

## Supplementary Material

# Comparative Chemical Profiling and Antimicrobial/Anticancer Evaluation of Extracts from Farmed versus Wild *Agelas oroides* and *Sarcotragus foetidus* Sponges

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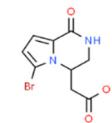
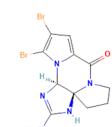
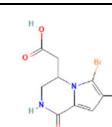
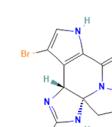
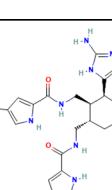
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**Table S1.** Selected compounds for *A. oroides* extracts. Experimental retention time (RT), mode polarity (mode), collision energy, precursor ion, fragment ions and bibliographic references for SRM ions.

Superclass	Class	Chemical subclass	Metabolite	RT (min)	Mode	Collision Energy (V)	Chemical formula	Chemical structure	Precursor ion (m/z)	Fragments ions (m/z)	Ref for m/z
Alkaloids	Pyrrole alkaloids	Linear pyrrole alkaloids	Dispacamide A	12.52	+	20	C <sub>11</sub> H <sub>11</sub> Br <sub>2</sub> N <sub>5</sub> O <sub>2</sub>		405.934	126.067; 138.068; 155.094	[71]
			Dispacamide B	1.58	+	10	C <sub>11</sub> H <sub>12</sub> BrN <sub>5</sub> O <sub>2</sub>		326.025	155.09; 326.00	[71]
			Hymenidin	11.35	+	10	C <sub>11</sub> H <sub>12</sub> BrN <sub>5</sub> O		310.029	80.050; 110.071; 122.071	GNPS
			Keramadine	11.45	+	20	C <sub>12</sub> H <sub>15</sub> BrN <sub>5</sub> O <sup>+</sup>		324.047	94.067; 136.088	[71]
			Oroidin	12.89	+	10	C <sub>11</sub> H <sub>11</sub> Br <sub>2</sub> N <sub>5</sub> O		389.938	80.05; 110.07; 122.07; 139.10; 389.94	GNPS
			4,5-Dibromopyrrole-2-carboxylic acid	16.35	-	20	C <sub>5</sub> H <sub>3</sub> Br <sub>2</sub> NO <sub>2</sub>		267.920	223.920	[154]

Fused cyclic pyrrole alkaloids

3-Debromohanishin	3.54	+	10	C <sub>11</sub> H <sub>14</sub> BrN <sub>2</sub> O <sub>3</sub> <sup>+</sup>		300.990	215.968; 254.978	[71]
Dibromophakellin	12.88	+	40	C <sub>11</sub> H <sub>11</sub> Br <sub>2</sub> N <sub>5</sub> O		387.940	249.975; 328.892	GNPS
Longamide B	14.31	+	20	C <sub>9</sub> H <sub>8</sub> Br <sub>2</sub> N <sub>2</sub> O <sub>3</sub>		352.897	273.978; 292.876	[71]
Longamide B methyl ester	16.56	+	20	C <sub>10</sub> H <sub>10</sub> Br <sub>2</sub> N <sub>2</sub> O <sub>3</sub>		366.913	292.877	[71]
Monobromoisoaphakellin	2.06	+	10	C <sub>11</sub> H <sub>12</sub> BrN <sub>5</sub> O		310.029	250.982	[70]
Ageliferin	Not Detected	+	10	C <sub>22</sub> H <sub>24</sub> Br <sub>2</sub> N <sub>10</sub> O <sub>2</sub> <sup>+</sup>		623.070	148.088; 160.888; 433.094; 450.120	[71]

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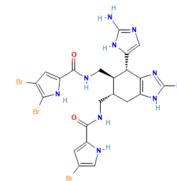
Bromoageliferin

13.73

+

10

C<sub>22</sub>H<sub>23</sub>Br<sub>3</sub>N<sub>10</sub>O<sub>2</sub>



701.01

700.96

[71]

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Debromosceptrin acetate

26.33

+

20

C<sub>22</sub>H<sub>25</sub>BrN<sub>10</sub>O<sub>2</sub>



541.142

177.114

GNPS

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Nakamuric acid

26.21

+

20

C<sub>20</sub>H<sub>21</sub>Br<sub>2</sub>N<sub>7</sub>O<sub>4</sub>



584.008

584.000

[155]

