococcus aureus</i>	32\8	49
193	Hanburinone	the fruits of <i>Garcinia hanburyi</i>	 <p>The structure of Hanburinone is a complex polycyclic molecule. It features a central chromone core with a fused benzene ring. The chromone ring has a methoxy group (OCH₃) at the 7-position and a methyl group at the 4-position. The benzene ring is substituted with a methyl group at the 6-position and a propenyl group at the 5-position. The propenyl group is further substituted with a methyl group at the 3-position. The chromone ring also has a methyl group at the 2-position and a methyl group at the 3-position. The structure is shown with stereochemistry indicated by wedged and dashed bonds.</p>	MRSA	124.85	52
194	Isomoreollin B	the fruits of <i>Garcinia hanburyi</i>	 <p>The structure of Isomoreollin B is a complex polycyclic molecule. It features a central chromone core with a fused benzene ring. The chromone ring has a methoxy group (OCH₃) at the 7-position and a methyl group at the 4-position. The benzene ring is substituted with a methyl group at the 6-position and a propenyl group at the 5-position. The propenyl group is further substituted with a methyl group at the 3-position. The chromone ring also has a methyl group at the 2-position and a methyl group at the 3-position. The structure is shown with stereochemistry indicated by wedged and dashed bonds.</p>	MRSA	115.25	52

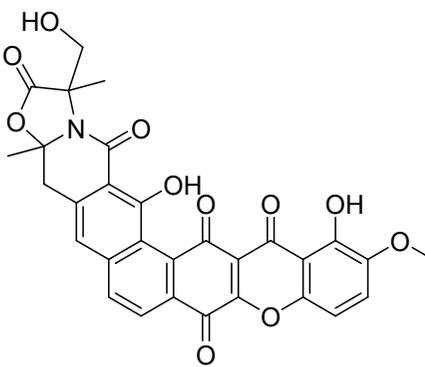
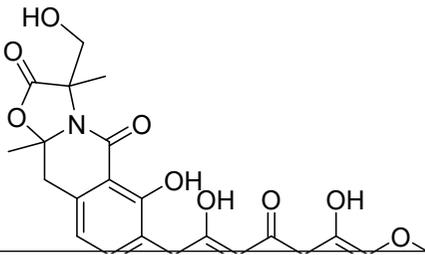
195	Moreollin acid	the fruits of <i>Garcinia hanburyi</i>	 <p>The structure of Moreollin acid is a complex polycyclic molecule. It features a central benzene ring fused to a six-membered ring containing a lactone group and a methyl group. This is further fused to a five-membered ring with a methyl group and a hydroxyl group. A side chain with a methyl group and a propenoic acid moiety is attached to the central ring. Stereochemistry is indicated with wedged and dashed bonds.</p>	MRSA	14.80	52
196	Morellin	the fruits of <i>Garcinia hanburyi</i>	 <p>The structure of Morellin is similar to Moreollin acid but lacks the propenoic acid side chain, instead having a propenal side chain. The rest of the polycyclic core, including the lactone and hydroxyl groups, remains the same. Stereochemistry is indicated with wedged and dashed bonds.</p>	MRSA	108.85	52
197	Morellic acid	the fruits of <i>Garcinia hanburyi</i>	 <p>The structure of Morellic acid is identical to Moreollin acid, featuring the same polycyclic core and propenoic acid side chain. Stereochemistry is indicated with wedged and dashed bonds.</p>	MRSA	14	52

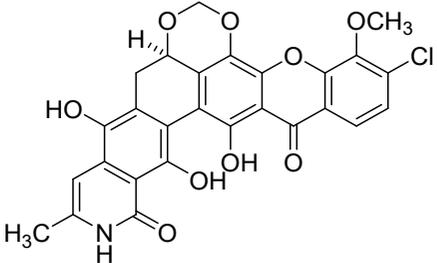
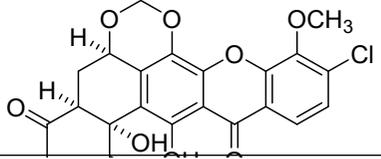
198	Scortechterpene A	the fruits of <i>Garcinia scortechinii</i>		MRSA	128	34,35
199	Scortechinone M	the stem bark of <i>Garcinia scortechinii</i>		<i>Staphylococcus aureus</i>	32	49
				<i>Staphylococcus aureus</i>	32	
200	Scortechinone N	the stem bark of <i>Garcinia scortechinii</i>		<i>Staphylococcus aureus</i>	32	49
				<i>Staphylococcus aureus</i>	32	

