frontiers

*Supplementary Material*

# In search of alternative antibiotic drugs: Quorum-quenching based anti virulence potential in sponges and their isolates

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## 1 Supplementary Data

**Table S1.** List of sponge and environmental samples used in the analysis of abundance and distribution of QQ-active isolates. Samples are part of the EMP-Sponge Microbiome dataset.
**Table S2**. Minimal concentration (MIC) of the butanone extracts of selected strains against *P. aeruginosa* PAO1 (PAO1), *Bacillus subtilis* CU1050 (BS), and *Escherichia coli* GM1655 (EC)
**Table S3**. Protease activity (mean and standard deviation of duplicates) of *P. aeruginosa* in the presence of extracts of selected strains, or controls (positive control (PC): Penicillic acid, negative control (NC): methanol).
**Table S4.** List of various OTUs with corresponding e-value and bit score hit from Sponge Microbiome project with ≥98% similarity against QQ-active isolates Ac4, Ac14, Ac15, Ac17, Cc27, De103, Pv86, Pv87, Pv91, Pv98, Ss38, Ss63, Ss68 and Ss7.
**Table S5 A**. Selected features with their corresponding mzmed, rtmed, adduct, METLIN MS/MS match and AntiMarin database match for Cc27.
**Table S5 B**. Selected features with their corresponding mzmed, rtmed, adduct, METLIN MS/MS match and AntiMarin database match for Ss68.
**Table S5 C**. Selected features with their corresponding mzmed, rtmed, adduct, METLIN MS/MS match and AntiMarin database match for Pv86.
**Table S5 D**. Selected features with their corresponding mzmed, rtmed, adduct, METLIN MS/MS match and AntiMarin database match for Pv91.
**Figure S1** *C. violaceum* CV026 violacein and growth inhibition (%) in presence of extracts from 17 different isolates, Penicillic acid (0.025 mg/mL) and ampicillin (3 µg/mL) were used as the positive controls for violacein and growth inhibition assays respectively. Inhibition of violacein production or growth was calculated as percentage inhibition compared to the inhibition of the negative control (methanol).
**Figure S2.** Inhibition of biofilm formation (%) in *P. aeruginosa* PAO1, *Bacillus substilis* and *E. coli* by extracts from isolates deriving from *Crella cyathophora* (Cc), *Diacarnus erythraenus* (De), *Pione vastifica* (Pv), *Amphimedon chloros* (Ac), *Sarcotragus sp.*(Ss). Streptomycin was used as positive control (PC) for PAO1 and BS, whereas penicillic acid was used for EC. Methanol (solvent in which the extracts were re-suspended) was used as a negative control.
**Figure S3.** Relative abundance of OTUs from the SMP with ≥98% identity to 16S rRNA sequences from strains isolated in this study. **A.** Information relative to OTUs closely affiliated to isolate Pv87 **B**. Information relative to OTUs closely affiliated with isolate Pv88. **C**. Information relative to OTUs closely affiliated with isolate Ss38. Vertical bar represents the mean, the hinge represents SEM (standard error of mean), and dots represent outlier values beyond mean.
**Figure S4.** Relative abundance of OTUs from the SMP with ≥98% identity to 16S rRNA sequences from strains isolated in this study. **A.** Information relative to OTUs closely affiliated to isolates Ac4, Ac14, and Ac15 **B**. Information relative to OTUs closely affiliated with isolate Ss63. Vertical bar represents the mean, the hinge represents SEM (standard error of mean), and dots represent outlier values beyond mean.
**Figure S5.** Relative abundance of OTUs from the SMP with ≥98% identity to 16S rRNA sequences from strains isolated in this study. **A.** Information relative to OTUs closely affiliated to isolate De103. Vertical bar represents the mean, the hinge represents SEM (standard error of mean), and dots represent outlier values beyond mean.
**Figure S6.** Relative abundance of OTUs from the SMP with ≥98% identity to 16S rRNA sequences from strains isolated in this study. **A.** Information relative to OTUs closely affiliated to isolate Pv98 **B**. Information relative to OTUs closely affiliated with isolate Ss7. Vertical bar represents the mean, the hinge represents SEM (standard error of mean), and dots represent outlier values beyond mean.

**Figure S7**.The overlay of total ion chromatograms (A) before and (B) after retention time correction, (C) Cloud plots with 855 features with p-value of ≤0.001 and (D) location of MS/MS scans.
**Figure S8**. Interactive cloud plot analysis for the dataset containing compounds from extracts deriving from the four selected isolates (Cc27, Pv86, Pv91, and Ss68) for metabolomic profiling.

## 2. Supplementary Tables

**Table S1.** List of all sponge species and environmental sample details (including sample ID, geographical location and total number of reads) used in the analysis of distribution and abundance of OTUs closely related to QQ-active isolates in the EMP-Sponge Microbiome dataset.

| Sample ID | Sponge species/ environmental sample | LATITUDE | LONGITUDE | Total number of reads |
|---|---|---|---|---|
| 43.1020521 | *Mycale laxissima* | 17.95522 | -67.05322 | 29853 |
| 46.1019503 | *Mycale laxissima* | 17.95522 | -67.05322 | 25445 |
| 48.1019786 | *Mycale laxissima* | 17.95522 | -67.05322 | 27172 |
| 5.11.5I.1019867 | *Xestospongia muta* | 26.50992 | -80.03365 | 13593 |
| 5.11.6I.1019777 | *Xestospongia muta* | 26.50992 | -80.03365 | 5840 |
| 5.11.7D.1019610 | *Xestospongia muta* | 26.50992 | -80.03365 | 6321 |
| 5.11.7I.1020089 | *Xestospongia muta* | 26.50992 | -80.03365 | 8025 |
| 5.11.8I.1020323 | *Xestospongia muta* | 26.50992 | -80.03365 | 14712 |
| 5.11.Water.1019824 | Seawater | 26.509917 | -80.03365 | 18570 |
| 5.29.4D.1020519 | *Xestospongia muta* | 26.16817 | -80.07667 | 18368 |
| 5.29.5D.1019862 | *Xestospongia muta* | 26.16817 | -80.07667 | 16104 |
| 5.29.7I.1020306 | *Xestospongia muta* | 26.16817 | -80.07667 | 17394 |
| 50.1019597 | *Mycale laxissima* | 17.95522 | -67.05322 | 36505 |
| 51.1020358 | *Mycale laxissima* | 17.95522 | -67.05322 | 9769 |
| BCD1H2O.1019563 | Seawater | 26.1494 | -80.0971 | 21724 |
| BCD2H2O.1019577 | Seawater | 26.1494 | -80.0971 | 19786 |
| BCH1H2O.1019957 | Seawater | 26.1494 | -80.0971 | 23984 |
| BCH2H2O.1020268 | Seawater | 26.1494 | -80.0971 | 21346 |
| BCH31SED.1019515 | Marine sediments | 26.1494 | -80.0971 | 22063 |
| BCH3H2O.1019849 | Seawater | 26.1494 | -80.0971 | 23074 |
| BR10A.Jan.1019548 | Seawater | 26.2516 | -80.0623 | 12511 |
| BR10A.Nov.1019707 | Seawater | 26.2514 | -80.0621 | 28985 |
| BR10C.Jul.1020245 | Seawater | 26.2519 | -80.0632 | 6141 |
| BR14A.Nov.1020043 | Seawater | 26.2619 | -80.0851 | 11332 |
| CL265.1019674 | *Cliona delitrix* | 24.6715 | -81.0506 | 29294 |
| HW14A.Jul.1019607 | Seawater | 26.0942 | -80.1159 | 12546 |
| N31.3.17.11.DC.1020439 | *Amphimedon compressa* | 25.842 | -80.09507 | 16498 |
| P10X53.1020516 | *Xestospongia bocatorensis* | 9.35167 | -82.2595 | 20924 |
| P12x11.1020349 | *Erylus formosus* | 9.24133 | -82.17367 | 28627 |
| P12x122.1020481 | *Mycale laxissima* | 9.35317 | -82.261 | 6792 |
| P12x124.1020221 | *Mycale laevis* | 9.35317 | -82.261 | 10393 |
| P12x143.1020448 | *Mycale laxissima* | 9.35317 | -82.261 | 12336 |
| P20.1020203 | *Placospongia intermedia* | 9.24133 | -82.17367 | 5468 |
| SH22SED.1019800 | Marine sediments | 26.1673 | -80.0894 | 16627 |
| SI06.11.1019752 | *Xestospongia bocatorensis* | 9.36068 | -82.278 | 14908 |
| SI06.152.1019496 | *Haliclona vansoesti* | 9.24133 | -82.17367 | 6379 |
| SI06.80.1020478 | *Chalinula molitba* | 9.30583 | -82.17317 | 7636 |
| SI06.93.1019533 | *Dysidea etheria* | 9.30583 | -82.17317 | 13623 |
| SI06.94.1019967 | *Haliclona tubifera* | 9.30583 | -82.17317 | 8292 |

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|---|---|---|---|---|
| SW.245.1020115 | *Halichondria panicea* | 58.983333 | 11.276667 | 19712 |
| SW.30.1020365 | *Mycale lingua* | 58.961667 | 11.3275 | 6384 |
| SW.H2O.5.1019804 | Seawater | 58.829116 | 11.083156 | 20173 |
| SW.H2O.6.1019920 | Seawater | 58.829116 | 11.083156 | 22381 |
| SWBHMPV1.1020492 | Seawater | 22.100867 | -73.540733 | 29077 |
| SWBHMPV2.1019827 | Seawater | 22.100867 | -73.540733 | 22944 |
| SWBHMPV3.1019729 | Seawater | 22.100867 | -73.540733 | 27717 |
| SWBHPK1.1020427 | Seawater | 22.6045 | -73.546533 | 19438 |
| SWBHPK2.1020243 | Seawater | 22.6045 | -73.546533 | 17443 |
| SWBHPK3.1020109 | Seawater | 22.6045 | -73.546533 | 15987 |
| SWBHSS1.1020185 | Seawater | 24.04055 | -74.531367 | 27943 |
| SWBHSS3.1020029 | Seawater | 24.04055 | -74.531367 | 28825 |
| SWPRBV2.1020241 | Seawater | 17.888283 | -66.998117 | 18341 |
| SWPRD1.1019576 | Seawater | 18.391767 | -67.475967 | 29263 |
| Webster.3.D8.232.1020434 | *Carteriospongia foliascens* | -18.68543 | 146.51218 | 27620 |
| Webster.3.F6.254.1019814 | *Carteriospongia foliascens* | -18.5996 | 146.49222 | 11686 |
| Webster.5.E6.430.1020522 | Seawater | -18.82257 | 147.63755 | 22939 |
| AF11.7.9.1181192 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 23671 |
| AW10.10.II.1181451 | Seawater | 41.68 | 2.81 | 14622 |
| AW10.10.III.1181682 | Seawater | 41.68 | 2.81 | 17871 |
| AW10.11.I.1181594 | Seawater | 41.68 | 2.81 | 13811 |
| AW10.11.II.1181844 | Seawater | 41.68 | 2.81 | 16416 |
| AW10.12.I.1182118 | Seawater | 41.68 | 2.81 | 16762 |
| AW10.12.III.1181128 | Seawater | 41.68 | 2.81 | 9536 |
| AW10.3.II.1181943 | Seawater | 41.68 | 2.81 | 17945 |
| AW10.3.III.1181432 | Seawater | 41.68 | 2.81 | 13911 |
| AW10.4.I.1181462 | Seawater | 41.68 | 2.81 | 22379 |
| AW10.4.II.1181086 | Seawater | 41.68 | 2.81 | 22589 |
| AW10.4.III.1182286 | Seawater | 41.68 | 2.81 | 23204 |
| AW10.5.I.1181997 | Seawater | 41.68 | 2.81 | 18009 |
| AW10.7.II.1181304 | Seawater | 41.68 | 2.81 | 13328 |
| AW10.7.III.1182181 | Seawater | 41.68 | 2.81 | 17757 |
| AW10.8.I.1181963 | Seawater | 41.68 | 2.81 | 16032 |
| AW10.8.II.1181869 | Seawater | 41.68 | 2.81 | 14473 |
| AW10.8.III.1182423 | Seawater | 41.68 | 2.81 | 19328 |
| AW10.9.I.1181604 | Seawater | 41.68 | 2.81 | 17660 |
| AW10.9.II.1181973 | Seawater | 41.68 | 2.81 | 16348 |
| AW10.9.III.1181831 | Seawater | 41.68 | 2.81 | 21761 |
| AW11.1.I.1181552 | Seawater | 41.68 | 2.81 | 27081 |
| AW11.1.II.1181307 | Seawater | 41.68 | 2.81 | 14641 |
| AW11.1.III.1182104 | Seawater | 41.68 | 2.81 | 10272 |
| AW11.2.I.1181241 | Seawater | 41.68 | 2.81 | 17615 |
| AW11.2.II.1181195 | Seawater | 41.68 | 2.81 | 21826 |
| AW11.2.III.1181851 | Seawater | 41.68 | 2.81 | 11250 |
| AW11.3.I.1181767 | Seawater | 41.68 | 2.81 | 21001 |