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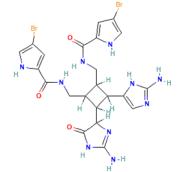
Oxysceptrin

Not Detected

+

40

C<sub>22</sub>H<sub>25</sub>Br<sub>2</sub>N<sub>10</sub>O<sub>3</sub><sup>+</sup>



637.000

148.000;  
177.000;  
247.000;  
466.00

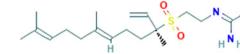
[155]

Terpenoid alkaloids

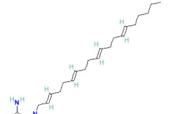
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Sceptryn	18.14	+	20	C <sub>22</sub> H <sub>24</sub> Br <sub>2</sub> N <sub>10</sub> O <sub>2</sub>		619.000	448.128; 243.131	GNPS
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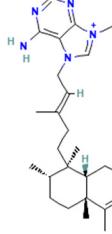
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Agelasidine A	26.16	+	20	C <sub>18</sub> H <sub>33</sub> N <sub>3</sub> O <sub>2</sub> S		356.227	183.120; 184.140	[154]
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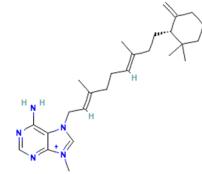
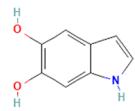
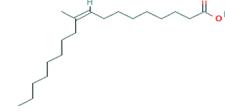
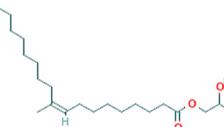
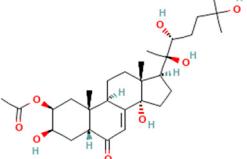
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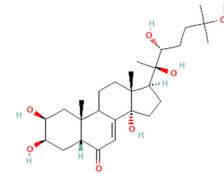
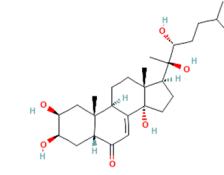
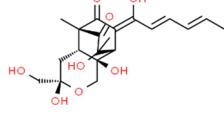
Agelasine	25.71	+	20	C <sub>26</sub> H <sub>40</sub> N <sub>5</sub> <sup>+</sup>		422.328	177.16	[156]
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Agelasine A	26.62	+	20	C <sub>26</sub> H <sub>40</sub> ClN <sub>5</sub>		458.304	457.336	PubChem
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	Agelasine E	Not Detected	+	40	C <sub>26</sub> H <sub>40</sub> N <sup>5+</sup>		422.327	95.086; 121.01; 150.077; 423.331	GNPS	
<b>Indoles</b>	4,6-Dihydroxyindole	2.82	+	10	C <sub>8</sub> H <sub>7</sub> NO <sub>2</sub>		150.055	132.045; 133.029	FoodB	
<b>Fatty acyls</b>	10-Methyl-9(Z)-octadecenoic acid	26.18	-	40	C <sub>19</sub> H <sub>36</sub> O <sub>2</sub>		297.000	183.000	[81]	
<b>Lipids</b>	<b>Glycerolipids</b>	2,3-Dihydroxypropyl(Z)-10-methyloctadec-9-enoate	25.37	+	10	C <sub>22</sub> H <sub>42</sub> O <sub>4</sub>		371.000	279.000; 297.000	[81]
	<b>Steroids</b>	20-Hydroxyecdysone-22-acetate	26.04	+	20	C <sub>29</sub> H <sub>46</sub> O <sub>8</sub>		523.337	299.154; 531.331	GNPS

	$\beta$ -ecdysterone	25.64	+	40	C <sub>27</sub> H <sub>44</sub> O <sub>7</sub>		481.310	280.999; 299.154	GNPS
	Ponasterone-A	Not Detected	-	10	C <sub>27</sub> H <sub>44</sub> O <sub>6</sub>		464.000	463.000; 928.000	MoNA
<b>Polyketides</b>	Trichodermanone C	Not Detected	-	40	C <sub>20</sub> H <sub>26</sub> O <sub>8</sub>		393.115	205.000; 247.000	[157]

**Table S2.** The relative percentages of the metabolite components identified among the *A. oroides* extracts. –; Not Detected.