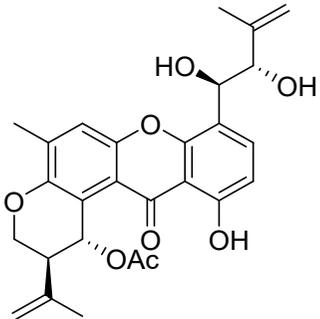
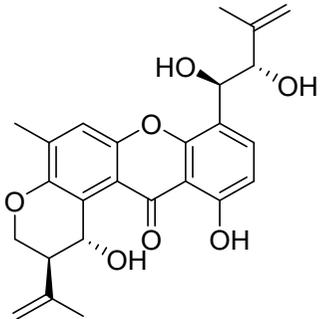
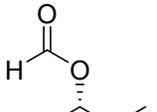
201	Scortechinone B	the fruits of <i>Garcinia scortechinii</i>		MRSA	2	34,35
202	Neobractatin	the roots of <i>Garcinia propinqua</i>		<i>Bacillus cereus</i>	32	43
				<i>Bacillus subtilis</i>	1	
				<i>Escherichia coli</i>	128	
				<i>Staphylococcus typhimurium</i>	128	
203	Cochinchinoxanthone	the roots of <i>Cratoxylum sumatranum</i>		<i>Micrococcus luteus</i>	>128	51
				<i>Bacillus cereus</i>	>128	
				<i>Bacillus subtilis</i>	\	
				<i>Staphylococcus aureus</i>	>128	
				<i>Staphylococcus epidermidis</i>	>128	
				<i>Escherichia coli</i>	>128	
				<i>Salmonella typhimurium</i>	>128	
				<i>Pseudomonas aeruginosa</i>	>128	

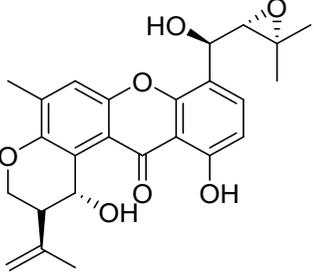
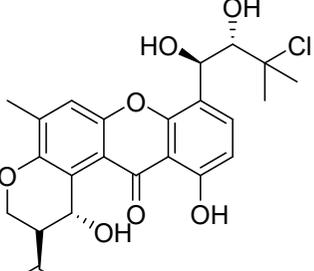
204	Scortechinone K	the stem bark of <i>Garcinia scortechinii</i>		<i>Staphylococcus aureus</i>	128	49
Bi-xanthones						
205	Secalonic acid A			<i>Staphylococcus aureus</i>	12.5	70
				<i>Escherichia coli</i>	25	
				<i>Sarcina ventriculi</i>	12.5	
				<i>Pseudomonas aeruginosa</i>	12.5	
206	Secalonic acid D			<i>Bacillus subtilis</i>	24.4	69
				<i>Escherichia coli</i>	24.4	
				<i>Micrococcus luteus</i>	24.4	
				<i>Pseudoalteromonas nigrifaciens</i>	97.5	
207	Globulixanthone E	the root bark of <i>Symphonia globulifera</i>		<i>Staphylococcus aureus</i>	4.51	16
				<i>Bacillus subtilis</i>	3.12	
				<i>Vibrio anguillarum</i>	5.56	

				<i>Escherichia coli</i>	>100	
208	Garmoxanthone	the bark of <i>Garcinia mangostana</i>		MRSA	3.9	38
				<i>Vibrio vulnificus</i>	15.6	
				<i>Vibrio rotiferianus</i>	15.6	
				<i>Vibrio campbellii</i>	31.2	
209	Dicerandrol C			<i>Staphylococcus aureus</i>	1/1.33	71
				<i>Staphylococcus saprophyticus</i>	2/2.66	
210	Secalonic acid B			<i>Bacillus subtilis</i>	24.4	72
				<i>Escherichia coli</i>	24.4	
				<i>Micrococcus luteus</i>	24.4	
				<i>Pseudoalteromonas nigrifaciens</i>	97.5	