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|---|---|---|---|---|
| AW11.4.II.1181401 | Seawater | 41.68 | 2.81 | 13481 |
| AW11.4.III.1182415 | Seawater | 41.68 | 2.81 | 17185 |
| AW11.6.I.1182134 | Seawater | 41.68 | 2.81 | 13804 |
| AW11.6.II.1182018 | Seawater | 41.68 | 2.81 | 6987 |
| AW11.6.III.1182287 | Seawater | 41.68 | 2.81 | 15661 |
| AW11.8.I.1181714 | Seawater | 41.68 | 2.81 | 21949 |
| AW11.8.III.1182400 | Seawater | 41.68 | 2.81 | 20452 |
| IF2.WI.1181794 | Seawater | 41.38 | 2.2 | 25384 |
| IF2.WII.1181395 | Seawater | 41.38 | 2.2 | 23010 |
| IF5.Wctr.1181399 | Seawater | 41.38 | 2.2 | 11374 |
| IF5.Wnh.1182034 | Seawater | 41.38 | 2.2 | 15953 |
| IO2.WI.1181409 | Seawater | 41.38 | 2.2 | 20788 |
| IO2.WII.1181646 | Seawater | 41.38 | 2.2 | 25035 |
| IO2.WIII.1181978 | Seawater | 41.38 | 2.2 | 27143 |
| SWBH.1.1181167 | Seawater | 41.67 | 2.8 | 17950 |
| SWBH.2.1182397 | Seawater | 41.67 | 2.8 | 21183 |
| SWBH.3.1181292 | Seawater | 41.67 | 2.8 | 23568 |
| SWSA.1.1181494 | Seawater | 41.67 | 2.8 | 24091 |
| SWSA.2.1181197 | Seawater | 41.67 | 2.8 | 19765 |
| SWSA.3.1181074 | Seawater | 41.67 | 2.8 | 20591 |
| TV10.11.12.1181165 | *Ircinia variabilis* | 41.72 | 2.94 | 30905 |
| TV10.12.7.1181211 | *Ircinia variabilis* | 41.72 | 2.94 | 31798 |
| TV10.5.12.1181986 | *Ircinia variabilis* | 41.72 | 2.94 | 46532 |
| TV10.5.7.1182192 | *Ircinia variabilis* | 41.72 | 2.94 | 42192 |
| TV10.7.2.1181625 | *Ircinia variabilis* | 41.72 | 2.94 | 33116 |
| TV10.7.7.1182251 | *Ircinia variabilis* | 41.72 | 2.94 | 33327 |
| TV10.8.7.1181883 | *Ircinia variabilis* | 41.72 | 2.94 | 29665 |
| TV11.1.7.1181486 | *Ircinia variabilis* | 41.72 | 2.94 | 30571 |
| TV11.2.12.1181251 | *Ircinia variabilis* | 41.72 | 2.94 | 34977 |
| TV11.5.12.1181838 | *Ircinia variabilis* | 41.72 | 2.94 | 27536 |
| TV11.7.12.1181394 | *Ircinia variabilis* | 41.72 | 2.94 | 27333 |
| TV11.8.7.1181932 | *Ircinia variabilis* | 41.72 | 2.94 | 30604 |
| TW10.10.I.1181667 | Seawater | 41.72 | 2.94 | 27474 |
| TW10.10.III.1181697 | Seawater | 41.72 | 2.94 | 15233 |
| TW10.11.I.1181974 | Seawater | 41.72 | 2.94 | 13792 |
| TW10.11.II.1181427 | Seawater | 41.72 | 2.94 | 19940 |
| TW10.11.III.1182236 | Seawater | 41.72 | 2.94 | 23411 |
| TW10.12.I.1182004 | Seawater | 41.72 | 2.94 | 20334 |
| TW10.12.II.1181757 | Seawater | 41.72 | 2.94 | 9042 |
| TW10.12.III.1182205 | Seawater | 41.72 | 2.94 | 7789 |
| TW10.3.II.1181259 | Seawater | 41.72 | 2.94 | 25440 |
| TW10.3.III.1181864 | Seawater | 41.72 | 2.94 | 24781 |
| TW10.4.II.1182137 | Seawater | 41.72 | 2.94 | 18446 |
| TW10.4.III.1182315 | Seawater | 41.72 | 2.94 | 20906 |
| TW10.6.I.1181884 | Seawater | 41.72 | 2.94 | 16380 |

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|---|---|---|---|---|
| TW10.6.II.1182441 | Seawater | 41.72 | 2.94 | 20212 |
| TW10.7.II.1182248 | Seawater | 41.72 | 2.94 | 13425 |
| TW10.8.I.1181563 | Seawater | 41.72 | 2.94 | 6546 |
| TW10.8.II.1182342 | Seawater | 41.72 | 2.94 | 16161 |
| TW10.8.III.1182435 | Seawater | 41.72 | 2.94 | 18175 |
| TW10.9.I.1181157 | Seawater | 41.72 | 2.94 | 17310 |
| TW10.9.II.1181335 | Seawater | 41.72 | 2.94 | 21078 |
| TW10.9.III.1182302 | Seawater | 41.72 | 2.94 | 26334 |
| TW11.1.I.1181751 | Seawater | 41.72 | 2.94 | 12703 |
| TW11.1.II.1181113 | Seawater | 41.72 | 2.94 | 10239 |
| TW11.1.III.1181629 | Seawater | 41.72 | 2.94 | 14267 |
| TW11.2.I.1181107 | Seawater | 41.72 | 2.94 | 18401 |
| TW11.2.III.1181469 | Seawater | 41.72 | 2.94 | 17194 |
| TW11.3.I.1181174 | Seawater | 41.72 | 2.94 | 22300 |
| TW11.3.II.1181991 | Seawater | 41.72 | 2.94 | 16758 |
| TW11.3.III.1182340 | Seawater | 41.72 | 2.94 | 13984 |
| TW11.4.II.1181268 | Seawater | 41.72 | 2.94 | 12725 |
| TW11.5.III.1182247 | Seawater | 41.72 | 2.94 | 17934 |
| 11.1019601 | *Ircinia strobilina* | 18.40198 | -87.40878 | 6191 |
| 11.XII.84.1.014.1020284 | *Axinella corrugata* | 25.40333 | -77.90833 | 35777 |
| 20.X.00.1.015.1020304 | *Discodermia* | 26.51255 | -78.58482 | 14478 |
| 21.X.03.5.008.1020153 | *Discodermia sp.* | 26.51122 | -78.58708 | 16948 |
| 26.IX.88.1.023.1020410 | *Axinella corrugata* | 24.058 | -74.54217 | 12071 |
| 27.V.93.2.7.1020505 | *Xestospongia muta* | 22.055 | -74.55333 | 3403 |
| 28.IX.88.3.001.1020352 | *Axinella corrugata* | 23.64667 | -74.945 | 24068 |
| 4.VI.93.4.001.1019646 | *Axinella* | 22.72333 | -73.88333 | 11930 |
| 40.1020202 | *Mycale laxissima* | 17.95522 | -67.05322 | 4137 |
| 5.11.143I.1020345 | *Xestospongia muta* | 26.50992 | -80.03365 | 15892 |
| 5.11.6H.1019523 | *Xestospongia muta* | 26.50992 | -80.03365 | 11225 |
| 5.11.9I.1020119 | *Xestospongia muta* | 26.50992 | -80.03365 | 15413 |
| 5.29.4H.1019593 | *Xestospongia muta* | 26.16817 | -80.07667 | 23141 |
| 5.29.4I.1019789 | *Xestospongia muta* | 26.16817 | -80.07667 | 18986 |
| 5.29.7D.1020389 | *Xestospongia muta* | 26.16817 | -80.07667 | 21361 |
| 5.29.8D.1020459 | *Xestospongia muta* | 26.16817 | -80.07667 | 8427 |
| 64.1020327 | *Xestospongia* | 17.88828 | -66.99812 | 15915 |
| 70.1020429 | *Xestospongia* | 20.38228 | -87.0291 | 24536 |
| BCD11SED.1020055 | Marine sediments | 26.1494 | -80.0971 | 15691 |
| BCH11SED.1020281 | Marine sediments | 26.1494 | -80.0971 | 20818 |
| CL105.1020425 | *Cliona delitrix* | 26.14217 | -80.09657 | 19173 |
| CL106.1020152 | *Cliona delitrix* | 26.14217 | -80.09657 | 14534 |
| CL108.1019904 | *Cliona delitrix* | 26.14217 | -80.09657 | 18469 |
| CL109.1020300 | *Cliona delitrix* | 26.14217 | -80.09657 | 12145 |
| CL11.1019830 | *Cliona delitrix* | 24.54912 | -81.37958 | 7837 |
| CL110.1020007 | *Cliona delitrix* | 26.14217 | -80.09657 | 17495 |
| CL12.1020264 | *Cliona delitrix* | 24.54912 | -81.37958 | 13414 |

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|---|---|---|---|---|
| CL13.1020533 | *Cliona delitrix* | 24.54912 | -81.37958 | 11207 |
| CL183.1019498 | *Cliona delitrix* | 16.80083 | -88.07887 | 11708 |
| CL24.1019928 | *Cliona delitrix* | 24.54912 | -81.37958 | 5494 |
| CL251.1020171 | *Cliona delitrix* | 26.0522 | -80.09782 | 11188 |
| CL299.1020078 | *Cliona delitrix* | 25.84217 | -80.10403 | 25194 |
| CL301.1019822 | *Cliona delitrix* | 25.84217 | -80.10403 | 14679 |
| CL303.1019948 | *Cliona delitrix* | 25.84217 | -80.10403 | 13831 |
| CL352.1020377 | *Cliona delitrix* | 24.05862 | -74.54122 | 9111 |
| CL353.1020282 | *Cliona delitrix* | 24.05862 | -74.54122 | 44490 |
| CL415.1019946 | *Cliona delitrix* | 24.60903 | -82.94957 | 12276 |
| CL417.1020011 | *Cliona delitrix* | 24.60903 | -82.94957 | 29000 |
| CL42.1020404 | *Cliona delitrix* | 9.3777 | -82.3032 | 14376 |
| CL420.1019933 | *Cliona delitrix* | 24.60903 | -82.94957 | 15389 |
| CL461.1020397 | *Cliona delitrix* | 24.94067 | -80.45383 | 11025 |
| Cl179.1019663 | *Cliona delitrix* | 16.80083 | -88.07887 | 12650 |
| GC.2.3.1020219 | *Stylissa carteri* | 20.280232 | 38.512573 | 16824 |
| N31.5.9.11.DC.1020371 | *Amphimedon compressa* | 25.842 | -80.09507 | 11396 |
| N32.12.6.10.DC.1020311 | *Amphimedon compressa* | 25.842 | -80.09507 | 10244 |
| N32.5.9.11.DC.1019961 | *Amphimedon compressa* | 25.842 | -80.09507 | 7947 |
| N50.11.10.11.BC.1020037 | *Amphimedon compressa* | 26.15995 | -80.0825 | 10147 |
| N50.9.1.11.BC.1020044 | *Amphimedon compressa* | 26.15995 | -80.0825 | 29367 |
| P12x101.1020320 | *Niphates erecta* | 9.36068 | -82.278 | 4056 |
| P12x116.1019703 | *Niphates erecta* | 9.36068 | -82.278 | 5463 |
| P12x119.1019608 | *Niphates erecta* | 9.36068 | -82.278 | 4718 |
| P12x134.1020162 | *Mycale laxissima* | 9.35317 | -82.261 | 8844 |
| P12x144.1020206 | *Mycale laxissima* | 9.35317 | -82.261 | 16389 |
| SI06.79.1020289 | *Amphimedon erina* | 9.30583 | -82.17317 | 16360 |
| SS.11.3.1019853 | *Ircinia* | -18.819402 | 147.649572 | 19184 |
| SS.14.1.1020351 | *Pseudoceratina* | 13.455407 | 144.645146 | 32642 |
| SS.14.3.1020260 | *Pseudoceratina* | 13.455407 | 144.645146 | 33467 |
| SS.16.1.1019647 | *Stylissa massa* | 13.455407 | 144.645146 | 18085 |
| SS.16.2.1019945 | *Stylissa massa* | 13.455407 | 144.645146 | 25139 |
| SS.22.3.1020163 | *Ircinia felix* | 24.957076 | -80.460613 | 27950 |
| SWPRBV3.1019766 | Seawater | 17.888283 | -66.998117 | 26540 |
| SWPRD2.1019841 | Seawater | 18.391767 | -67.475967 | 29010 |
| SWPRD3.1020378 | Seawater | 18.391767 | -67.475967 | 27249 |
| Webster.1.D3.39.1019529 | *Ianthella basta* | -18.82257 | 147.63755 | 6926 |
| Webster.1.E1.49.1019860 | *Coralliophila* | -18.82257 | 147.63755 | 8075 |
| Webster.4.F1.343.1020468 | *Coscinoderma* | -18.59297 | 46.48359 | 6291 |
| Webster.5.B6.394.1019750 | *Spheciospongia vagabunda* | -12.46725 | 130.829517 | 9968 |
| Webster.5.E1.425.1020137 | *Suberites diversicolour* | -12.4152 | 130.83193 | 11657 |
| ZA.14.1020132 | *Xestospongia* | -6.11738 | 39.16904 | 46360 |
| ZA.17.1020226 | *Cinachyrella* | -6.11738 | 39.16904 | 36528 |
| ZA.37.1020177 | *Callyspongia* | -6.149923 | 39.131603 | 17810 |
| ZA.39.1020013 | *Callyspongia* | -6.149923 | 39.131603 | 10321 |

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|---|---|---|---|---|
| ZA.44.1020227 | *Cymbastela* | -6.165917 | 39.202641 | 15814 |
| ZA.47.1020435 | *Cymbastela* | -6.165917 | 39.202641 | 21596 |
| CCBH.2.1182428 | *Crambe crambe* | 41.67 | 2.8 | 19719 |
| IO5.24.1181867 | *Ircinia oros* | 41.38 | 2.2 | 13398 |
| 100.1019549 | *Xestospongia* | 17.88828 | -66.99812 | 30984 |
| 113.1020508 | *Xestospongia* | 17.88828 | -66.99812 | 30905 |
| 117.1020476 | *Xestospongia* | 18.39177 | -67.47597 | 26493 |
| 3.1020215 | *Mycale laxissima* | 26.56295 | -77.8815 | 18823 |
| 37.1020129 | *Mycale laxissima* | 17.95522 | -67.05322 | 26856 |
| 44.102037 | *Mycale laxissima* | 17.95522 | -67.05322 | 29124 |
| 45.1020225 | *Mycale laxissima* | 17.95522 | -67.05322 | 6846 |
| 5.11.120H.1019638 | *Xestospongia muta* | 26.50992 | -80.03365 | 22088 |
| 5.11.120I.1019774 | *Xestospongia muta* | 26.50992 | -80.03365 | 30288 |
| 5.11.136H.1019859 | *Xestospongia muta* | 26.50992 | -80.03365 | 17531 |
| 5.11.137H.1019552 | *Xestospongia muta* | 26.50992 | -80.03365 | 17944 |
| 5.11.142D.1020350 | *Xestospongia muta* | 26.50992 | -80.03365 | 9149 |
| 5.11.143D.1019573 | *Xestospongia muta* | 26.50992 | -80.03365 | 14091 |
| 5.11.4I.1019698 | *Xestospongia muta* | 26.50992 | -80.03365 | 17091 |
| 5.11.5H.1019892 | *Xestospongia muta* | 26.50992 | -80.03365 | 17476 |
| 5.11.9H.1020261 | *Xestospongia muta* | 26.50992 | -80.03365 | 12686 |
| 5.29.1H.1020444 | *Xestospongia muta* | 26.16817 | -80.07667 | 21615 |
| 5.29.2H.1020009 | *Xestospongia muta* | 26.16817 | -80.07667 | 17046 |
| 5.29.3H.1019531 | *Xestospongia muta* | 26.16817 | -80.07667 | 15131 |
| 5.29.5H.1020252 | *Xestospongia muta* | 26.16817 | -80.07667 | 15165 |
| 5.29.6I.1020436 | *Xestospongia muta* | 26.16817 | -80.07667 | 19331 |
| 5.29.7H.1019812 | *Xestospongia muta* | 26.16817 | -80.07667 | 14985 |
| 5.29.8H.1020181 | *Xestospongia muta* | 26.16817 | -80.07667 | 12646 |
| 53.1020236 | *Mycale laxissima* | 17.95522 | -67.05322 | 32088 |
| 57.1019587 | *Mycale laxissima* | 17.95522 | -67.05322 | 17530 |
| 59.1019505 | *Mycale laxissima* | 17.95522 | -67.05322 | 17231 |
| 60.1020005 | *Mycale laxissima* | 17.95522 | -67.05322 | 23012 |
| 74.1019775 | *Xestospongia* | 17.88828 | -66.99812 | 16745 |
| 81.1020014 | *Xestospongia* | 17.88828 | -66.99812 | 30450 |
| 82.101958 | *Xestospongia* | 17.88828 | -66.99812 | 34664 |
| 93.1020001 | *Xestospongia* | 17.88828 | -66.99812 | 22851 |
| 97.1020294 | *Xestospongia* | 17.88828 | -66.99812 | 44516 |
| 98.1020248 | *Xestospongia* | 17.88828 | -66.99812 | 23376 |
| ALG12.90.1019650 | *Phorbas fictitius* | 37.069333 | -8.331138889 | 20469 |
| ALG12.91.1020146 | *Phorbas fictitius* | 37.069333 | -8.331138889 | 21609 |
| ALG12.96.1019911 | *Phorbas fictitius* | 37.069333 | -8.331138889 | 19310 |
| ALG12.97.1020523 | *Phorbas fictitius* | 37.069333 | -8.331138889 | 23025 |
| BZ09x1.1019879 | *Tedania ignis* | 16.82983 | -88.1045 | 34476 |
| CL293.1019996 | *Cliona delitrix* | 25.84217 | -80.10403 | 14468 |
| CL302.1020065 | *Cliona delitrix* | 25.84217 | -80.10403 | 11181 |
| CL418.1019557 | *Cliona delitrix* | 24.60903 | -82.94957 | 8830 |