Metabolite	%Content					
	Wild #1	Wild #2	Wild #3	Farmed #1	Farmed #2	Farmed #3
<b>Dispacamide A</b>	2.7%	1.1%	2.4%	1.5%	1.4%	1.8%
<b>Dispacamide B</b>	1.2%	5.5%	2.1%	8.3%	6.3%	8.9%
<b>Hymenidin</b>	2.6%	0.9%	0.7%	0.6%	0.6%	1.7%
<b>Keramadine</b>	0.5%	5.9%	4.5%	7.2%	6.8%	10.0%
<b>Oroidin</b>	82.8%	75.8%	82.7%	70.8%	73.0%	66.9%
<b>4,5-Dibromopyrrole-2-carboxylic acid</b>	6.9%	7.2%	6.4%	7.6%	6.1%	6.0%
<b>3-Debromohananishin</b>	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%
<b>Dibromophakellin</b>	0.7%	0.7%	0.8%	0.6%	0.6%	0.6%
<b>Longamide B</b>	0.02%	0.02%	0.05%	0.01%	0.01%	0.01%
<b>Longamide B methyl ester</b>	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
<b>Monobromoisorphakellin</b>	0.01%	0.01%	<0.01%	0.01%	0.01%	0.01%

<b>Ageliferin</b>	<0.01%	–	–	–	–	–	–
<b>Bromoageliferin</b>	0.01%	0.02%	<0.01%	0.01%	0.01%	0.01%	0.01%
<b>Debromosceptrin acetate</b>	0.1%	0.1%	0.01%	0.1%	0.1%	0.1%	0.1%
<b>Nakamuric acid</b>	0.3%	0.1%	0.01%	0.2%	0.3%	0.2%	
<b>Oxysceptrin</b>	<0.01%	–	–	–	–	–	–
<b>Sceptrin</b>	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%	–
<b>Agelasidine A</b>	0.1%	0.1%	0.01%	0.1%	0.1%	0.1%	0.1%
<b>Agelasine</b>	0.1%	0.1%	0.01%	0.1%	0.1%	0.1%	0.1%
<b>Agelasine A</b>	0.8%	0.7%	0.1%	1.1%	1.2%		0.9%
<b>Agelasine E</b>	<0.01%	–	<0.01%	–	<0.01%	–	–
<b>4,6-Dihydroxyindole</b>	0.01%	0.1%	<0.01%	0.01%	0.01%	0.01%	0.1%
<b>10-Methyl-9(Z)-octadecenoic acid</b>	1.1%	1.9%	0.1%	1.7%	3.2%		2.4%
<b>2,3-Dihydroxypropyl(Z)-10-methyloctadec-9-enoate</b>	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%	0.01%
<b>20-Hydroxyecdysone-22-acetate</b>	<0.01%	<0.01%	<0.01%	<0.01%	0.01%		<0.01%

<b>β-ecdysterone</b>	0.01%	0.01%	<0.01%	0.01%	0.01%	<0.01%
<b>Ponasterone-A</b>	0.01%	-	-	-	<0.01%	-
<b>Trichodermanone C</b>	<0.01%	-	-	-	-	-

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**Table S3.** Weight-normalized peak intensity values of the metabolite components identified among the *A. oroides* extracts, related to their production levels within sponges. –; Not Detected.