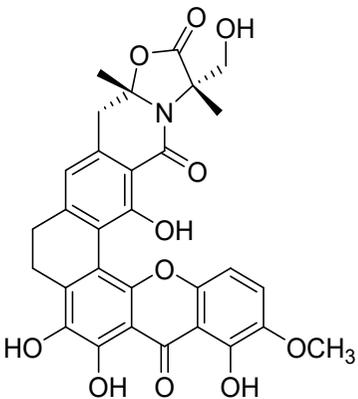
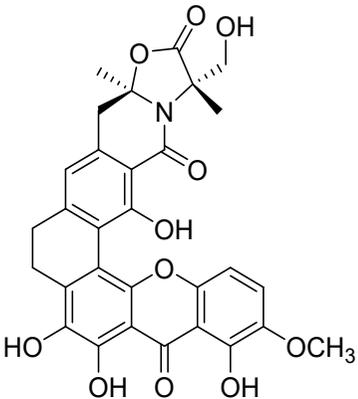
Other xanthone derivatives						
211	Citreamicin δ	<i>Streptomyces vinaceus</i>		<i>Staphylococcus aureus</i>	$\leq 0.5 \setminus 1 \setminus 2$	24
				VRE	≤ 0.25	
				<i>Streptococcus pneumoniae</i>	≤ 0.06	
				<i>Haemophilus influenzae</i>	1	
				<i>Hemophilus parainfluenzae</i>	1	
				<i>Escherichia coli</i>	> 64	
				<i>Klebsiella pneumoniae</i>	> 64	
				<i>Moraxella catarrhalis</i>	4	
				<i>Serratia marcescens</i>	> 64	
				<i>Pseudomonas aeruginosa</i>	> 64	
212	Citreamicin ϵ	<i>Streptomyces vinaceus</i>		<i>Staphylococcus aureus</i>	$0.13 \setminus 0.12 \setminus 0.25$	24
				VRE	0.5	
				<i>Streptococcus pneumoniae</i>	$0.25 \setminus 0.12$	
				<i>Haemophilus</i>	> 32	

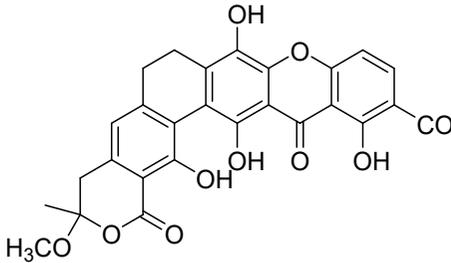
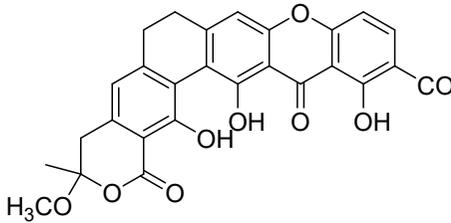
				<i>influenzae</i> <i>Hemophilus parainfluenzae</i> <i>Escherichia coli</i> <i>Klebsiella pneumoniae</i> <i>Moraxella catarrhalis</i> <i>Serratia marcescens</i> <i>Pseudomonas aeruginosa</i>	 >32 >32 >32 0.5 >32 >32	
213	Xantholipin B	<i>Streptomyces flocculus</i> CGMCC 4.1223		<i>Bacillus mycoides</i> <i>Mycobacterium smegmatis</i> <i>Staphylococcus aureus</i> <i>Pseudomonas aeruginosa</i> <i>Klebsiella pneumoniae</i> <i>Escherichia coli</i>	 0.08 5.0 0.025 >30 >30 >30	26
214	Xantholipin	<i>Streptomyces flocculus</i> CGMCC 4.1223		<i>Bacillus mycoides</i> <i>Mycobacterium smegmatis</i> <i>Staphylococcus</i>	 0.08 5.0 0.025	26

				<i>aureus</i>		
				<i>Pseudomonas aeruginosa</i>	>30	
				<i>Klebsiella pneumoniae</i>	>30	
				<i>Escherichia coli</i>	>30	
215	Aspergixanthone G	fungus <i>Aspergillus</i> sp.		<i>Micrococcus lysodeikticus</i>	0.78	39
				<i>Bacillus anthracis</i>	12.5	
				<i>Salmonella typhi</i>	6.13	
				<i>Enterobacter aerogenes</i>	6.13	
216	Aspergixanthone H	fungus <i>Aspergillus</i> sp.		<i>Micrococcus lysodeikticus</i>	6.13	39
				<i>Bacillus anthracis</i>	12.5	
				<i>Salmonella typhi</i>	6.13	
				<i>Enterobacter aerogenes</i>	6.13	
217	Varixanthone	the fungus of <i>Emericella varicolor</i>		<i>Escherichia coli</i>	12.5	62
				<i>Proteus</i> sp.	12.5	
				<i>Bacillus subtilis</i>	12.5	