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|---|---|---|---|---|
| CL52.1019677 | *Cliona delitrix* | 9.3777 | -82.3032 | 13023 |
| CL53.1020356 | *Cliona delitrix* | 9.3777 | -82.3032 | 4144 |
| GC.1.1.1019521 | *Xestospongia testudinaria* | 20.280232 | 38.512573 | 18100 |
| GC.1.2.1020021 | *Xestospongia testudinaria* | 20.280232 | 38.512573 | 22051 |
| GC.1.3.1020054 | *Xestospongia testudinaria* | 20.280232 | 38.512573 | 20609 |
| GC.1.4.1019595 | *Xestospongia testudinaria* | 20.280232 | 38.512573 | 25366 |
| GC.1.5.1020049 | *Xestospongia testudinaria* | 20.280232 | 38.512573 | 23147 |
| GC.2.1.1020491 | *Stylissa carteri* | 20.280232 | 38.512573 | 23629 |
| GC.2.5.1020467 | *Stylissa carteri* | 20.280232 | 38.512573 | 23863 |
| N50.5.10.11.BC.1019840 | *Amphimedon compressa* | 26.15995 | -80.0825 | 18222 |
| P12x145.1020431 | *Amphimedon compressa* | 9.35167 | -82.2595 | 7850 |
| P12x147.1019555 | *Amphimedon compressa* | 9.35167 | -82.2595 | 7976 |
| P12x149.1020354 | *Amphimedon compressa* | 9.35167 | -82.2595 | 9065 |
| P12x150.1020217 | *Amphimedon compressa* | 9.35167 | -82.2595 | 7917 |
| P12x151.1020099 | *Amphimedon compressa* | 9.35167 | -82.2595 | 12572 |
| P12x54.1019994 | *Amphimedon erina* | 9.30583 | -82.17317 | 9985 |
| P12x58.1019792 | *Amphimedon erina* | 9.30583 | -82.17317 | 18184 |
| P81.1020228 | *Amphimedon erina* | 9.30583 | -82.17317 | 19392 |
| SD13SED.1020318 | Marine sediments | 26.1673 | -80.0894 | 14587 |
| SH3H2O.1020545 | Seawater | 26.1673 | -80.0894 | 22690 |
| SI06.59.1020443 | *Tedania ignis* | 9.33333 | -82.25 | 13196 |
| SI06.67.1019719 | *Amphimedon erina* | 9.30583 | -82.17317 | 32650 |
| SI06.78.1020367 | *Tedania ignis* | 9.30583 | -82.17317 | 17398 |
| SS.17.3.1020518 | *Xestospongia* | 13.455407 | 144.645146 | 17982 |
| SS.20.3.1019724 | *Ircinia* | -32.134084 | 115.766008 | 12225 |
| SS.24.1.1019990 | *Xestospongia muta* | 24.957076 | -80.460613 | 23738 |
| SS.24.2.1020274 | *Xestospongia muta* | 24.957076 | -80.460613 | 21213 |
| SS.27.3.1019917 | *Ircinia variabilis* | 43.19794 | 5.363352 | 13103 |
| Webster.1.C10.34.1019596 | *Ianthella basta* | -9.74967 | 143.39925 | 1552 |
| Webster.1.D4.40.1020364 | *Ianthella basta* | -18.82257 | 147.63755 | 16759 |
| Webster.1.D6.42.1020464 | *Ianthella basta* | -18.82257 | 147.63755 | 15475 |
| Webster.1.E8.56.1019871 | *Ianthella basta* | -18.82257 | 147.63755 | 14296 |
| Webster.3.A3.191.1019662 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 17995 |
| Webster.3.A4.192.1019606 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 20879 |
| Webster.3.A8.196.1020298 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 15571 |
| Webster.3.A9.197.1020023 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 37317 |
| Webster.3.B1.201.1020240 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 14794 |
| Webster.3.B8.208.1020140 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 17294 |
| Webster.3.C7.219.1019964 | *Carteriospongia foliascens* | -18.81707 | 147.63232 | 15429 |
| Webster.3.C8.220.1020034 | *Carteriospongia foliascens* | -18.81707 | 147.63232 | 18105 |
| Webster.3.D12.236.1019651 | *Carteriospongia foliascens* | -18.68543 | 146.51218 | 10120 |
| Webster.3.D4.228.1020333 | *Carteriospongia foliascens* | -18.81707 | 147.63232 | 16965 |
| Webster.3.D7.231.1020292 | *Carteriospongia foliascens* | -18.68543 | 146.51218 | 18989 |
| Webster.3.E4.240.1019504 | *Carteriospongia foliascens* | -18.68543 | 146.51218 | 13654 |
| Webster.3.E7.243.1019748 | *Carteriospongia foliascens* | -18.68543 | 146.51218 | 11636 |

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|---|---|---|---|---|
| Webster.3.E8.244.1020063 | *Carteriospongia foliascens* | -18.68543 | 146.51218 | 14807 |
| Webster.3.F11.259.1020559 | *Carteriospongia foliascens* | -18.5996 | 146.49222 | 18431 |
| Webster.3.F2.250.1019808 | *Carteriospongia foliascens* | -18.5996 | 146.49222 | 18595 |
| Webster.3.F5.253.1019731 | *Carteriospongia foliascens* | -18.5996 | 146.49222 | 27652 |
| Webster.3.F9.257.1019705 | *Carteriospongia foliascens* | -18.5996 | 146.49222 | 33059 |
| Webster.3.H10.282.1020179 | *Carteriospongia foliascens* | -15.3363 | 123.5129 | 26300 |
| Webster.3.H3.275.1019734 | *Carteriospongia foliascens* | -15.33242 | 124.243 | 7434 |
| Webster.3.H5.277.1020338 | *Carteriospongia foliascens* | -15.3363 | 123.5129 | 22147 |
| Webster.3.H7.279.1019697 | *Carteriospongia foliascens* | -20.64983 | 116.43683 | 10125 |
| Webster.3.H8.280.1020167 | *Carteriospongia foliascens* | -15.50517 | 123.60483 | 35589 |
| Webster.3.H9.281.1019735 | *Carteriospongia foliascens* | -15.3363 | 123.5129 | 38535 |
| Webster.4.A6.288.1019940 | *Carteriospongia foliascens* | -19.79372 | 149.17307 | 11287 |
| Webster.4.A7.289.1019759 | *Carteriospongia foliascens* | -18.6397 | 147.04775 | 17405 |
| Webster.4.B5.299.1019876 | *Ircinia* | -18.68543 | 146.51218 | 14252 |
| Webster.4.B6.300.1019971 | *Ircinia* | -18.68543 | 146.51218 | 13995 |
| Webster.4.G7.361.1020363 | *Cinachyrella alloclada* | -9.82425 | 150.81788 | 19819 |
| Webster.4.G9.363.1020111 | *Cinachyrella alloclada* | -9.82425 | 150.81788 | 15618 |
| Webster.4.H5.371.1019922 | *Cinachyrella alloclada* | -9.82805 | 150.82028 | 15305 |
| Webster.4.H8.374.1020510 | *Cinachyrella alloclada* | -9.82805 | 150.82028 | 19599 |
| Webster.5.A1.377.1020553 | *Iotrochota* | -12.484783 | 130.78445 | 4029 |
| Webster.5.A11.387.1019740 | *Halichondria phakellioides* | -12.46725 | 130.829517 | 12433 |
| Webster.5.A12.388.1020144 | *Halichondria phakellioides* | -12.46725 | 130.829517 | 9752 |
| Webster.5.A3.379.1019907 | *Iotrochota* | -12.484783 | 130.78445 | 5971 |
| Webster.5.A4.380.1020194 | *Iotrochota* | -12.484783 | 130.78445 | 5887 |
| Webster.5.A5.381.1020416 | *Spheciospongia vagabunda* | -12.418383 | 130.8146 | 4711 |
| Webster.5.A6.382.1019604 | *Spheciospongia vagabunda* | -12.418383 | 130.8146 | 12451 |
| Webster.5.A9.385.1019972 | *Halichondria phakellioides* | -12.484783 | 130.78445 | 15858 |
| Webster.5.B5.393.1020076 | *Iotrochota* | -12.46725 | 130.829517 | 8184 |
| Webster.5.B7.395.1019832 | *Spheciospongia vagabunda* | -12.46725 | 130.829517 | 7650 |
| AF10.5.15.1181407 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 28259 |
| AF10.8.15.1182052 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 28510 |
| AF10.9.15.1181763 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 27358 |
| IF5.3.1181746 | *Sarcotragus fasciculatus* | 41.38 | 2.2 | 15440 |
| IO2.18.1181332 | *Ircinia oros* | 41.38 | 2.2 | 24181 |
| IO5.25.1182429 | *Ircinia oros* | 41.38 | 2.2 | 13571 |
| PO10.5.1.1181804 | *Ircinia oros* | 41.67 | 2.8 | 21841 |
| TO10.10.7.1181236 | *Ircinia oros* | 41.72 | 2.94 | 23043 |
| TO10.7.22.1181634 | *Ircinia oros* | 41.72 | 2.94 | 19014 |
| TO10.7.7.1182167 | *Ircinia oros* | 41.72 | 2.94 | 17875 |
| TO10.8.19.1181194 | *Ircinia oros* | 41.72 | 2.94 | 22007 |
| TO10.9.22.1181891 | *Ircinia oros* | 41.72 | 2.94 | 18002 |
| TO10.9.7.1182379 | *Ircinia oros* | 41.72 | 2.94 | 23760 |
| TO11.1.22.1181309 | *Ircinia oros* | 41.72 | 2.94 | 17483 |
| TV10.10.12.1181903 | *Ircinia variabilis* | 41.72 | 2.94 | 32022 |
| TV10.10.7.1181679 | *Ircinia variabilis* | 41.72 | 2.94 | 22982 |

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| TV10.4.2.1181247 | *Ircinia variabilis* | 41.72 | 2.94 | 29271 |
| TV10.8.12.1181313 | *Ircinia variabilis* | 41.72 | 2.94 | 37608 |
| TV10.8.2.1181576 | *Ircinia variabilis* | 41.72 | 2.94 | 31932 |
| TV10.9.12.1181059 | *Ircinia variabilis* | 41.72 | 2.94 | 26422 |
| TV10.9.2.1182146 | *Ircinia variabilis* | 41.72 | 2.94 | 3775 |
| TV10.9.7.1181743 | *Ircinia variabilis* | 41.72 | 2.94 | 25135 |
| TV11.7.7.1181561 | *Ircinia variabilis* | 41.72 | 2.94 | 33668 |
| TV11.8.12.1181970 | *Ircinia variabilis* | 41.72 | 2.94 | 23206 |
| 10.102009 | *Ircinia strobilina* | 18.40198 | -87.40878 | 7233 |
| 100.1019549 | *Xestospongia* | 17.88828 | -66.99812 | 30984 |
| 105.1019767 | *Xestospongia* | 17.88828 | -66.99812 | 28264 |
| 11.1019601 | *Ircinia strobilina* | 18.40198 | -87.40878 | 6191 |
| 110.1020489 | *Xestospongia* | 18.39177 | -67.47597 | 24834 |
| 116.1019727 | *Xestospongia* | 18.39177 | -67.47597 | 20770 |
| 12.1020554 | *Ircinia strobilina* | 18.40198 | -87.40878 | 3854 |
| 120.1019581 | *Xestospongia* | 22.6045 | -73.54653 | 20687 |
| 125.1020059 | *Xestospongia* | 24.04055 | -74.53137 | 21614 |
| 126.1019975 | *Xestospongia* | 24.04055 | -74.53137 | 23152 |
| 127.1019923 | *Xestospongia* | 22.10087 | -73.54073 | 23774 |
| 128.1019745 | *Xestospongia* | 18.39177 | -67.47597 | 21800 |
| 20.X.00.1.015.1020304 | *Discodermia* | 26.51255 | -78.58482 | 14478 |
| 24.1020549 | *Ircinia strobilina* | 18.40198 | -87.40878 | 24968 |
| 41.1019582 | *Mycale laxissima* | 17.95522 | -67.05322 | 7206 |
| 47.1019927 | *Mycale laxissima* | 17.95522 | -67.05322 | 13904 |
| 48.1019786 | *Mycale laxissima* | 17.95522 | -67.05322 | 27172 |
| 49.1019629 | *Mycale laxissima* | 17.95522 | -67.05322 | 17579 |
| 5.11.4D.1020074 | *Xestospongia muta* | 26.50992 | -80.03365 | 8132 |
| 5.11.6D.1020166 | *Xestospongia muta* | 26.50992 | -80.03365 | 16883 |
| 5.11.8D.1019704 | *Xestospongia muta* | 26.50992 | -80.03365 | 8620 |
| 5.11.Soil.1020271 | *Xestospongia muta* | 26.50992 | -80.03365 | 6124 |
| 5.29.Soil.1019966 | *Xestospongia muta* | 26.16817 | -80.07667 | 13609 |
| 5.IV.91.2.003.1020531 | *Axinella* | 28.1595 | -14.10167 | 5131 |
| 56.1020286 | *Mycale laxissima* | 17.95522 | -67.05322 | 21234 |
| 67.1019591 | *Xestospongia* | 20.38228 | -87.0291 | 16377 |
| 700.1181449 | *Placospongia intermedia* | 9.30683 | -82.17417 | 3380 |
| 701.118144 | *Placospongia intermedia* | 9.30683 | -82.17417 | 23844 |
| 702.118179 | *Placospongia intermedia* | 9.36068 | -82.278 | 5787 |
| 712.1181913 | *Aplysina fulva* | 9.36068 | -82.278 | 10431 |
| 73.1019805 | *Xestospongia* | 17.88828 | -66.99812 | 26833 |
| 94.1020316 | *Xestospongia* | 17.88828 | -66.99812 | 18414 |
| 95.1019987 | *Plakortis* | 17.88828 | -66.99812 | 29554 |
| 99.1019716 | *Plakortis* | 17.88828 | -66.99812 | 21404 |
| ALG12.101.1020199 | *Cliona viridis* | 37.069333 | -8.331138889 | 32436 |
| ALG12.103.1020514 | *Cliona celata complex* | 37.069333 | -8.331138889 | 18976 |
| ALG12.105.1019558 | *Phorbas fictitius* | 37.087972 | -8.342583 | 25877 |