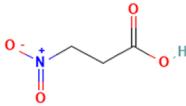
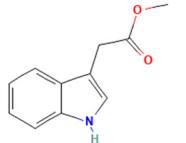
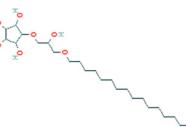
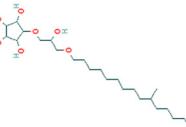
Metabolite	Weight-normalized Intensity (Intensity g <sub>sponge</sub> <sup>-1</sup> )					
	Wild #1	Wild #2	Wild #3	Farmed #1	Farmed #2	Farmed #3
<b>Dispacamide A</b>	2.7E+10	10.0E+10	2.1E+11	1.8E+10	2.0E+10	2.4E+10
<b>Dispacamide B</b>	1.2E+10	5.2E+10	1.8E+11	9.6E+10	9.3E+10	1.2E+11
<b>Hymenidin</b>	2.6E+10	8.1E+09	6.4E+10	7.4E+09	9.0E+09	2.2E+10
<b>Keramadine</b>	4.5E+09	5.6E+10	4.0E+11	8.3E+10	1.0E+11	1.3E+11
<b>Oroidin</b>	8.2E+11	7.2E+11	7.3E+12	8.2E+11	1.1E+12	8.9E+11
<b>4,5-Dibromopyrrole-2-carboxylic acid</b>	6.8E+10	6.8E+10	5.6E+11	8.9E+10	9.0E+10	8.0E+10
<b>3-Debromohanishin</b>	3.1E+07	7.0E+07	2.3E+07	2.3E+07	1.2E+08	3.1E+07
<b>Dibromophakellin</b>	7.2E+09	6.6E+09	7.0E+10	7.4E+09	9.4E+09	7.9E+09
<b>Longamide B</b>	2.1E+08	2.3E+08	4.5E+09	1.3E+08	2.2E+08	9.8E+07
<b>Longamide B methyl ester</b>	1.1E+09	8.3E+08	1.1E+10	1.1E+09	1.1E+09	8.1E+08
<b>Monobromoiosiphakellin</b>	1.3E+08	8.0E+07	2.8E+07	1.3E+08	8.3E+07	1.2E+08
<b>Ageliferin</b>	4.9E+06	–	–	–	–	–
<b>Bromoageliferin</b>	8.2E+07	1.5E+08	4.8E+07	1.3E+08	8.0E+07	8.8E+07
<b>Debromosceptrin acetate</b>	9.6E+08	7.5E+08	7.4E+08	7.4E+08	2.1E+09	1.8E+09
<b>Nakamuric acid</b>	2.6E+09	10.0E+08	9.5E+08	2.7E+09	4.7E+09	3.2E+09
<b>Oxysceptrin</b>	1.0E+07	–	–	–	–	–

<b>Sceptrin</b>	9.3E+06	6.7E+06	2.6E+07	3.6E+06	1.6E+07	-
<b>Agelasidine A</b>	9.6E+08	4.3E+08	4.8E+08	9.3E+08	1.8E+09	1.9E+09
<b>Agelasine</b>	1.2E+09	7.7E+08	6.5E+08	1.6E+09	1.9E+09	1.8E+09
<b>Agelasine A</b>	7.5E+09	7.0E+09	4.2E+09	1.2E+10	1.8E+10	1.2E+10
<b>Agelasine E</b>	8.2E+06	-	2.6E+07	-	9.2E+06	-
<b>4,6-Dihydroxyindole</b>	1.4E+08	4.8E+08	9.0E+07	9.0E+07	1.5E+08	8.7E+08
<b>10-Methyl-9(Z)-octadecenoic acid</b>	1.1E+10	1.8E+10	1.1E+10	1.9E+10	4.7E+10	3.2E+10
<b>2,3-Dihydroxypropyl(Z)-10-methyloctadec-9-enoate</b>	2.6E+07	1.8E+07	1.9E+07	3.5E+06	3.3E+07	7.5E+07
<b>20-Hydroxyecdysone-22-acetate</b>	4.8E+07	4.1E+07	2.2E+07	4.9E+07	8.7E+07	3.9E+07
<b><math>\beta</math>-ecdysterone</b>	1.1E+08	6.7E+07	1.1E+07	5.9E+07	2.0E+08	3.0E+07
<b>Ponasterone-A</b>	5.8E+07	-	-	-	2.7E+07	-
<b>Trichodermanone C</b>	3.4E+06	-	-	-	-	-

**Table S4.** Selected compounds for *S. foetidus* extracts. Experimental retention time (RT), mode polarity (mode), collision energy, precursor ion, fragment ions and bibliographic references for SRM ions.