				<i>Staphylococcus aureus</i>	12.5	
218	14-Hydroxyltajixanthone	the fungus <i>Emericella</i> sp. XL029		<i>Micrococcus luteus</i>	25	62
				<i>Staphylococcus aureus</i>	25	
				<i>Bacillus megaterium</i>	12.5	
				<i>Bacillus anthracis</i>	12.5	
				<i>Bacillus paratyphosum</i>	12.5	
				MRSA	50	
				<i>Pseudomonas aeruginosa</i>	50	
				<i>Bacillus cereus</i>	50	
220	14-Hydroxyl-15-chlorotajixanthone hydrate	the fungus <i>Emericella</i> sp. XL029		<i>Micrococcus luteus</i>	25	62
				<i>Staphylococcus aureus</i>	25	
				<i>Bacillus megaterium</i>	25	
				<i>Bacillus anthracis</i>	25	
				<i>Bacillus paratyphosum</i>	25	
				MRSA	>100	

				<i>Pseudomonas aeruginosa</i>	50	
				<i>Escherichia coli</i>	50	
				<i>Enterobacter aerogenes</i>	50	
221	14-Methoxytjixanthone-25-acetate	the fungus <i>Emericella</i> sp. XL029		<i>Micrococcus luteus</i>	25	62
				<i>Staphylococcus aureus</i>	25	
				<i>Bacillus megaterium</i>	12.5	
				<i>Bacillus anthracis</i>	25	
				<i>Bacillus paratyphosum</i>	25	
				MRSA	>100	
				<i>Pseudomonas aeruginosa</i>	50	
				<i>Escherichia coli</i>	50	
				<i>Enterobacter aerogenes</i>	50	
222	15-Chlorotjixanthone hydrate	the fungus <i>Emericella</i> sp. XL029		<i>Micrococcus luteus</i>	50	62
				<i>Staphylococcus aureus</i>	25	
				<i>Bacillus megaterium</i>	12.5	
				<i>Bacillus anthracis</i>	50	
				<i>Bacillus</i>	25	

				<i>paratyphosum</i>		
				MRSA	>100	
				<i>Pseudomonas aeruginosa</i>	50	
				<i>Escherichia coli</i>	50	
				<i>Enterobacter aerogenes</i>	50	
223	Citreamicin θ A	<i>Streptomyces caelestis</i>	 <p>The chemical structure of Citreamicin θ A features a complex polycyclic core. It includes a decalin system fused to a benzene ring, which is further fused to a pyridone ring. A methoxy group (-OCH₃) is attached to the pyridone ring. A side chain containing a hydroxyl group (-OH) and a methyl group is attached to the decalin system. A lactam ring is fused to the decalin system, with a hydroxyl group (-OH) and a methyl group attached to its nitrogen atom.</p>	<i>Staphylococcus haemolyticus</i>	0.5	64
				<i>Staphylococcus aureus</i>	1\0.25	
				<i>Bacillus subtilis</i>	0.25	
224	Citreamicin θ B	<i>Streptomyces caelestis</i>	 <p>The chemical structure of Citreamicin θ B is very similar to Citreamicin θ A, but the side chain on the decalin system is shorter, containing only a hydroxyl group (-OH) and a methyl group, without the additional methyl group seen in θ A.</p>	<i>Staphylococcus haemolyticus</i>	0.5	64
				<i>Staphylococcus aureus</i>	1\0.25	
				<i>Bacillus subtilis</i>	0.25	

225	Citreaglycon A	<i>Streptomyces caelestis</i>	 <p>The chemical structure of Citreaglycon A is a complex polycyclic molecule. It features a central benzene ring fused to a six-membered ring containing a hydroxyl group and a carbonyl group. This is further fused to a five-membered ring with a methoxy group and a carbonyl group. The structure is highly substituted with multiple hydroxyl groups and a methoxy group.</p>	<i>Staphylococcus haemolyticus</i>	8.0	64
				<i>Staphylococcus aureus</i>	16.0\8	
				<i>Bacillus subtilis</i>	8.0	
226	Dehydrocitreaglycon A	<i>Streptomyces caelestis</i>	 <p>The chemical structure of Dehydrocitreaglycon A is similar to Citreaglycon A but lacks the hydroxyl group at the 10-position of the central benzene ring. It features a central benzene ring fused to a six-membered ring with a carbonyl group, which is further fused to a five-membered ring with a methoxy group and a carbonyl group. The structure is highly substituted with multiple hydroxyl groups and a methoxy group.</p>	<i>Staphylococcus haemolyticus</i>	8.0	64
				<i>Staphylococcus aureus</i>	16.0	
				<i>Bacillus subtilis</i>	8.0	