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| ALG12.106.1020012 | *Phorbas fictitius* | 37.087972 | -8.342583 | 16044 |
| ALG12.110.1020285 | *Cliona celata complex* | 37.087972 | -8.342583 | 25654 |
| ALG12.111.1019802 | *Cliona celata complex* | 37.087972 | -8.342583 | 21522 |
| ALG12.112.1019618 | *Cliona celata complex* | 37.087972 | -8.342583 | 26707 |
| ALG12.114.1019900 | *Cliona celata complex* | 37.087972 | -8.342583 | 21721 |
| ALG12.115.1020456 | *Cliona celata complex* | 37.087972 | -8.342583 | 17608 |
| ALG12.95.1019784 | *Phorbas fictitius* | 37.069333 | -8.331138889 | 23384 |
| BCD12SED.1019631 | Marine sediments | 26.1494 | -80.0971 | 22374 |
| BCD13SED.1020512 | Marine sediments | 26.1494 | -80.0971 | 12416 |
| BCD21SED.1019899 | Marine sediments | 26.1494 | -80.0971 | 9984 |
| BCD22SED.1019908 | Marine sediments | 26.1494 | -80.0971 | 13050 |
| BCD23SED.1020540 | Marine sediments | 26.1494 | -80.0971 | 19261 |
| BCD31SED.1019600 | Marine sediments | 26.1494 | -80.0971 | 12223 |
| BCD32SED.1019628 | Marine sediments | 26.1494 | -80.0971 | 9339 |
| BCD33SED.1020484 | Marine sediments | 26.1494 | -80.0971 | 24127 |
| BCH12SED.1020332 | Marine sediments | 26.1494 | -80.0971 | 5812 |
| BCH13SED.1020409 | Marine sediments | 26.1494 | -80.0971 | 30505 |
| BCH21SED.1019500 | Marine sediments | 26.1494 | -80.0971 | 25107 |
| BCH32SED.1019565 | Marine sediments | 26.1494 | -80.0971 | 12353 |
| BCH33SED.1019842 | Marine sediments | 26.1494 | -80.0971 | 9863 |
| BR10B.Jan.1020118 | Seawater | 26.2516 | -80.062 | 12288 |
| BR10B.Nov.1019955 | Seawater | 26.2509 | -80.0621 | 29339 |
| BR10C.Jan.1020239 | Seawater | 26.2516 | -80.0619 | 10871 |
| BR10C.Nov.1019679 | Seawater | 26.251 | -80.062 | 23631 |
| BR14A.Jan.1020379 | Seawater | 26.2618 | -80.0853 | 13317 |
| BR7C.Jul.1020534 | Seawater | 26.2036 | -80.0682 | 2086 |
| CL22.1020317 | *Cliona delitrix* | 24.54912 | -81.37958 | 9405 |
| CL23.1019991 | *Cliona delitrix* | 24.54912 | -81.37958 | 8968 |
| CL264.1019976 | *Cliona delitrix* | 24.6715 | -81.0506 | 14575 |
| CL300.1019671 | *Cliona delitrix* | 25.84217 | -80.10403 | 9866 |
| CL416.1020174 | *Cliona delitrix* | 24.60903 | -82.94957 | 15128 |
| CL51.1019843 | *Cliona delitrix* | 9.3777 | -82.3032 | 7482 |
| Cl178.1020401 | *Cliona delitrix* | 16.80083 | -88.07887 | 12771 |
| GC.2.4.1020212 | *Stylissa carteri* | 20.280232 | 38.512573 | 24955 |
| HW4A.Nov.1019983 | Seawater | 26.019 | -80.0858 | 15411 |
| HW4C.Jul.1019970 | Seawater | 26.0191 | -80.086 | 14257 |
| HW4C.Nov.1019848 | Seawater | 26.0193 | -80.086 | 20420 |
| HW9A.Jul.1020291 | Seawater | 26.0675 | -80.0842 | 10947 |
| HW9A.Nov.1019960 | Seawater | 26.0676 | -80.0844 | 23100 |
| HW9C.Jan.1019820 | Seawater | 26.0668 | -80.0863 | 20729 |
| HW9C.Jul.1020373 | Seawater | 26.0675 | -80.0846 | 14323 |
| ML2.water.gDNA.1019528 | Seawater | 17.955217 | -67.053217 | 16807 |
| ML3.water.gDNA.1019985 | Seawater | 17.955217 | -67.053217 | 18363 |
| N50.3.1.11.BC.1019585 | *Amphimedon compressa* | 26.15995 | -80.0825 | 7264 |
| P12x102.1019625 | *Niphates erecta* | 9.36068 | -82.278 | 4087 |

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|---|---|---|---|---|
| P12x110.1020230 | *Aiolochroia crassa* | 9.36068 | -82.278 | 21045 |
| P12x118.1020030 | *Niphates erecta* | 9.36068 | -82.278 | 4726 |
| P12x125.1020301 | *Mycale laevis* | 9.35317 | -82.261 | 20536 |
| P12x129.1019770 | *Iotrochota birotulata* | 9.35317 | -82.261 | 29989 |
| P12x13.1020313 | *Ectyoplasia ferox* | 9.24133 | -82.17367 | 21248 |
| P12x130.1020344 | *Mycale laevis* | 9.35317 | -82.261 | 13678 |
| P12x132.1019839 | *Iotrochota birotulata* | 9.35317 | -82.261 | 17110 |
| P12x19.1019691 | *Ectyoplasia ferox* | 9.24133 | -82.17367 | 14102 |
| P12x20.1020408 | *Ectyoplasia ferox* | 9.24133 | -82.17367 | 28849 |
| P12x73.1020335 | *Chondrilla caribensis* | 9.35167 | -82.2595 | 13633 |
| P12x75.1019915 | *Chondrilla caribensis* | 9.35167 | -82.2595 | 16523 |
| P31.1020110 | *Dysidea etheria* | 9.30583 | -82.17317 | 9346 |
| SD11SED.1020180 | Marine sediments | 26.1673 | -80.0894 | 18981 |
| SD12SED.1019847 | Marine sediments | 26.1673 | -80.0894 | 19898 |
| SD21SED.1020473 | Marine sediments | 26.1673 | -80.0894 | 3258 |
| SD22SED.1020493 | Marine sediments | 26.1673 | -80.0894 | 28220 |
| SD23SED.1020164 | Marine sediments | 26.1673 | -80.0894 | 26864 |
| SD31SED.1020543 | Marine sediments | 26.1673 | -80.0894 | 20905 |
| SD33SED.1019711 | Marine sediments | 26.1673 | -80.0894 | 30596 |
| SH11SED.1019845 | Marine sediments | 26.1673 | -80.0894 | 25421 |
| SH12SED.1019810 | Marine sediments | 26.1673 | -80.0894 | 24017 |
| SH13SED.1019692 | Marine sediments | 26.1673 | -80.0894 | 27032 |
| SH1H20.1020135 | Seawater | 26.1673 | -80.0894 | 26784 |
| SH21SED.1020160 | Marine sediments | 26.1673 | -80.0894 | 4675 |
| SH23SED.1020048 | Marine sediments | 26.1673 | -80.0894 | 16939 |
| SH2H2O.1020112 | Seawater | 26.1673 | -80.0894 | 29946 |
| SH31SED.1019561 | Marine sediments | 26.1673 | -80.0894 | 15235 |
| SH32SED.1020463 | Marine sediments | 26.1673 | -80.0894 | 4147 |
| SH33SED.1020220 | Marine sediments | 26.1673 | -80.0894 | 14939 |
| SI06.133.1019903 | *Lissodendoryx colombiensis* | 9.36068 | -82.278 | 22197 |
| SI06.53.1020326 | *Lissodendoryx colombiensis* | 9.35167 | -82.2595 | 29383 |
| SI06.81.1020040 | *Dysidea etheria* | 9.30583 | -82.17317 | 16990 |
| SI06.96.1020259 | *Dysidea etheria* | 9.30583 | -82.17317 | 16578 |
| SS.11.1.1019652 | *Ircinia* | -18.819402 | 147.649572 | 24749 |
| SS.12.2.1019981 | *Xestospongia testudinaria* | -18.819402 | 147.649572 | 36640 |
| SS.25.3.1019611 | *Aplysina aerophoba* | 45.131314 | 13.666244 | 21580 |
| SS.3.1.1019571 | *Stelletta* | -36.37932 | 174.823554 | 11269 |
| SS.3.2.1019835 | *Stelletta* | -36.37932 | 174.823554 | 11566 |
| SS.3.3.1019673 | *Stelletta* | -36.37932 | 174.823554 | 13156 |
| SS.5.2.1019874 | *Stelletta* | -41.333 | 174.75 | 10936 |
| SS.6.1.1020480 | *Ancorina* | -41.333 | 174.75 | 10703 |
| SS.9.1.1020557 | *Cymbastela coralliophila* | -18.819402 | 147.649572 | 70634 |
| SS.9.2.1019758 | *Cymbastela coralliophila* | -18.819402 | 147.649572 | 81687 |
| SS.9.3.1019851 | *Cymbastela coralliophila* | -18.819402 | 147.649572 | 110456 |
| SW.16.1019912 | *Axinella* | 59.000278 | 11.185 | 18653 |

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|---|---|---|---|---|
| SW.19.1019641 | *Axinella* | 58.961667 | 11.3275 | 17998 |
| SW.227.1020120 | *Myxilla* | 59.043056 | 11.242222 | 7202 |
| SW.233.1020497 | *Myxilla* | 59.043056 | 11.242222 | 5578 |
| SW.234.1019718 | *Myxilla* | 59.043056 | 11.242222 | 4454 |
| SW.241.1020020 | *Halichondria panicea* | 58.983333 | 11.276667 | 19490 |
| SW.25.1020395 | *Axinella infundibuliformis* | 58.896667 | 11.270833 | 7099 |
| SW.26.1019992 | *Axinella infundibuliformis* | 58.896667 | 11.270833 | 6282 |
| SW.27.1019787 | *Axinella infundibuliformis* | 58.896667 | 11.270833 | 3289 |
| SW.60.1020016 | *Halichondria panicea* | 58.829116 | 11.083156 | 18311 |
| SW.H2O.4.1020393 | Seawater | 58.829116 | 11.083156 | 19085 |
| SWBHSS2.1019559 | Seawater | 24.04055 | -74.531367 | 28133 |
| SWMX1.1.1020238 | Seawater | 20.382283 | -87.0291 | 17491 |
| SWMX1.2.1020168 | Seawater | 20.382283 | -87.0291 | 15984 |
| SWMX1.3.1019958 | Seawater | 20.382283 | -87.0291 | 18249 |
| SWPRBV1.1020450 | Seawater | 17.888283 | -66.998117 | 29171 |
| Webster.1.B11.23.1020420 | *Ianthella basta* | -9.74967 | 143.39925 | 14375 |
| Webster.1.C3.27.1020147 | *Ianthella basta* | -9.74967 | 143.39925 | 17032 |
| Webster.1.C7.31.1019656 | *Ianthella basta* | -9.74967 | 143.39925 | 14628 |
| Webster.1.D7.43.1019506 | *Stylissa* | -18.82257 | 147.63755 | 56330 |
| Webster.1.D8.44.1020056 | *Stylissa* | -18.82257 | 147.63755 | 17300 |
| Webster.2.D4.133.1019984 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 16399 |
| Webster.2.E6.147.1019885 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 37608 |
| Webster.3.A2.190.1019569 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 30097 |
| Webster.3.A6.194.1020461 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 11524 |
| Webster.3.B10.210.1019644 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 17517 |
| Webster.3.B4.204.1020234 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 16399 |
| Webster.3.B7.207.1020441 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 17315 |
| Webster.3.C9.221.1020122 | *Carteriospongia foliascens* | -18.81707 | 147.63232 | 27930 |
| Webster.3.E9.245.1019861 | *Carteriospongia foliascens* | -18.68543 | 146.51218 | 41827 |
| Webster.3.G11.271.1019913 | *Carteriospongia foliascens* | -15.87005 | 123.66517 | 18262 |
| Webster.3.G3.263.1019818 | *Carteriospongia foliascens* | -16.05308 | 123.35887 | 8589 |
| Webster.3.H2.274.1019764 | *Carteriospongia foliascens* | -20.515 | 116.67033 | 9956 |
| Webster.3.H4.276.1019944 | *Carteriospongia foliascens* | -15.33242 | 124.243 | 11728 |
| Webster.3.H6.278.1019825 | *Carteriospongia foliascens* | -15.33242 | 125.77433 | 10919 |
| Webster.4.A9.291.1020187 | *Carteriospongia foliascens* | -9.75403 | 143.41833 | 16975 |
| Webster.4.B8.302.1020437 | *Luffariella variabilis* | -18.68543 | 146.51218 | 19679 |
| Webster.4.D4.322.1020071 | *Coscinoderma* | -18.59297 | 46.48359 | 6821 |
| Webster.4.D7.325.1019936 | *Coscinoderma* | -18.59297 | 46.48359 | 19289 |
| Webster.4.D9.327.1020502 | *Coscinoderma* | -18.59297 | 46.48359 | 10732 |
| Webster.4.E3.333.1020445 | *Coscinoderma* | -18.59297 | 46.48359 | 10976 |
| Webster.4.E7.337.1020077 | *Coscinoderma* | -18.59297 | 46.48359 | 19814 |
| Webster.4.F10.352.1019826 | *Rhopaloeides odorabile* | -18.81723 | 147.63252 | 7337 |
| Webster.4.F9.351.1019995 | *Rhopaloeides odorabile* | -18.81723 | 147.63252 | 11091 |
| Webster.4.G10.364.1020027 | *Cinachyrella alloclada* | -9.82425 | 150.81788 | 8952 |
| Webster.4.G4.358.1020209 | *Coelocarteria singaporensis* | -9.82425 | 150.81788 | 14438 |