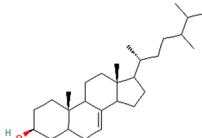
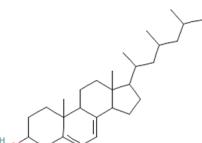
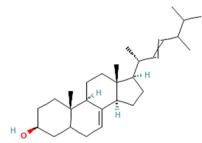
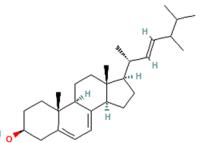
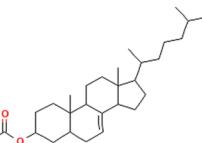
Superclass	Chemical class	Metabolite	RT (min)	Mode	Collision Energy (V)	Chemical formula	Chemical structure	Precursor ion (m/z)	Fragment ions (m/z)	Ref for m/z
		Emodin	4.23	+	10	C <sub>15</sub> H <sub>10</sub> O <sub>5</sub>		271.060	139.054; 225.055	GNPS
<b>Anthracenes</b>										
		Endocrocin	19.51	-	10	C <sub>16</sub> H <sub>10</sub> O <sub>7</sub>		313.035	269.046; 313.037	GNPS
<b>Benzenoids</b>										
	<b>Benzene &amp; substituted derivatives</b>	3-Phenylpropane-1,2-diol	1.54	+	10	C <sub>9</sub> H <sub>12</sub> O <sub>2</sub>		153.092	91.055; 93.070; 135.081; 153.092	DrugBank
		3,4-Dimethoxybenzoic acid	1.52	+	20	C <sub>9</sub> H <sub>10</sub> O <sub>4</sub>		183.180	126.046; 152.062	GNPS
	<b>Flavonoids</b>									
		8-O-4'-Dehydroniferulic acid	20.53	+	10	C <sub>20</sub> H <sub>18</sub> O <sub>8</sub>		387.108	195.066; 351.087	HMDB

Toluate	1.50	+	10	C <sub>8</sub> H <sub>8</sub> O <sub>2</sub>		137.060	91.0555; 109.0661; 137.0597	[101]
3-Isochromanone	1.50	+	10	C <sub>9</sub> H <sub>8</sub> O <sub>2</sub>		149.061	105.035; 121.028	[101]
<b>Benzopyrans</b>								
7-Hydroxy-2-(2-hydroxypropyl)-5-methylchromone (Aloesol)	1.51	+	10	C <sub>13</sub> H <sub>14</sub> O <sub>4</sub>		235.097	191.071; 217.087; 235.070	HMDB
4-Hydroxyphenylacetic acid	4.46	+	20	C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>		153.055	95.049; 107.049	GNPS
<b>Phenols</b>								
Tyrosol	1.91	+	20	C <sub>8</sub> H <sub>10</sub> O <sub>2</sub>		121.064	71.970	GNPS

Dipeptides	3-Nitropropionic acid	1.39	+	10	C <sub>3</sub> H <sub>5</sub> NO <sub>4</sub>		120.029	91.054; 100.001; 100.505	GNPS
Indoles	Indole-3-methylethanoate	1.49	+	20	C <sub>11</sub> H <sub>11</sub> NO <sub>2</sub>		190.087	103.055; 128.049; 130.065	PubChem
Fatty acyls	N-hexadecanoyl-L-homoserine lactone	12.05	+	10	C <sub>20</sub> H <sub>37</sub> NO <sub>3</sub>		340.283	298.275; 322.274	[101]
Lipids	1-O-(2,3,4,5-tetrahydroxycyclopentyl)-3-O-hexadecylglycerol	27.44	+	10	C <sub>24</sub> H <sub>48</sub> O <sub>7</sub>		471.329	471.000	[105]
Glycerolipids	1-O-(2,3,4,5-tetrahydroxycyclopentyl)-3-O-(10-methylhexadecyl)glycerol	28.23	+	10	C <sub>25</sub> H <sub>50</sub> O <sub>7</sub>		485.343	245.000; 485.000	[105]

Monovaccenin	26.24	+	10	C <sub>21</sub> H <sub>40</sub> O <sub>4</sub>		357.000	321.279; 339.282; 357.300	HMDB	
7E,12E,20Z-Variabilin	25.61	+	20	C <sub>25</sub> H <sub>34</sub> O <sub>4</sub>		399.254	107.083; 135.078	GNPS	
4-Hydroxy-3-tetraprenylbenzoic acid	27.75	+	10	C <sub>27</sub> H <sub>38</sub> O <sub>3</sub>		411.287	151.038; 411.287	GNPS	
Prenol lipids	1,4-Dihydroxy-2-tetraprenylbenzene	28.67	+	10	C <sub>26</sub> H <sub>38</sub> O <sub>2</sub>		383.292	109.1007; 383.2932	GNPS
(+)-12,15 Dihydroxycurcuphenol	23.12	+	20	C <sub>15</sub> H <sub>22</sub> O <sub>3</sub>		251.164	59.050; 149.025	[101]	