Reference:

1. I. Siridechakorn, W. Phakhodee, T. Ritthiwigrom, T. Promgool, S. Deachathai, S. Cheenpracha, U. Prawat and S. Laphookhieo, *Fitoterapia*, 2012, **83**, 1430-1434.
2. C. Auranwiwat, K. Trisuwan, A. Saiai, S. G. Pyne and T. Ritthiwigrom, *Fitoterapia*, 2014, **98**, 179-183.
3. G. A. Mohamed, S. R. Ibrahim, M. I. Shaaban and S. A. Ross, *Fitoterapia*, 2014, **98**, 215-221.
4. A. Raksat, W. Maneerat, R. J. Andersen, S. G. Pyne and S. Laphookhieo, *Fitoterapia*, 2019, **136**.
5. E. E. Eltamany, U. R. Abdelmohsen, A. K. Ibrahim, H. A. Hassanean, U. Hentschel and S. A. Ahmed, *Bioorg Med Chem Lett*, 2014, **24**, 4939-4942.
6. M. M. Wagenaar and J. Clardy, *Journal of Natural Products*, 2001, **64**, 1006-1009.
7. T. Kodama, T. Ito, D. F. Dibwe, S. Y. Woo and H. Morita, *Bioorg Med Chem Lett*, 2017, **27**, 2397-2400.
8. N. Boonnak, S. Chantrapromma, K. Sathirakul and C. Kaewpiboon, *Bioorg Med Chem Lett*, 2020, **30**.
9. S. M. Lin, C. J. Zhu, H. X. Li, Y. Z. Chen and S. P. Liu, *Biochimica Et Biophysica Acta-Biomembranes*, 2020, **1862**.
10. J. J. Koh, H. X. Zou, D. Mukherjee, S. M. Lin, F. H. Lim, J. K. Tan, D. Z. Tan, B. L. Stocker, M. S. M. Timmer, H. M. Corkran, R. Lakshminarayanan, D. T. H. Tan, D. R. Cao, R. W. Beuerman, T. Dick and S. P. Liu, *European Journal of Medicinal Chemistry*, 2016, **123**, 684-703.
11. A. E. Nkengfack, P. Mkounga, M. Meyer, Z. T. Fomum and B. Bodo, *Phytochemistry*, 2002, **61**, 181-187.
12. A. G. Azebaze, M. Meyer, B. Bodo and A. E. Nkengfack, *Phytochemistry*, 2004, **65**, 2561-2564.
13. K. Panthong, W. Pongcharoen, S. Phongpaichit and W. C. Taylor, *Phytochemistry*, 2006, **67**, 999-1004.
14. S. Klaiklay, Y. Sukpondma, V. Rukachaisirikul and S. Phongpaichit, *Phytochemistry*, 2013, **85**, 161-166.
15. S. Mahamodo, C. Riviere, C. Neut, A. Abedini, H. Ranarivelo, N. Duhal, V. Roumy, T. Hennebelle, S. Sahpaz, A. Lemoine, D. Razafimahefa, B. Razanamahefa, F. Bailleul and B. Andriamihaja, *Phytochemistry*, 2014, **102**, 162-168.
16. H. R. W. Dharmaratne, W. M. N. M. Wijesinghe and V. Thevanasem, *Journal of Ethnopharmacology*, 1999, **66**, 339-342.
17. J. J. Omolo, M. M. Johnson, S. F. van Vuuren and C. B. de Koning, *Bioorg Med Chem Lett*, 2011, **21**, 7085-7088.
18. S. Deachathai, S. Phongpaichit and W. Mahabusarakam, *Nat Prod Res*, 2008, **22**, 1327-1332.
19. J. Ngoupayo, T. K. Tabopda and M. S. Ali, *Bioorg Med Chem*, 2009, **17**, 5688-5695.
20. V. Rukachaisirikul, K. Tadpetch, A. Watthanaphanit, N. Saengsanee and S. Phongpaichit, *J Nat Prod*, 2005, **68**, 1218-1221.
21. H. Fouotsa, A. T. Mbaveng, C. D. Mbazona, A. E. Nkengfack, S. Farzana, C. M. Iqbal, J. J. Meyer, N. Lall and V. Kuete, *BMC Complement Altern Med*, 2013, **13**, 81.
22. G. A. Mohamed, S. R. M. Ibrahim, N. A. Alhakamy and O. S. Aljohani, *Nat Prod Res*, 2020, DOI: 10.1080/14786419.2020.1855165, 1-9.
23. F. Song, B. Ren, C. Chen, K. Yu, X. Liu, Y. Zhang, N. Yang, H. He, X. Liu, H. Dai and L. Zhang, *Appl Microbiol Biotechnol*, 2014, **98**, 3753-3758.
24. D. C. Hopp, D. J. Milanowski, J. Rhea, D. Jacobsen, J. Rabenstein, C. Smith, K. Romari, M. Clarke, L. Francis, M. Irigoyen, M. Luche, G. J. Carr and U. Mocek, *J Nat Prod*, 2008, **71**, 2032-2035.
25. S. Ngouela, B. L. Ndjakou, D. N. Tchamo, F. Zelefack, E. Tsamo and J. D. Connolly, *Nat Prod Res*, 2005, **19**, 23-27.
26. S. F. Wu, T. T. Huang, D. Xie, J. Wo, X. Z. Wang, Z. X. Deng and S. J. Lin, *J Antibiot*, 2017, **70**, 90-95.
27. K. Trisuwan and T. Ritthiwigrom, *Arch Pharm Res*, 2012, **35**, 1733-1738.
28. Y. Sakagami, K. Kajimura, W. M. N. M. Wijesinghe and H. R. W. Dharmaratne, *Planta Medica*, 2002, **68**, 541-543.
29. N. Boonnak, C. Karalai, S. Chantrapromma, C. Ponglimanont, A. Kanjana-Opas, K. Chantrapromma and S. Kato, *Chem Pharm Bull*, 2010, **58**, 386-389.
30. S. Limsuwan, E. N. Trip, T. R. Kouwen, S. Piersma, A. Hiranrat, W. Mahabusarakam, S. P. Voravuthikunchai, J. M. van Dijk and O. Kayser, *Phytomedicine*, 2009, **16**, 645-651.
31. T. Kaneshima, T. Myoda, K. Toeda, T. Fujimori and M. Nishizawa, *Biosci Biotechnol Biochem*, 2017, **81**, 1461-1465.