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|---|---|---|---|---|
| Webster.4.G8.362.1019865 | *Cinachyrella alloclada* | -9.82425 | 150.81788 | 18085 |
| Webster.4.H6.372.1020405 | *Cinachyrella alloclada* | -9.82805 | 150.82028 | 11999 |
| Webster.5.A10.386.1019689 | *Halichondria phakellioides* | -12.484783 | 130.78445 | 7154 |
| Webster.5.B9.397.1019542 | *Paratetilla* | -12.484783 | 130.78445 | 8097 |
| Webster.5.C11.411.1020079 | *Stylissa massa* | -9.82805 | 150.82028 | 10634 |
| Webster.5.C2.402.1020087 | *Stylissa massa* | -9.82425 | 150.81788 | 11305 |
| Webster.5.C3.403.1020469 | *Stylissa massa* | -9.82425 | 150.81788 | 18997 |
| Webster.5.C4.404.1020430 | *Stylissa massa* | -9.82425 | 150.81788 | 7991 |
| Webster.5.C5.405.1020347 | *Stylissa massa* | -9.82425 | 150.81788 | 7646 |
| Webster.5.C6.406.1020060 | *Stylissa massa* | -9.82425 | 150.81788 | 9538 |
| Webster.5.C7.407.1019765 | *Stylissa massa* | -9.82805 | 150.82028 | 5085 |
| Webster.5.C9.409.1020124 | *Stylissa massa* | -9.82805 | 150.82028 | 5624 |
| Webster.5.D7.419.1019564 | *Suberites diversicolour* | -12.41482 | 130.83212 | 20959 |
| Webster.5.E4.428.1019670 | Seawater | -18.82257 | 147.63755 | 20105 |
| Webster.5.E5.429.1019889 | Seawater | -18.82257 | 147.63755 | 36094 |
| ZA.13.1020462 | *Xestospongia* | -6.11738 | 39.16904 | 38208 |
| ZA.15.1019642 | *Cinachyrella* | -6.11738 | 39.16904 | 22331 |
| ZA.16.1019749 | *Cinachyrella* | -6.11738 | 39.16904 | 27082 |
| ZA.38.1020095 | *Callyspongia* | -6.149923 | 39.131603 | 4565 |
| ZA.40.1019544 | *Clathria* | -6.11738 | 39.16904 | 13842 |
| ZA.41.1020474 | *Clathria* | -6.11738 | 39.16904 | 9657 |
| ZA.42.1019809 | *Clathria* | -6.11738 | 39.16904 | 4475 |
| ZA.46.1020417 | *Cymbastela* | -6.165917 | 39.202641 | 12927 |
| AF10.7.15.1182210 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 37615 |
| AF10.7.7.1181843 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 29495 |
| AF10.7.9.1181539 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 32729 |
| AF10.8.9.1181531 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 27304 |
| AF11.3.9.1182276 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 16753 |
| AF11.8.9.1181747 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 27771 |
| AW10.12.II.1182012 | Seawater | 41.68 | 2.81 | 4948 |
| AW10.3.I.1181981 | Seawater | 41.68 | 2.81 | 14482 |
| AW10.5.II.1182241 | Seawater | 41.68 | 2.81 | 19078 |
| AW10.5.III.1182271 | Seawater | 41.68 | 2.81 | 13234 |
| AW11.3.II.1181386 | Seawater | 41.68 | 2.81 | 3853 |
| AW11.5.III.1181684 | Seawater | 41.68 | 2.81 | 8631 |
| CCBH.1.1181350 | *Crambe crambe* | 41.67 | 2.8 | 22198 |
| CCBH.3.1181704 | *Crambe crambe* | 41.67 | 2.8 | 25795 |
| CCSA.1.1182079 | *Crambe crambe* | 41.67 | 2.8 | 20287 |
| CCSA.3.1181521 | *Crambe crambe* | 41.67 | 2.8 | 18104 |
| IF2.WIII.1181920 | Seawater | 41.38 | 2.2 | 28075 |
| IO2.24.1181173 | *Ircinia oros* | 41.38 | 2.2 | 16675 |
| IO2.25.1182327 | *Ircinia oros* | 41.38 | 2.2 | 20784 |
| IO2.36.1182150 | *Ircinia oros* | 41.38 | 2.2 | 21365 |
| IO5.18.1181378 | *Ircinia oros* | 41.38 | 2.2 | 21349 |
| IO5.Wctr.1182213 | Seawater | 41.38 | 2.2 | 23758 |

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| IO5.Wnh.1181835 | Seawater | 41.38 | 2.2 | 26146 |
| PO10.3.7.1181810 | *Ircinia oros* | 41.67 | 2.8 | 22245 |
| TO10.6.22.1182060 | *Ircinia oros* | 41.72 | 2.94 | 20116 |
| TO10.6.7.1181390 | *Ircinia oros* | 41.72 | 2.94 | 17577 |
| TO10.8.22.1181724 | *Ircinia oros* | 41.72 | 2.94 | 24567 |
| TO11.4.7.1181284 | *Ircinia oros* | 41.72 | 2.94 | 23726 |
| TO11.8.7.1181052 | *Ircinia oros* | 41.72 | 2.94 | 18223 |
| TV10.3.12.1182038 | *Ircinia variabilis* | 41.72 | 2.94 | 27182 |
| TV10.6.12.1181765 | *Ircinia variabilis* | 41.72 | 2.94 | 19991 |
| TV10.6.2.1182331 | *Ircinia variabilis* | 41.72 | 2.94 | 22435 |
| TV10.6.7.1182389 | *Ircinia variabilis* | 41.72 | 2.94 | 23842 |
| TV10.7.12.1181055 | *Ircinia variabilis* | 41.72 | 2.94 | 31194 |
| TV11.2.2.1181754 | *Ircinia variabilis* | 41.72 | 2.94 | 29787 |
| TV11.4.7.1182039 | *Ircinia variabilis* | 41.72 | 2.94 | 36239 |
| TV11.6.7.1182221 | *Ircinia variabilis* | 41.72 | 2.94 | 32822 |
| TV11.7.2.1181239 | *Ircinia variabilis* | 41.72 | 2.94 | 41814 |
| TW10.10.II.1181942 | Seawater | 41.72 | 2.94 | 13163 |
| TW10.3.I.1181457 | Seawater | 41.72 | 2.94 | 21455 |
| TW11.7.I.1181050 | Seawater | 41.72 | 2.94 | 20266 |
| 106.1019831 | *Xestospongia* | 17.88828 | -66.99812 | 25105 |
| 116.1019727 | *Xestospongia* | 18.39177 | -67.47597 | 20770 |
| 52.1019713 | *Mycale laxissima* | 17.95522 | -67.05322 | 1066 |
| 6.VIII.05.1.009.1019902 | *Geodia* | 25.69806 | -79.86635 | 14926 |
| 69.1020426 | *Xestospongia* | 20.38228 | -87.0291 | 2206 |
| 710.1181188 | *Aplysina fulva* | 9.36068 | -82.278 | 18470 |
| 85.1020438 | *Plakortis halichondrioides* | 17.88828 | -66.99812 | 16687 |
| 96.1019742 | *Plakortis* | 17.88828 | -66.99812 | 6687 |
| ALG12.99.1020247 | *Cliona viridis* | 37.069333 | -8.331138889 | 22862 |
| CL242.1020433 | *Cliona delitrix* | 26.0522 | -80.09782 | 22806 |
| CL43.1019930 | *Cliona delitrix* | 9.3777 | -82.3032 | 11576 |
| GC.3.4.1020086 | *Aplysina aerophoba* | 45.131314 | 13.666244 | 24896 |
| P06.1019883 | *Lissodendoryx colombiensis* | 9.35167 | -82.2595 | 19216 |
| P10X38.1020293 | *Haliclona vansoesti* | 9.36068 | -82.278 | 5372 |
| P110.1019538 | *Haliclona tubifera* | 9.30583 | -82.17317 | 15074 |
| P12x105.1019499 | *Aiolochroia crassa* | 9.36068 | -82.278 | 13183 |
| P12x121.1019986 | *Mycale laxissima* | 9.35317 | -82.261 | 10591 |
| P12x126.1020142 | *Mycale laevis* | 9.35317 | -82.261 | 5566 |
| P12x127.1019894 | *Iotrochota birotulata* | 9.35317 | -82.261 | 26802 |
| P12x133.1020070 | *Mycale laevis* | 9.35317 | -82.261 | 10461 |
| P12x21.1019954 | *Erylus formosus* | 9.24133 | -82.17367 | 28570 |
| P12x51.1020198 | *Haliclona tubifera* | 9.30583 | -82.17317 | 11801 |
| P12x56.1019518 | *Chalinula molitba* | 9.30583 | -82.17317 | 9235 |
| P12x59.1019532 | *Lissodendoryx colombiensis* | 9.30667 | -82.174 | 46262 |
| P12x74.1020161 | *Chondrilla caribensis* | 9.35167 | -82.2595 | 17631 |
| SI06.27.1020539 | *Tedania ignis* | 9.33333 | -82.25 | 18705 |

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| SI06.54.1019494 | *Lissodendoryx colombiensis* | 9.35167 | -82.2595 | 57212 |
| SI06.66.1020487 | *Dysidea etheria* | 9.30583 | -82.17317 | 6888 |
| SI06.9.1019630 | *Xestospongia bocatorensis* | 9.36068 | -82.278 | 24174 |
| SI06.97.1020093 | *Haliclona tubifera* | 9.30583 | -82.17317 | 16845 |
| SI06x69.1019615 | *Chalinula molitba* | 9.30583 | -82.17317 | 8913 |
| SS.27.2.1020151 | *Ircinia variabilis* | 43.19794 | 5.363352 | 10095 |
| SS.29.2.1020372 | *Pseudocorticium jarrei* | 43.19794 | 5.363352 | 17088 |
| SW.05.1020303 | *Phakellia ventilabrum* | 59.000278 | 11.185 | 13068 |
| SW.06.1019684 | *Geodia barretti* | 59.000278 | 11.185 | 15182 |
| SW.31.1020503 | *Mycale lingua* | 58.961667 | 11.3275 | 8728 |
| SW.38.1020149 | *Axinella infundibuliformis* | 58.896667 | 11.270833 | 7415 |
| Webster.1.C5.29.1020186 | *Ianthella basta* | -9.74967 | 143.39925 | 11966 |
| Webster.1.C9.33.1019732 | *Ianthella basta* | -9.74967 | 143.39925 | 12574 |
| Webster.1.D11.47.1020528 | *Coralliophila* | -18.82257 | 147.63755 | 15305 |
| Webster.2.A6.100.1019599 | *Ircinia* | -18.56028 | 146.48462 | 12968 |
| Webster.2.C8.125.1019896 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 12238 |
| Webster.2.D7.136.1019776 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 30801 |
| Webster.2.F1.154.1020479 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 23657 |
| Webster.2.G1.166.1019779 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 22213 |
| Webster.2.G9.174.1020452 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 17525 |
| Webster.3.C1.213.1020348 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 23126 |
| Webster.3.C5.217.1019794 | *Carteriospongia foliascens* | -18.81707 | 147.63232 | 22986 |
| Webster.3.E6.242.1019938 | *Carteriospongia foliascens* | -18.68543 | 146.51218 | 12931 |
| Webster.3.G6.266.1020251 | *Carteriospongia foliascens* | -14.17732 | 121.88157 | 9065 |
| Webster.3.G7.267.1019856 | *Carteriospongia foliascens* | -14.17705 | 121.8817 | 10648 |
| Webster.3.H12.Negative.control.1020551 | freshwater metagenome | NA | NA | 5944 |
| Webster.4.A3.285.1019579 | *Carteriospongia foliascens* | -20.466 | 116.82817 | 9003 |
| Webster.4.A5.287.1019869 | *Carteriospongia foliascens* | -18.6397 | 147.04775 | 26108 |
| Webster.4.D11.329.1020288 | *Coscinoderma* | -18.59297 | 46.48359 | 8577 |
| Webster.4.E6.336.1019575 | *Coscinoderma* | -18.59297 | 46.48359 | 10108 |
| Webster.4.G1.355.1020330 | *Coelocarteria singaporensis* | -9.82425 | 150.81788 | 13389 |
| Webster.4.G12.366.1020031 | *Coelocarteria singaporensis* | -9.82805 | 150.82028 | 19214 |
| Webster.4.H11.No.sample.1020513 | freshwater metagenome | NA | NA | 10212 |
| Webster.5.D4.416.1019813 | *Suberites diversicolour* | -12.41555 | 130.83263 | 15552 |
| AF10.10.15.1181373 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 32038 |
| AF10.9.7.1182028 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 37262 |
| AF11.3.7.1181265 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 22497 |
| IF5.27.1181406 | *Sarcotragus fasciculatus* | 41.38 | 2.2 | 24994 |
| IF5.31.1181060 | *Sarcotragus fasciculatus* | 41.38 | 2.2 | 24315 |
| IF5.7.1181937 | *Sarcotragus fasciculatus* | 41.38 | 2.2 | 19066 |
| IO2.35.1181480 | *Ircinia oros* | 41.38 | 2.2 | 17746 |
| TO10.10.19.1181285 | *Ircinia oros* | 41.72 | 2.94 | 29181 |
| TO11.2.22.1181591 | *Ircinia oros* | 41.72 | 2.94 | 19788 |
| TV10.11.2.1182269 | *Ircinia variabilis* | 41.72 | 2.94 | 26630 |
| TV11.3.7.1182361 | *Ircinia variabilis* | 41.72 | 2.94 | 32450 |