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	24-Methylcholest-7-en-3 $\beta$ -ol	22.68	+	40	C <sub>28</sub> H <sub>48</sub> O		400.371	85.102; 297.852	FoodB
	24-Methylcholesta-5,7-dien-3 $\beta$ -ol (22,23-Dihydroergosterol)	12.52	+	10	C <sub>28</sub> H <sub>46</sub> O		398.355	381.352; 399.363	HMDB
Steroids	24-Methylcholesta-7,22-dien-3 $\beta$ -ol (Stellasterol)	11.58	+	10	C <sub>28</sub> H <sub>46</sub> O		398.355	295.243; 399.363	FoodB
	24-Methylcholesta-5,7,22-trien-3 $\beta$ -ol (Ergosterol)	12.51	+	10	C <sub>28</sub> H <sub>44</sub> O		397.35	204.118; 397.116	GNPS
	Cholest-7-en-3 $\beta$ -yl acetate	27.15	+	10	C <sub>29</sub> H <sub>48</sub> O <sub>2</sub>		429.372	159.115; 411.362	GNPS

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	Cholesta-5,7-dien-3 $\beta$ -ol ( $\Delta^7$ -Cholesterol)	27.85	+	10	C <sub>27</sub> H <sub>44</sub> O		385.346	161.1325; 173.1326; 367.3349	GNPS
	3,8-Dihydroxy-6-methoxy-8-methylxanthone (Griseoxanthone C)	23.17	+	10	C <sub>15</sub> H <sub>12</sub> O <sub>5</sub>		273.075	230.0581; 273.0766	GNPS
	Chrysophanol	1.53	+	10	C <sub>15</sub> H <sub>10</sub> O <sub>4</sub>		255.066	209.060; 255.065	GNPS
Polyketides	Dechlorogriseofulvin	14.99	+	20	C <sub>17</sub> H <sub>18</sub> O <sub>6</sub>		319.118	165.054	GNPS
	Griseofulvin	1.53	+	10	C <sub>17</sub> H <sub>17</sub> ClO <sub>6</sub>		353.079	385.079; 353.079	GNPS
	Norlichexanthone	21.03	-	10	C <sub>14</sub> H <sub>10</sub> O <sub>5</sub>		257.045	257.108; 257.304; 257.0455	GNPS

**Table S5.** The relative percentages of the metabolite components identified among the *S. foetidus* extracts. –; Not Detected.

Metabolite	%Content					
	Wild #1	Wild #2	Wild #3	Farmed #1	Farmed #2	Farmed #3
<b>Emodin</b>	<0.01%	<0.01%	<0.01%	–	<0.01%	–
<b>Endocrin</b>	<0.01%	<0.01%	0.01%	<0.01%	<0.01%	<0.01%
<b>3-Phenylpropane-1,2-diol</b>	0.4%	0.4%	0.5%	0.2%	0.3%	0.4%
<b>3,4-Dimethoxybenzoic acid</b>	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
<b>8-O-4'-Dehydrodiferulic acid</b>	1.2%	1.8%	1.8%	1.3%	1.1%	1.5%
<b>Toluate</b>	2.8%	2.1%	1.5%	1.8%	1.8%	1.5%
<b>3-Isochromanone</b>	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%