32. S. Boonsri, C. Karalai, C. Ponglimanont, A. Kanjana-opas and K. Chantrapromma, *Phytochemistry*, 2006, **67**, 723-727.
33. W. Y. Wang, M. L. Gao, Z. H. Luo, Y. Y. Liao, B. B. Zhang, W. Q. Ke, Z. Z. Shao, F. Li and J. M. Chen, *Natural Product Research*, 2019, **33**, 3077-3082.
34. Y. Sukpondma, V. Rukachaisirikul and S. Phongpaichit, *J Nat Prod*, 2005, **68**, 1010-1017.
35. N. Anantachoke, P. Tuchinda, C. Kuhakarn, M. Pohmakotr and V. Reutrakul, *Pharm Biol*, 2012, **50**, 78-91.
36. S. Q. Yang, X. M. Li, G. M. Xu, X. Li, C. Y. An and B. G. Wang, *J Antibiot (Tokyo)*, 2018, **71**, 778-784.
37. S. Sanpa, M. Popova, V. Bankova, T. Tunkasiri, S. Eitssayeam and P. Chantawannakul, *PLoS One*, 2015, **10**, e0126886.
38. W. Wang, Y. Liao, X. Huang, C. Tang and P. Cai, *Nat Prod Res*, 2018, **32**, 1769-1774.
39. A. Zhu, M. Y. Yang, Y. H. Zhang, C. L. Shao, C. Y. Wang, L. D. Hu, F. Cao and H. J. Zhu, *Sci Rep*, 2018, **8**, 10621.
40. A. Coqueiro, Y. H. Choi, R. Verpoorte, K. B. Gupta, M. De Mieri, M. Hamburger, M. C. Young, P. Stapleton, S. Gibbons and S. Bolzani Vda, *J Nat Prod*, 2016, **79**, 470-476.
41. K. Y. He, C. Zhang, Y. R. Duan, G. L. Huang, C. Y. Yang, X. R. Lu, C. J. Zheng and G. Y. Chen, *J Antibiot*, 2017, **70**, 823-827.
42. C. Tantapakul, W. Phakhodee, T. Ritthiwigrom, S. Cheenpracha, U. Prawat, S. Deachathai and S. Laphookhieo, *J Nat Prod*, 2012, **75**, 1660-1664.
43. P. Meesakul, A. Pansanit, W. Maneerat, T. Sripisut, T. Ritthiwigrom, T. Machan, S. Cheenpracha and S. Laphookhieo, *Nat Prod Commun*, 2016, **11**, 87-90.
44. T. Fukai, Y. Oku, A. J. Hou, M. Yonekawa and S. Terada, *Phytomedicine*, 2005, **12**, 510-513.
45. L. J. Bessa, A. Palmeira, A. S. Gomes, V. Vasconcelos, E. Sousa, M. Pinto and P. Martins da Costa, *Microb Drug Resist*, 2015, **21**, 404-415.
46. J. Nontakham, N. Charoenram, W. Upamai, M. Taweechotipatr and S. Suksamrarn, *Arch Pharm Res*, 2014, **37**, 972-977.
47. T. Sriyatep, I. Siridechakorn, W. Maneerat, A. Pansanit, T. Ritthiwigrom, R. J. Andersen and S. Laphookhieo, *J Nat Prod*, 2015, **78**, 265-271.
48. V. Rukachaisirikul, M. Kamkaew, D. Sukavisit, S. Phongpaichit, P. Sawangchote and W. C. Taylor, *J Nat Prod*, 2003, **66**, 1531-1535.
49. V. Rukachaisirikul, P. Phainuphong, Y. Sukpondma, S. Phongpaichit and W. C. Taylor, *Planta Med*, 2005, **71**, 165-170.
50. X. Hu, X. Hu, X. Hu, S. Li, L. Li, L. Yu, H. Liu, X. You, Z. Wang, L. Li, B. Yang, B. Jiang and L. Wu, *J Nat Prod*, 2019, **82**, 2337-2342.
51. C. Tantapakul, W. Maneerat, T. Sripisut, T. Ritthiwigrom, R. J. Andersen, P. Cheng, S. Cheenpracha, A. Raksat and S. Laphookhieo, *J Agric Food Chem*, 2016, **64**, 8755-8762.
52. Y. Sukpondma, V. Rukachaisirikul and S. Phongpaichit, *Chem Pharm Bull*, 2005, **53**, 850-852.
53. H. Fouotsa, A. M. Lannang, J. P. Dzoyem, S. J. N. Tatsimo, B. Neumann, C. D. Mbazona, A. A. Razakarivony, A. E. Nkengfack, J. N. Eloff and N. Sewald, *Planta Medica*, 2015, **81**, 594-599.
54. M. Iinuma, H. Tosa, T. Tanaka, F. Asai, Y. Kobayashi, R. Shimano and K. Miyauchi, *J Pharm Pharmacol*, 1996, **48**, 861-865.
55. H. R. Dharmaratne, Y. Sakagami, K. G. Piyasena and V. Thevanesam, *Nat Prod Res*, 2013, **27**, 938-941.
56. H. L. Li, X. M. Li, H. Liu, L. H. Meng and B. G. Wang, *Mar Drugs*, 2016, **14**.
57. A. Zhu, X. W. Zhang, M. Zhang, W. Li, Z. Y. Ma, H. J. Zhu and F. Cao, *Mar Drugs*, 2018, **16**.
58. X. Zhen, T. Gong, Y. H. Wen, D. J. Yan, J. J. Chen and P. Zhu, *Mar Drugs*, 2018, **16**.
59. L. Shao, Y. Marin-Felix, F. Surup, A. M. Stchigel and M. Stadler, *J Fungi (Basel)*, 2020, **6**.
60. T. Fukai, Y. Oku, A. J. Hou, M. Yonekawa and S. Terada, *Chem Biodivers*, 2004, **1**, 1385-1390.
61. J. Malmstrom, C. Christophersen, A. F. Barrero, J. E. Oltra, J. Justicia and A. Rosales, *J Nat Prod*, 2002, **65**, 364-367.
62. X. Wu, L. Z. Fang, F. L. Liu, X. J. Pang, H. L. Qin, T. Zhao, L. L. Xu, D. F. Yang and X. L. Yang, *Rsc Advances*, 2017, **7**, 31115-31122.
63. W. B. Xin, Z. J. Mao, G. L. Jin and L. P. Qin, *Phytother Res*, 2011, **25**, 536-539.
64. L. L. Liu, Y. Xu, Z. Han, Y. X. Li, L. Lu, P. Y. Lai, J. L. Zhong, X. R. Guo, X. X. Zhang and P. Y. Qian, *Mar Drugs*, 2012, **10**, 2571-2583.
65. Y. B. Ji, W. J. Chen, T. Z. Shan, B. Y. Sun, P. C. Yan and W. Jiang, *Chem Biodivers*, 2020, **17**, e1900640.