| | | | | |
|---|---|---|---|---|
| 104.1020269 | *Plakortis* | 17.88828 | -66.99812 | 26355 |
| 108.1019657 | *Plakortis* | 17.88828 | -66.99812 | 8949 |
| 76.1020092 | *Plakortis* | 17.88828 | -66.99812 | 15162 |
| GC.4.1.1019685 | *Dysidea avara* | 45.131314 | 13.666244 | 18286 |
| Webster.1.B5.17.1020280 | *Ianthella basta* | 13.4513 | 144.65637 | 16761 |
| Webster.3.B3.203.1020424 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 11650 |
| Webster.4.F8.350.1019495 | *Rhopaloeides odorabile* | -18.81723 | 147.63252 | 12786 |
| TV11.3.2.1181705 | *Ircinia variabilis* | 41.72 | 2.94 | 25590 |
| 5.11.9D.1019918 | *Xestospongia muta* | 26.50992 | -80.03365 | 3887 |
| GC.4.3.1020024 | *Dysidea avara* | 45.131314 | 13.666244 | 15823 |
| SS.2.2.1019796 | *Polymastia* | -36.37932 | 174.823554 | 8205 |
| SS.7.3.1019590 | *Xestospongia sp. UCMPWC1055* | -41.333 | 174.75 | 25352 |
| Webster.3.F7.255.1019516 | *Carteriospongia foliascens* | -18.5996 | 146.49222 | 9562 |
| Webster.4.E10.340.1019694 | *Coscinoderma* | -18.59297 | 46.48359 | 10458 |
| AF11.1.7.1181766 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 36996 |
| AF11.4.9.1181355 | *Sarcotragus fasciculatus* | 41.68 | 2.81 | 25719 |
| IF5.4.1181930 | *Sarcotragus fasciculatus* | 41.38 | 2.2 | 26608 |
| IO2.2.1181341 | *Ircinia oros* | 41.38 | 2.2 | 20397 |
| IO2.21.1181726 | *Ircinia oros* | 41.38 | 2.2 | 23596 |
| IO2.8.1181866 | *Ircinia oros* | 41.38 | 2.2 | 18411 |
| TV11.1.12.1182117 | *Ircinia variabilis* | 41.72 | 2.94 | 35963 |
| Webster.4.D12.330.1020385 | *Coscinoderma* | -18.59297 | 46.48359 | 15594 |
| Webster.4.E5.335.1019535 | *Coscinoderma* | -18.59297 | 46.48359 | 12929 |
| Webster.4.E8.338.1020411 | *Coscinoderma* | -18.59297 | 46.48359 | 20464 |
| Webster.4.D5.323.1019546 | *Coscinoderma* | -18.59297 | 46.48359 | 14608 |
| 122.1019669 | *Plakortis* | 24.04055 | -74.53137 | 26803 |
| 5.29.8I.1020184 | *Xestospongia muta* | 26.16817 | -80.07667 | 13233 |
| P12x123.1019539 | *Iotrochota birotulata* | 9.35317 | -82.261 | 18125 |
| SS.2.1.1020520 | *Polymastia* | -36.37932 | 174.823554 | 9421 |
| Webster.2.C10.127.1019906 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 13291 |
| Webster.2.C12.129.1019806 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 11740 |
| Webster.2.C7.124.1020296 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 24399 |
| Webster.2.C9.126.1019979 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 10745 |
| Webster.2.D3.132.1020457 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 12184 |
| Webster.2.E9.150.1019527 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 12678 |
| Webster.2.F10.163.1020475 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 11265 |
| Webster.2.F11.164.1019681 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 9227 |
| Webster.2.F5.158.1019833 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 18783 |
| Webster.2.F7.160.1020229 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 29134 |
| Webster.2.G4.169.1019852 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 23092 |
| Webster.2.G7.172.1020355 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 27313 |
| Webster.2.H1.178.1020495 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 10040 |
| Webster.2.H11.188.1019926 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 22646 |
| Webster.2.H2.179.1020564 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 7720 |
| Webster.3.A1.189.1019973 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 22244 |

| | | | | |
|---|---|---|---|---|
| Webster.3.G8.268.1019921 | *Carteriospongia foliascens* | -20.4135 | 116.84467 | 20000 |
| Webster.4.C11.317.1020045 | *Phyllospongia* | -18.68543 | 146.51218 | 8869 |
| Webster.4.E4.334.1020244 | *Coscinoderma* | -18.59297 | 46.48359 | 7293 |
| Webster.4.F4.346.1019772 | *Coscinoderma* | -18.59297 | 46.48359 | 8588 |
| Webster.4.F5.347.1019701 | *Rhopaloeides odorabile* | -18.81723 | 147.63252 | 11962 |
| Webster.4.F6.348.1020572 | *Rhopaloeides odorabile* | -18.81723 | 147.63252 | 11862 |
| CCSA.2.1181822 | *Crambe crambe* | 41.67 | 2.8 | 22486 |
| IO5.8.1181088 | *Ircinia oros* | 41.38 | 2.2 | 25192 |
| 2.1019675 | *Mycale laxissima* | 26.56295 | -77.8815 | 12160 |
| Webster.1.E4.52.1019857 | *Ianthella basta* | -18.82257 | 147.63755 | 11039 |
| Webster.2.D8.137.1019884 | *Rhopaloeides odorabile* | -18.84478 | 147.64402 | 10452 |
| Webster.3.A10.198.1019768 | *Carteriospongia foliascens* | -16.75408 | 145.98733 | 8748 |
| Webster.4.C8.314.1019803 | *Luffariella variabilis* | -18.68543 | 146.51218 | 17773 |
| Webster.5.D9.421.1020328 | *Suberites diversicolour* | -12.41473 | 130.83198 | 10096 |

**Table S2.** Minimal inhibition concentration (MIC) of the butanone extracts of *C. violaceum* CV026-based QQ active strain against *P. aeruginosa* PAO1 (PAO1), *Bacillus subtilis* CU1050 (BS), and *Escherichia coli* GM1655 (EC)

| Test extract | MIC (µg/mL) | | |
|---|---|---|---|
| | EC | BS | PAO1 |
| Pv86 | 500 | 250 | 500 |
| Ac14 | 500 | 500 | 500 |
| Ac4 | 125 | 250 | 500 |
| Ss68 | 500 | 125 | 500 |
| Pv91 | 250 | 125 | 500 |
| Ss7 | 500 | 125 | 500 |
| Ss38 | 250 | 250 | 500 |
| Ac15 | 500 | 1000 | 500 |
| Ac17 | 1000 | 1000 | 500 |
| Cc27 | ≥2000 | 250 | 500 |
| Cc36 | ≥2000 | 500 | 1000 |
| De103 | 250 | 250 | 125 |
| Ss63 | 250 | 250 | 500 |
| Pv87 | 500 | ≥2000 | 250 |
| Pv88 | 500 | ≥2000 | 1000 |
| Pv90 | 250 | 500 | 500 |
| Pv98 | 500 | 1000 | 250 |
| Ampicillin | 0.025 | 8 | 200 |

**Note:** Positive control- Ampicillin

**Table S3.** Protease activity (mean and standard deviation of duplicates) of *P. aeruginosa* in the presence of extracts of selected strains, or controls (positive control (PC): Penicillic acid, negative control (NC): methanol).

| Test extract | Zone of casein hydrolysis (mm) |
|---|---|
| NC | 20±0.00 |
| Ac14 | 19±0.70 |
| Ac15 | 20±0.00 |
| Ac17 | 19±0.70 |
| Ac4 | 16±1.41 |
| Cc27 | 17±0.1.41 |
| Cc36 | 19±0.00 |
| De103 | 20±0.00 |
| Pv86 | 19±0.35 |
| Pv87 | 20±0.00 |
| Pv88 | 20±0.70 |
| Pv90 | 20±0.00 |
| Pv91 | 16±0.00 |
| Pv98 | ND |
| Ss38 | 20±0.00 |
| Ss63 | 20±0.70 |
| Ss68 | 15±0.00 |
| Ss7 | 20±0.70 |
| PC | 16±0.00 |

**Note:** Protease activity is expressed based on the diameter of the hydrolysis zone, QQ compounds will reduce the protease activity of *P. aeruginosa* PAO1, and thus, in their presence, the hydrolysis zone should be of smaller dimensions than in the negative control (<20 mm).

**Table S4.** List of OTUs from Sponge Microbiome project with ≥98% 16S rRNA gene identity and Score>172 against Ac4, Ac14, Ac15, Ac17, Cc27, De103, Pv86, Pv87, Pv88, Pv91, Pv98, Ss38, Ss63, Ss68 and Ss7.

| Sample ID | OTU | Hit (%) | e-value | Score |
|---|---|---|---|---|
| Ac14 | 1290 | 100 | 1.00E-46 | 183 |
| Ac15 | 1290 | 100 | 1.00E-46 | 183 |
| Ac17 | 51717 | 100 | 1.00E-46 | 183 |
| Ac4 | 1290 | 100 | 1.00E-46 | 183 |
| Cc27 | 2677 | 100 | 9.00E-47 | 183 |
| Cc27 | 20096 | 98.99 | 4.00E-45 | 178 |
| Cc27 | 154 | 98.99 | 4.00E-45 | 178 |
| De103 | 19426 | 100 | 4.00E-46 | 182 |
| De103 | 4508 | 100 | 4.00E-46 | 182 |
| De103 | 4507 | 100 | 4.00E-46 | 182 |
| De103 | 152535 | 100 | 1.00E-45 | 180 |
| De103 | 1438 | 100 | 1.00E-45 | 180 |
| De103 | 745 | 100 | 1.00E-45 | 180 |
| De103 | 548 | 100 | 1.00E-45 | 180 |
| De103 | 85134 | 100 | 5.00E-45 | 178 |
| De103 | 51421 | 98.99 | 5.00E-45 | 178 |
| De103 | 21363 | 98.99 | 5.00E-45 | 178 |
| De103 | 19425 | 98.99 | 5.00E-45 | 178 |
| De103 | 19413 | 98.99 | 5.00E-45 | 178 |
| De103 | 13939 | 98.99 | 5.00E-45 | 178 |
| De103 | 12124 | 98.99 | 5.00E-45 | 178 |
| De103 | 7321 | 98.99 | 5.00E-45 | 178 |
| De103 | 3825 | 98.99 | 5.00E-45 | 178 |
| De103 | 3793 | 98.99 | 5.00E-45 | 178 |
| De103 | 1808 | 98.99 | 5.00E-45 | 178 |
| De103 | 152322 | 98.99 | 2.00E-44 | 176 |
| De103 | 85139 | 98.98 | 2.00E-44 | 176 |
| De103 | 51425 | 100 | 2.00E-44 | 176 |
| De103 | 51381 | 100 | 2.00E-44 | 176 |
| De103 | 51311 | 98.98 | 2.00E-44 | 176 |
| De103 | 35499 | 100 | 2.00E-44 | 176 |
| De103 | 13978 | 98.98 | 2.00E-44 | 176 |
| De103 | 12127 | 98.98 | 2.00E-44 | 176 |
| De103 | 154451 | 98.97 | 6.00E-44 | 174 |
| De103 | 152514 | 98.97 | 6.00E-44 | 174 |
| De103 | 152388 | 98.97 | 6.00E-44 | 174 |
| De103 | 152344 | 98.97 | 6.00E-44 | 174 |
| De103 | 152165 | 98.97 | 6.00E-44 | 174 |
| De103 | 152105 | 100 | 6.00E-44 | 174 |
| De103 | 151937 | 98.97 | 6.00E-44 | 174 |

| | | | | |
|---|---|---|---|---|
| De103 | 151868 | 98.97 | 6.00E-44 | 174 |
| De103 | 151848 | 98.97 | 6.00E-44 | 174 |
| De103 | 151818 | 98.97 | 6.00E-44 | 174 |
| De103 | 85140 | 98.97 | 6.00E-44 | 174 |
| De103 | 85058 | 98.97 | 6.00E-44 | 174 |
| De103 | 85031 | 98.97 | 6.00E-44 | 174 |
| De103 | 85003 | 98.97 | 6.00E-44 | 174 |
| De103 | 84983 | 98.97 | 6.00E-44 | 174 |
| De103 | 84280 | 98.97 | 6.00E-44 | 174 |
| De103 | 84241 | 98.97 | 6.00E-44 | 174 |
| De103 | 57730 | 98.97 | 6.00E-44 | 174 |
| De103 | 57721 | 98.97 | 6.00E-44 | 174 |
| De103 | 57715 | 98.97 | 6.00E-44 | 174 |
| De103 | 57711 | 98.97 | 6.00E-44 | 174 |
| De103 | 57701 | 98.97 | 6.00E-44 | 174 |
| De103 | 57700 | 98.97 | 6.00E-44 | 174 |
| De103 | 57678 | 98.97 | 6.00E-44 | 174 |
| De103 | 57676 | 98.97 | 6.00E-44 | 174 |
| De103 | 51433 | 98.97 | 6.00E-44 | 174 |
| De103 | 51430 | 98.97 | 6.00E-44 | 174 |
| De103 | 51426 | 98.97 | 6.00E-44 | 174 |
| De103 | 51412 | 98.97 | 6.00E-44 | 174 |
| De103 | 51383 | 98.97 | 6.00E-44 | 174 |
| De103 | 51379 | 98.97 | 6.00E-44 | 174 |
| De103 | 51378 | 98.97 | 6.00E-44 | 174 |
| De103 | 51367 | 98.97 | 6.00E-44 | 174 |
| De103 | 51363 | 98.97 | 6.00E-44 | 174 |
| De103 | 51318 | 98.97 | 6.00E-44 | 174 |
| De103 | 35550 | 98.97 | 6.00E-44 | 174 |
| De103 | 35542 | 98.97 | 6.00E-44 | 174 |
| De103 | 35537 | 98.97 | 6.00E-44 | 174 |
| De103 | 35535 | 98.97 | 6.00E-44 | 174 |
| De103 | 35533 | 98.97 | 6.00E-44 | 174 |
| De103 | 35532 | 98.97 | 6.00E-44 | 174 |
| De103 | 35526 | 98.97 | 6.00E-44 | 174 |
| De103 | 35512 | 98.97 | 6.00E-44 | 174 |
| De103 | 35510 | 98.97 | 6.00E-44 | 174 |
| De103 | 35507 | 98.97 | 6.00E-44 | 174 |
| De103 | 35497 | 98.97 | 6.00E-44 | 174 |
| De103 | 35496 | 98.97 | 6.00E-44 | 174 |
| De103 | 35490 | 98.97 | 6.00E-44 | 174 |
| De103 | 21408 | 98.97 | 6.00E-44 | 174 |
| De103 | 21407 | 98.97 | 6.00E-44 | 174 |
| De103 | 21400 | 98.97 | 6.00E-44 | 174 |
| De103 | 21399 | 98.97 | 6.00E-44 | 174 |