<b>7-Hydroxy-2-(2-hydroxypropyl)-5-methylchromone</b>	0.4%	0.2%	0.5%	0.4%	0.3%	0.3%
<b>4-Hydroxyphenylacetic acid</b>	0.01%	<0.01%	0.01%	<0.01%	<0.01%	<0.01%
<b>Tyrosol</b>	0.01%	0.01%	<0.01%	0.01%	<0.01%	0.01%
<b>3-Nitropropionic acid</b>	0.01%	0.01%	0.02%	0.02%	0.01%	0.01%
<b>Indole-3-methylethanoate</b>	0.1%	0.1%	0.1%	0.1%	0.3%	0.1%
<b>N-hexadecanoyl-L-homoserine lactone</b>	56.2%	54.1%	56.3%	55.9%	56.7%	56.0%
<b>1-O-(2,3,4,5-tetrahydroxycyclopentyl)-3-O-(10-methylhexadecyl)glycerol</b>	2.3%	2.4%	2.6%	2.6%	2.3%	2.5%
<b>1-O-(2,3,4,5-tetrahydroxycyclopentyl)-3-O-hexadecylglycerol</b>	0.2%	0.3%	0.2%	0.2%	0.3%	0.4%
<b>Monovaccenin</b>	4.2%	4.9%	4.4%	4.9%	4.7%	4.5%
<b>7E,12E,20Z-Variabilin</b>	0.03%	0.01%	0.01%	0.01%	0.01%	0.01%

<b>4-Hydroxy-3-tetraprenylbenzoic acid</b>	1.1%	1.8%	0.9%	2.2%	2.7%	3.0%
<b>1,4-Dihydroxy-2-tetraprenylbenzene</b>	0.04%	0.2%	0.4%	0.4%	0.4%	0.5%
<b>(+)-12,15 Dihydroxycurcuphenol</b>	<0.01%	0.01%	<0.01%	0.03%	0.06%	0.05%
<b>24-Methylcholest-7-en-3<math>\beta</math>-ol</b>	0.07%	0.05%	0.08%	0.05%	0.08%	0.05%
<b>24-Methylcholesta-5,7-dien-3<math>\beta</math>-ol</b>	0.01%	0.02%	0.02%	0.01%	0.02%	0.03%
<b>24-Methylcholesta-7,22-dien-3<math>\beta</math>-ol</b>	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
<b>24-Methylcholesta-5,7,22-trien-3<math>\beta</math>-ol (Ergosterol)</b>	29.9%	30.8%	29.3%	29.0%	28.4%	28.3%
<b>Cholest-7-en-3<math>\beta</math>-yl acetate</b>	–	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%
<b>Cholesta-5,7-dien-3<math>\beta</math>-ol</b>	0.05%	0.07%	0.05%	0.06%	0.06%	0.06%
<b>3,8-Dihydroxy-6-methoxy-8-methylxanthone</b>	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%

<b>Chrysophanol</b>	0.4%	0.3%	0.3%	0.2%	0.3%	0.2%
<b>Dechlorogriseofulvin</b>	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%	-
<b>Griseofulvin</b>	0.2%	0.1%	0.2%	0.1%	0.1%	0.1%
<b>Norlichexanthone</b>	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%

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**Table S6.** Weight-normalized peak intensity values of the metabolite components identified among the *S. foetidus* extracts, related to their production levels within sponges. –; Not Detected.

Metabolite	Weight-normalized Intensity (Intensity g <sub>sponge</sub> <sup>-1</sup> )					
	Wild #1	Wild #2	Wild #3	Farmed #1	Farmed #2	Farmed #3
<b>Emodin</b>	1.7E+07	7.3E+07	2.2E+08	–	2.0E+07	–
<b>Endocrin</b>	3.3E+07	2.4E+08	4.2E+08	5.0E+07	4.4E+07	3.0E+07
<b>3-Phenylpropane-1,2-diol</b>	1.9E+10	1.9E+10	2.3E+10	1.1E+10	1.1E+10	2.4E+10
<b>3,4-Dimethoxybenzoic acid</b>	3.1E+09	2.9E+09	4.4E+09	3.2E+09	2.3E+09	3.1E+09
<b>8-O-4'-Dehydodiferulic acid</b>	6.0E+10	9.7E+10	9.0E+10	7.0E+10	4.5E+10	9.7E+10
<b>Toluate</b>	1.4E+11	1.1E+11	7.8E+10	9.4E+10	6.0E+10	9.6E+10
<b>3-Isochromanone</b>	6.5E+09	6.2E+09	1.1E+10	6.2E+09	5.9E+09	8.5E+09