66. S. Duangsrirai, K. Choowongkomon, L. J. Bessa, P. M. Costa, N. Amat and A. Kijjoa, *Molecules*, 2014, **19**, 19923-19934.
67. A. Abdel-Lateff, C. Klemke, G. M. Konig and A. D. Wright, *J Nat Prod*, 2003, **66**, 706-708.
68. Q. Yao, J. Wang, X. Zhang, X. Nong, X. Xu and S. Qi, *Mar Drugs*, 2014, **12**, 5902-5915.
69. J. Bao, Y. L. Sun, X. Y. Zhang, Z. Han, H. C. Gao, F. He, P. Y. Qian and S. H. Qi, *J Antibiot*, 2013, **66**, 219-223.
70. F. Liu, X. L. Cai, H. Yang, X. K. Xia, Z. Y. Guo, J. Yuan, M. F. Li, Z. G. She and Y. C. Lin, *Planta Med*, 2010, **76**, 185-189.
71. C. Erbert, A. A. Lopes, N. S. Yokoya, N. A. J. C. Furtado, R. Conti, M. T. Pupo, J. L. C. Lopes and H. M. Deboni, *Bot Mar*, 2012, **55**, 435-440.
72. W. Zhang, K. Krohn, U. Zia, U. Florke, G. Pescitelli, L. Di Bari, S. Antus, T. Kurtan, J. Rheinheimer, S. Draeger and B. Schulz, *Chemistry*, 2008, **14**, 4913-4923.