| | | | | |
|---|---|---|---|---|
| De103 | 21398 | 98.97 | 6.00E-44 | 174 |
| De103 | 21397 | 98.97 | 6.00E-44 | 174 |
| De103 | 21394 | 98.97 | 6.00E-44 | 174 |
| De103 | 21374 | 98.97 | 6.00E-44 | 174 |
| De103 | 21368 | 98.97 | 6.00E-44 | 174 |
| De103 | 21367 | 98.97 | 6.00E-44 | 174 |
| De103 | 21364 | 98.97 | 6.00E-44 | 174 |
| De103 | 21362 | 98.97 | 6.00E-44 | 174 |
| De103 | 19427 | 98.97 | 6.00E-44 | 174 |
| De103 | 19424 | 98.97 | 6.00E-44 | 174 |
| De103 | 19423 | 98.97 | 6.00E-44 | 174 |
| De103 | 19422 | 98.97 | 6.00E-44 | 174 |
| De103 | 19421 | 98.97 | 6.00E-44 | 174 |
| De103 | 19419 | 98.97 | 6.00E-44 | 174 |
| De103 | 19386 | 98.97 | 6.00E-44 | 174 |
| De103 | 19384 | 98.97 | 6.00E-44 | 174 |
| De103 | 19383 | 98.97 | 6.00E-44 | 174 |
| De103 | 13980 | 98.97 | 6.00E-44 | 174 |
| De103 | 13975 | 98.97 | 6.00E-44 | 174 |
| De103 | 13942 | 98.97 | 6.00E-44 | 174 |
| De103 | 10494 | 98.97 | 6.00E-44 | 174 |
| De103 | 8019 | 98.97 | 6.00E-44 | 174 |
| De103 | 6738 | 98.97 | 6.00E-44 | 174 |
| De103 | 6737 | 98.97 | 6.00E-44 | 174 |
| De103 | 2432 | 98.97 | 6.00E-44 | 174 |
| De103 | 1739 | 98.97 | 6.00E-44 | 174 |
| De103 | 85162 | 98.96 | 2.00E-43 | 172 |
| Pv86 | 1296 | 100 | 1.00E-46 | 183 |
| Pv86 | 207628 | 98.99 | 5.00E-45 | 178 |
| Pv86 | 207515 | 98.99 | 5.00E-45 | 178 |
| Pv86 | 207359 | 98.99 | 5.00E-45 | 178 |
| Pv86 | 138931 | 98.99 | 5.00E-45 | 178 |
| Pv86 | 138901 | 98.99 | 5.00E-45 | 178 |
| Pv86 | 138892 | 98.99 | 5.00E-45 | 178 |
| Pv86 | 34154 | 98.99 | 5.00E-45 | 178 |
| Pv86 | 20655 | 98.99 | 5.00E-45 | 178 |
| Pv86 | 3160 | 98.99 | 5.00E-45 | 178 |
| Pv87 | 4185 | 100 | 2.00E-46 | 183 |
| Pv87 | 6697 | 98.99 | 9.00E-45 | 178 |
| Pv87 | 1013 | 98.99 | 9.00E-45 | 178 |
| Pv87 | 119214 | 98.97 | 1.00E-43 | 174 |
| Pv88 | 2724 | 100 | 1.00E-46 | 183 |
| Pv91 | 143340 | 100 | 1.00E-46 | 183 |
| Pv98 | 230 | 100 | 4.00E-46 | 182 |
| Pv98 | 3451 | 98.98 | 2.00E-44 | 176 |

| | | | | |
|---|---|---|---|---|
| Pv98 | 47167 | 98.98 | 7.00E-44 | 174 |
| Ss38 | 160513 | 98.99 | 5.00E-45 | 178 |
| Ss63 | 20072 | 100 | 1.00E-46 | 183 |
| Ss63 | 75866 | 98.99 | 5.00E-45 | 178 |
| Ss63 | 75850 | 98.99 | 5.00E-45 | 178 |
| Ss63 | 18624 | 98.99 | 5.00E-45 | 178 |
| Ss63 | 15317 | 98.99 | 5.00E-45 | 178 |
| Ss68 | 7598 | 100 | 1.00E-46 | 183 |
| Ss68 | 4555 | 98.99 | 5.00E-45 | 178 |
| Ss7 | 26192 | 100 | 1.00E-46 | 183 |
| Ss7 | 1930 | 98.97 | 6.00E-44 | 174 |

**Table S5A**. Selected features with their corresponding mzmed, rtmed, adducts, METLIN MS/MS match and AntiMarin database match for extract from isolate Cc27.

| mzmed | rtmed | adducts | METLIN (MS/MS) | AntiMarin |
|---|---|---|---|---|
| 359.1738 | 3.78 | [M+Na]+ 336.184 | n | n |
| 280.1107 | 4.55 | [M+K]+ 241.147 | n | n |
| 358.2389 | 5.64 | | n | n |
| 339.1602 | 6.57 | | **1** | **1** |
| 608.3939 | 7.70 | | n | **2** |
| 284.1644 | 7.92 | [M+H]+ 283.158 | n | n |
| 267.1153 | 8.98 | [M+Na]+ 244.125 | n | n |
| 247.1482 | 9.75 | [M+H]+ 246.142 | n | n |
| 343.2394 | 10.80 | [M+Na]+320.239 [M+H-COCH2]+ 384.236 | n | n |
| 785.5158 | 13.00 | [M+H+NH3]+ 767.482 | n | n |
| 468.3917 | 27.80 | [M+Na+NH3]+ 428.379 [M+H+NH3]+ 450.361 | n | **3** |

**Table S5B**. Selected features with their corresponding mzmed, rtmed, adducts, METLIN MS/MS match and AntiMarin database match for extract from isolate Ss68.

| mzmed | rtmed | adducts | METLIN (MS/MS) | AntiMarin |
|---|---|---|---|---|
| 256.18 | 8.65 | | n | n |
| 489.257 | 9.03 | [2M+H]+ 244.125 | n | n |
| 316.171 | 9.42 | [M+H]+ 315.158 [M+H-CH4]+ 331.207 | n | n |
| 389.257 | 11.2 | [M+Na]+ 366.267 | 20991 | |
| 377.203 | 12 | [M+H]+ 376.197 | n | n |
| 421.229 | 12.2 | [M+H]+ 420.217 | n | n |

| | | | | |
|---|---|---|---|---|
| | | | | n |
| 741.489 | 12.9 | [M+K+NH3]+ 685.49<br>[M+H+NH3]+ 723.455 | n | |
| 313.204 | 13.7 | [M+H-C4H8]+ 368.259 | 44851 | |
| | | | | n |
| 412.327 | 15.1 | [M+Na+NH3]+ 372.292 | n | |
| | | | | n |
| 412.327 | 17 | [M+K]+ 373.358 | n | |
| 327.158 | 22.1 | | 18061 | n |

**Table S5C**. Selected features with their corresponding mzmed, rtmed, adducts, METLIN MS/MS match and AntiMarin database match for extract from isolate Pv86.

| mzmed | rtmed | adducts | METLIN (MS/MS) | AntiMarin |
|---|---|---|---|---|
| 350.1552 | 8.29 | [M+H]+ 349.148 | n | 4 |
| 334.1597 | 11.13 | [M+K]+ 295.198 | n | n |
| 471.1864 | 12.01 | [3M+H+Na]2+ 306.136 | 22979 | |
| 635.2739 | 12.08 | [2M+Na]+ 306.136 | n | 5 |
| 460.3006 | 12.37 | [M+H+NH3]+ 442.267 | 45418 | |
| 504.3278 | 12.51 | [M+H+NH3]+ 486.292 | n | 6 |
| 456.2097 | 25.90 | | y | |
| 412.3277 | 28.12 | | 68586 | |

**Table S5D**. Selected features with their corresponding mzmed, rtmed, adducts, METLIN MS/MS match and AntiMarin database match for extract from isolate Pv91.

| mzmed | rtmed | adducts | METLIN (MS/MS) | AntiMarin |
|---|---|---|---|---|
| 426.2081 | 5.58 | [M+K]+ 387.245 | n | **7** |
| 654.2737 | 7.42 | [M+H]+ 653.267 | n | n |
| 688.2402 | 9.22 | | n | n |
| 697.4609 | 14.14 | [M+K+NH3]+ 641.459 | n | **8** |
| 812.5125 | 14.34 | [M+Na]+ 789.516<br>[M+H-H20]+ 829.521 | n | n |
| 418.2856 | 14.79 | [M+Na]+ 395.305 | n | n |
| 449.2575 | 17.17 | [M+Na]+ 426.27 | n | n |
| 982.4649 | 18.25 | [M+H+NH3]+ 964.431 | n | **9** |

| | | | | |
|---|---|---|---|---|
| 546.3724 | 19.27 | [M+H-CO]+ 573.37 [M+H-C2H4]+ 573.37 | n | n |
| 537.3501 | 19.46 | [M+H]+ 536.343 | n | n |
| 399.2431 | 20.03 | | n | n |
| 560.3876 | 20.23 | [M+K]+ 521.439 [M+H]+ 559.385 | n | n |
| 439.3112 | 21 | | n | n |
| 689.566 | 23.72 | [M+Na]+ 666.585 [M+H]+ 688.559 | n | n |
| 689.5652 | 24.5 | [2M+Na+K-H]+ 314.299 [M+H-NH3]+ 705.578 | n | |
| 542.4158 | 24.86 | [M+K]+ 503.463 [M+Na]+ 519.415 | n | n |
| 371.1064 | 26.52 | [M+2K]2+ 664.267 [M+Na+K]2+ 680.246 | n | n |

## 1.2 Supplementary Figures

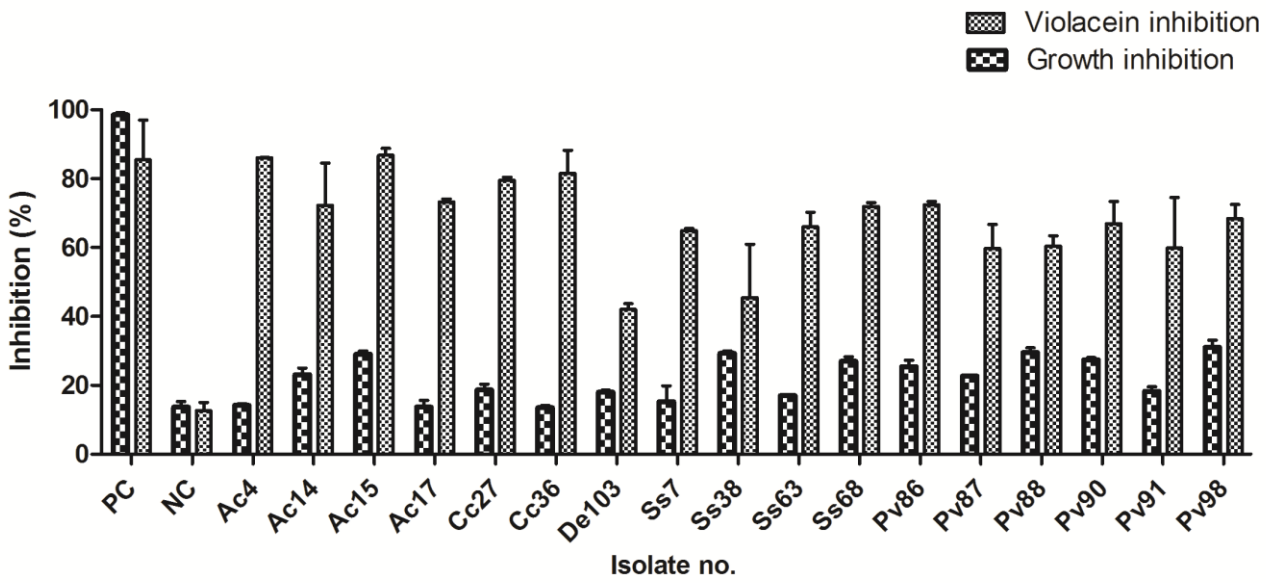


**Figure S1** *C. violaceum* CV026 violacein and growth inhibition (%) in presence of extracts from 17 different isolates, Penicillic acid (0.025 mg/mL) and ampicillin (3 µg/mL) were used as the positive controls for violacein and growth inhibition assays respectively. Inhibition of violacein production or growth was calculated as percentage inhibition compared to the inhibition by the negative control (methanol).

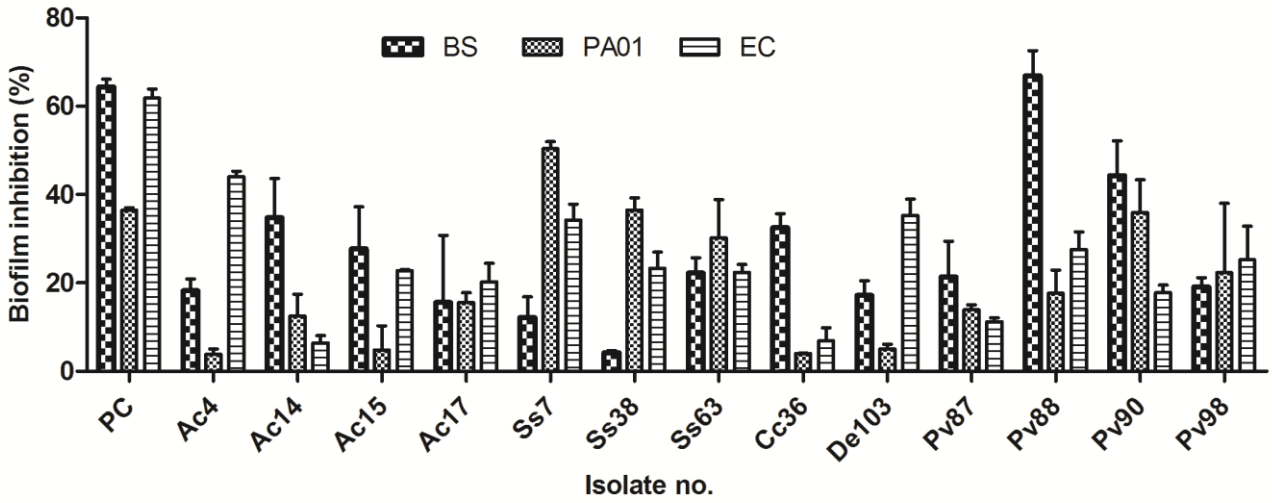


**Figure S2.** Inhibition of biofilm formation (%) in *P.aeruginosa* PAO1, *Bacillus substilis* and *E. coli* by extracts from isolates deriving from *Crella cyathophora* (Cc), *Diacarnus erythraenus* (De), *Pione vastifica* (Pv), *Amphimedon chloros* (Ac), *Sarcotragus sp.*(Ss). Streptomycin was used as positive control (PC) for PAO1 and BS, whereas penicillic acid was used for EC. Biofilm inhibition was calculated as percentage inhibition compared to the inhibition by the negative control (methanol). Note that some activities may have resulted from growth inhibition. Specifically extracts Ss68, Pv91 and Ss7 showed growth inhibition against BS and extract Ac4 inhibited growth of EC (see Table S2 for details on MIC).