<b>7-Hydroxy-2-(2-hydroxypropyl)-5-methylchromone</b>	2.0E+10	1.3E+10	2.7E+10	1.9E+10	1.2E+10	1.7E+10
<b>4-Hydroxyphenylacetic acid</b>	2.7E+08	8.1E+07	2.6E+08	1.4E+08	1.1E+08	1.4E+08
<b>Tyrosol</b>	3.9E+08	3.5E+08	1.5E+08	3.0E+08	1.0E+08	3.5E+08
<b>3-Nitropropionic acid</b>	7.3E+08	7.0E+08	1.2E+09	1.0E+09	6.4E+08	5.8E+08
<b>Indole-3-methylethanoate</b>	5.0E+09	5.4E+09	6.6E+09	3.7E+09	1.2E+10	5.8E+09
<b>N-hexadecanoyl-L-homoserine lactone</b>	2.8E+12	3.0E+12	2.8E+12	3.0E+12	2.4E+12	3.7E+12
<b>1-O-(2,3,4,5-tetrahydroxycyclopentyl)-3-O-(10-methylhexadecyl)glycerol</b>	1.2E+11	1.3E+11	1.3E+11	1.4E+11	1.0E+11	1.6E+11
<b>1-O-(2,3,4,5-tetrahydroxycyclopentyl)-3-O-hexadecylglycerol</b>	9.6E+09	1.6E+10	1.1E+10	1.1E+10	1.1E+10	2.4E+10
<b>Monovaccenin</b>	2.1E+11	2.7E+11	2.2E+11	2.6E+11	2.0E+11	2.9E+11
<b>7E,12E,20Z-Variabilin</b>	1.6E+09	6.4E+08	5.1E+08	3.0E+08	6.0E+08	9.5E+08

<b>4-Hydroxy-3-tetraprenylbenzoic acid</b>	5.6E+10	9.6E+10	4.5E+10	1.2E+11	1.1E+11	2.0E+11
<b>1,4-Dihydroxy-2-tetraprenylbenzene</b>	1.9E+09	10.0E+10	1.9E+10	2.1E+10	1.9E+10	3.3E+10
<b>(+)-12,15 Dihydroxycircuphenol</b>	3.2E+07	3.3E+08	4.3E+07	1.7E+09	2.6E+09	3.1E+09
<b>24-Methylcholest-7-en-3<math>\beta</math>-ol</b>	3.5E+09	2.6E+09	3.9E+09	2.5E+09	3.3E+09	3.1E+09
<b>24-Methylcholesta-5,7-dien-3<math>\beta</math>-ol</b>	5.6E+08	1.3E+09	1.1E+09	6.1E+08	8.7E+08	2.0E+09
<b>24-Methylcholesta-7,22-dien-3<math>\beta</math>-ol</b>	6.4E+08	3.5E+08	6.5E+08	4.1E+08	4.1E+08	3.7E+08
<b>24-Methylcholesta-5,7,22-trien-3<math>\beta</math>-ol (Ergosterol)</b>	1.5E+12	1.7E+12	1.5E+12	1.6E+12	1.2E+12	1.9E+12
<b>Cholest-7-en-3<math>\beta</math>-yl acetate</b>	–	4.7E+07	1.4E+08	1.7E+08	9.5E+07	1.6E+08
<b>Cholesta-5,7-dien-3<math>\beta</math>-ol</b>	2.6E+09	3.6E+09	2.5E+09	3.4E+09	2.5E+09	4.0E+09
<b>3,8-Dihydroxy-6-methoxy-8-methylxanthone</b>	1.3E+10	1.6E+10	1.6E+10	1.7E+10	1.3E+10	1.8E+10

<b>Chrysophanol</b>	1.7E+10	1.4E+10	1.6E+10	1.1E+10	1.2E+10	1.6E+10
<b>Dechlorogriseofulvin</b>	1.5E+07	1.5E+07	2.2E+07	2.1E+07	6.5E+07	-
<b>Griseofulvin</b>	8.2E+09	5.4E+09	8.4E+09	7.1E+09	5.8E+09	9.1E+09
<b>Norlichexanthone</b>	4.0E+09	4.8E+09	4.1E+09	4.9E+09	4.1E+09	6.3E+09

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