2. The correlation between log P and MIC values of simple xanthenes.

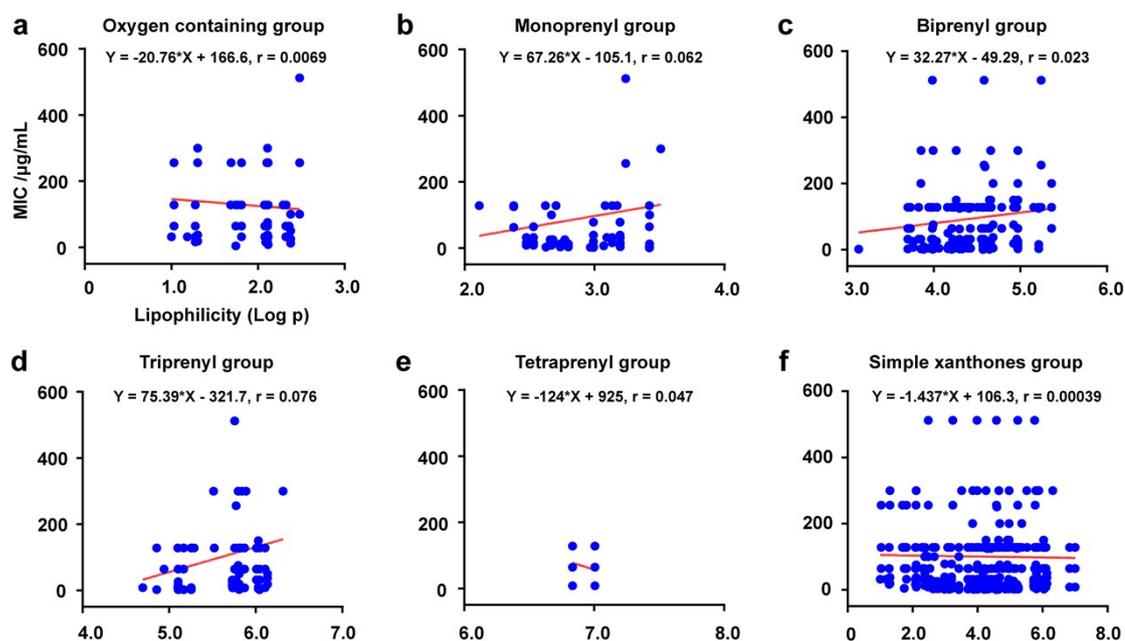


Fig. S1 The correlation between log P and MIC values of simple xanthenes.