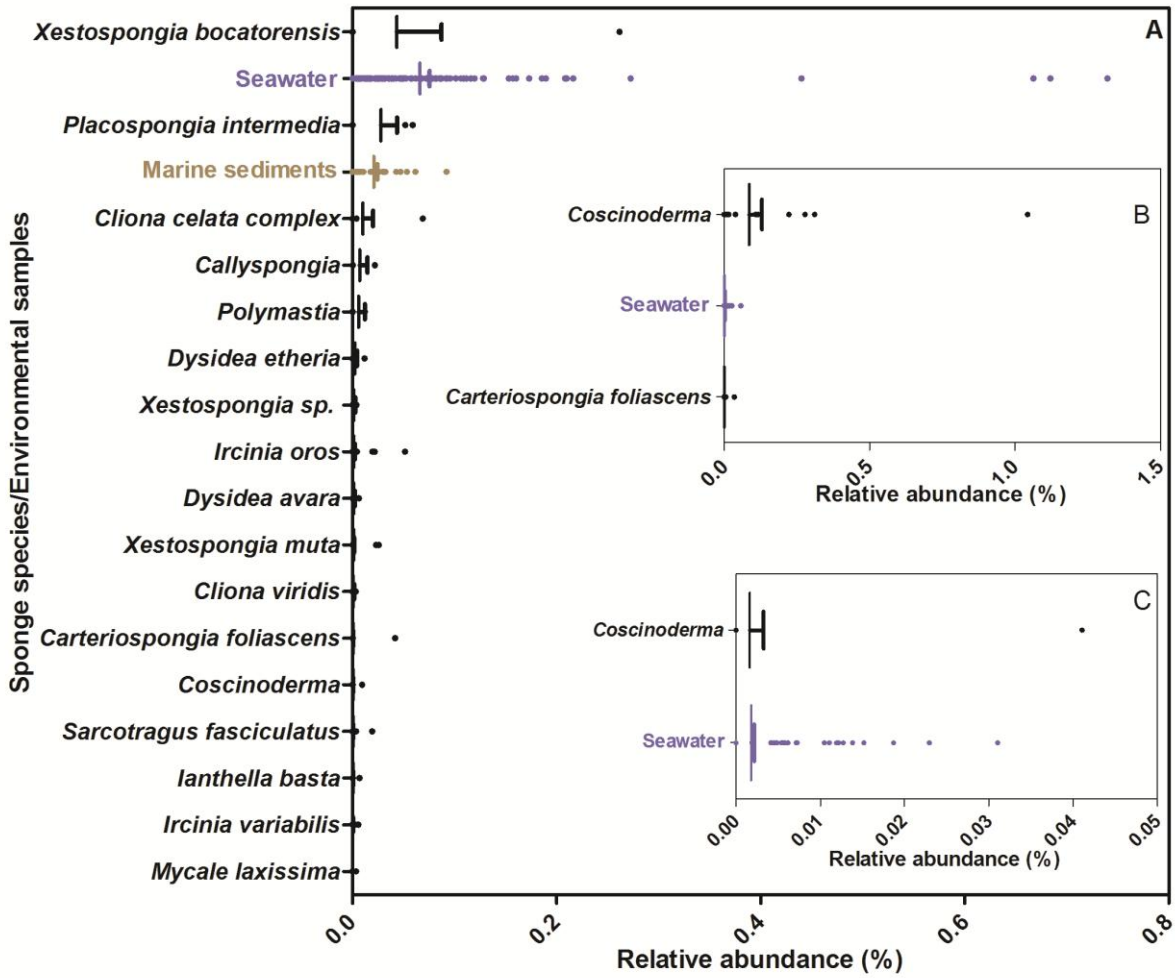


**Figure S3.** Relative abundance of OTUs from the SMP with ≥98% identity to 16S rRNA sequences from **A.** Information relative to OTUs closely affiliated to isolate Pv87 **B**. Information relative to OTUs closely affiliated with isolates Pv88. **C**. Information relative to OTUs closely affiliated with isolates Ss38. Vertical bar represents the mean, the hinge represents SEM (standard error mean), and dots represent outliner values beyond mean.

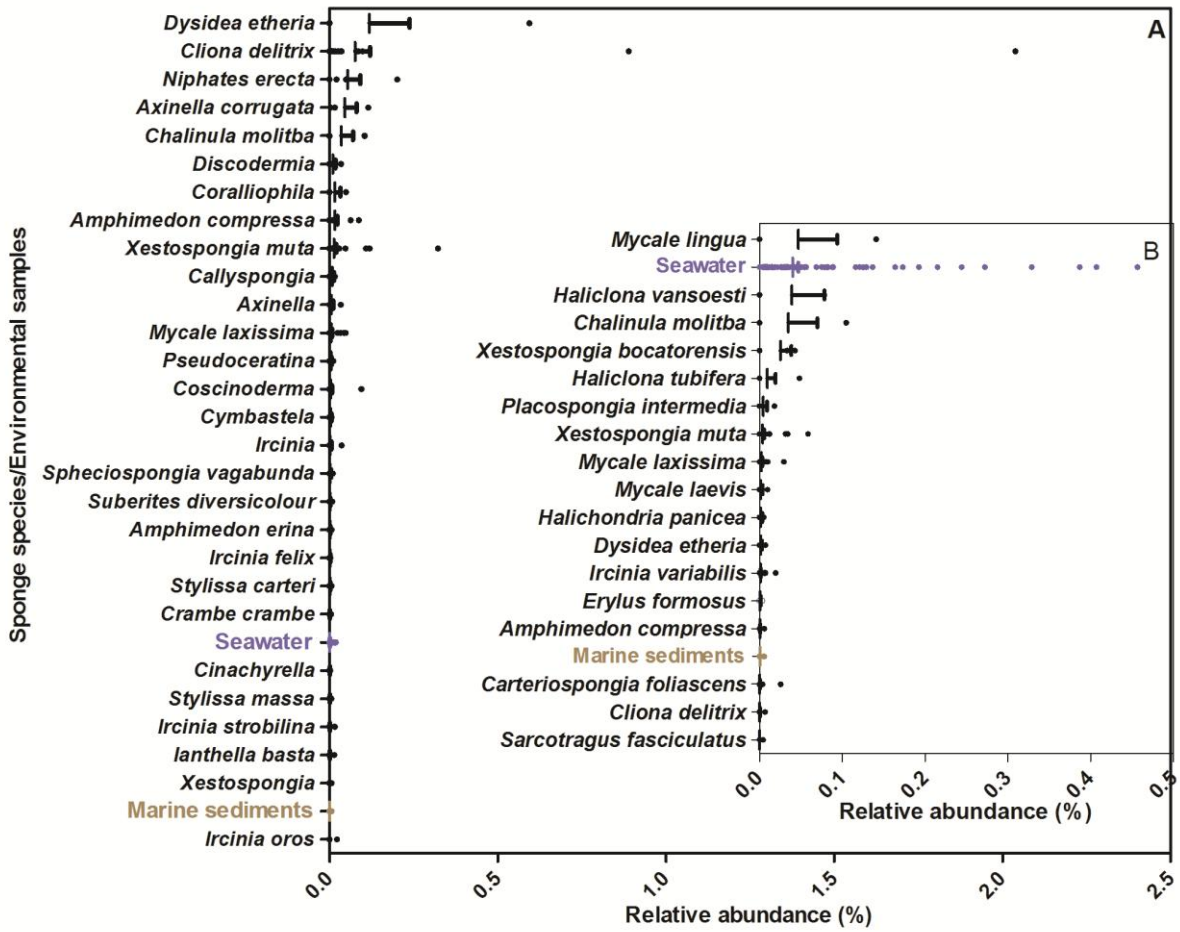


**Figure S4.** Relative abundance of OTUs from the SMP with ≥98% identity to 16S rRNA sequences from **A.** Information relative to OTUs closely affiliated to isolate Ac4,14,15 **B**. Information relative to OTUs closely affiliated with isolates Ss63. Vertical bar represents the mean, the hinge represents SEM (standard error mean), and dots represent outliner values beyond mean.

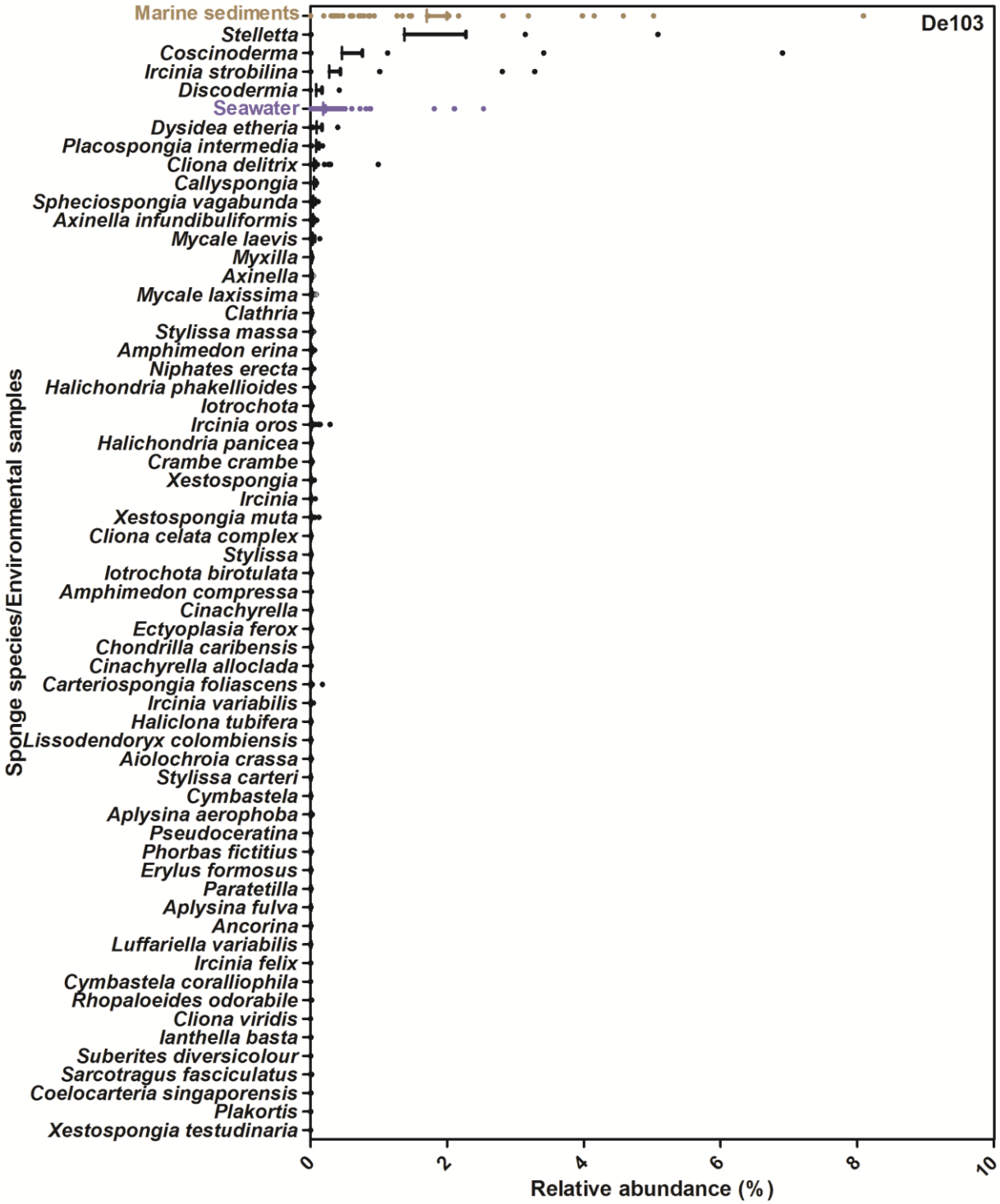


**Figure S5.** Relative abundance of OTUs from the SMP with ≥98% identity to 16S rRNA sequences from information relative to OTUs closely affiliated to isolate De103. Vertical bar represents the mean, the hinge represents SEM (standard error mean), and dots represent outliner values beyond mean.

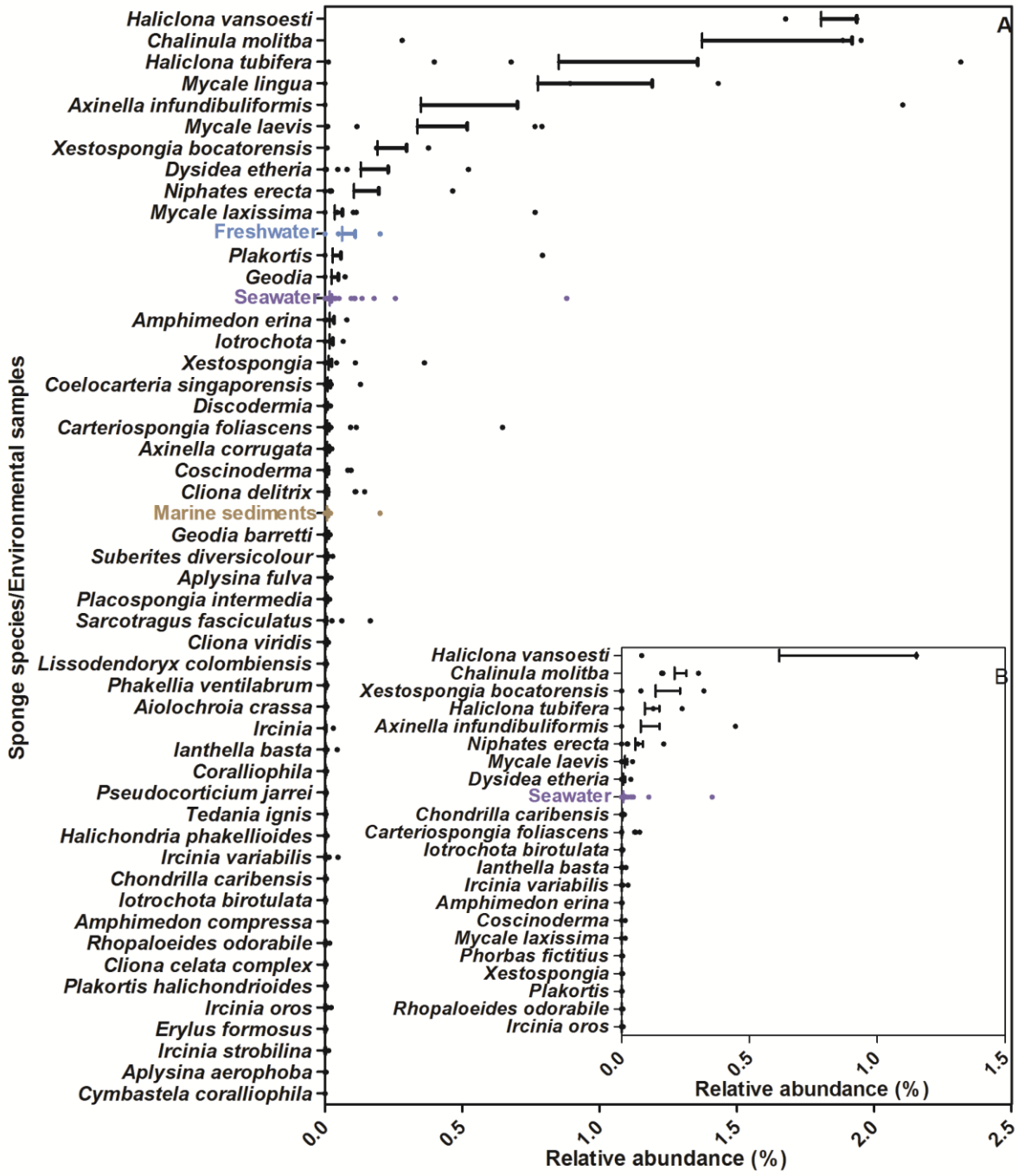


**Figure S6.** Relative abundance of OTUs from the SMP with ≥98% identity to 16S rRNA sequences from **A**. Information relative to OTUs closely affiliated to isolate Pv98 **B**. Information relative to OTUs closely affiliated with isolates Ss7. Vertical bar represents the mean, the hinge represents SEM (standard error mean), and dots represent outliner values beyond mean.

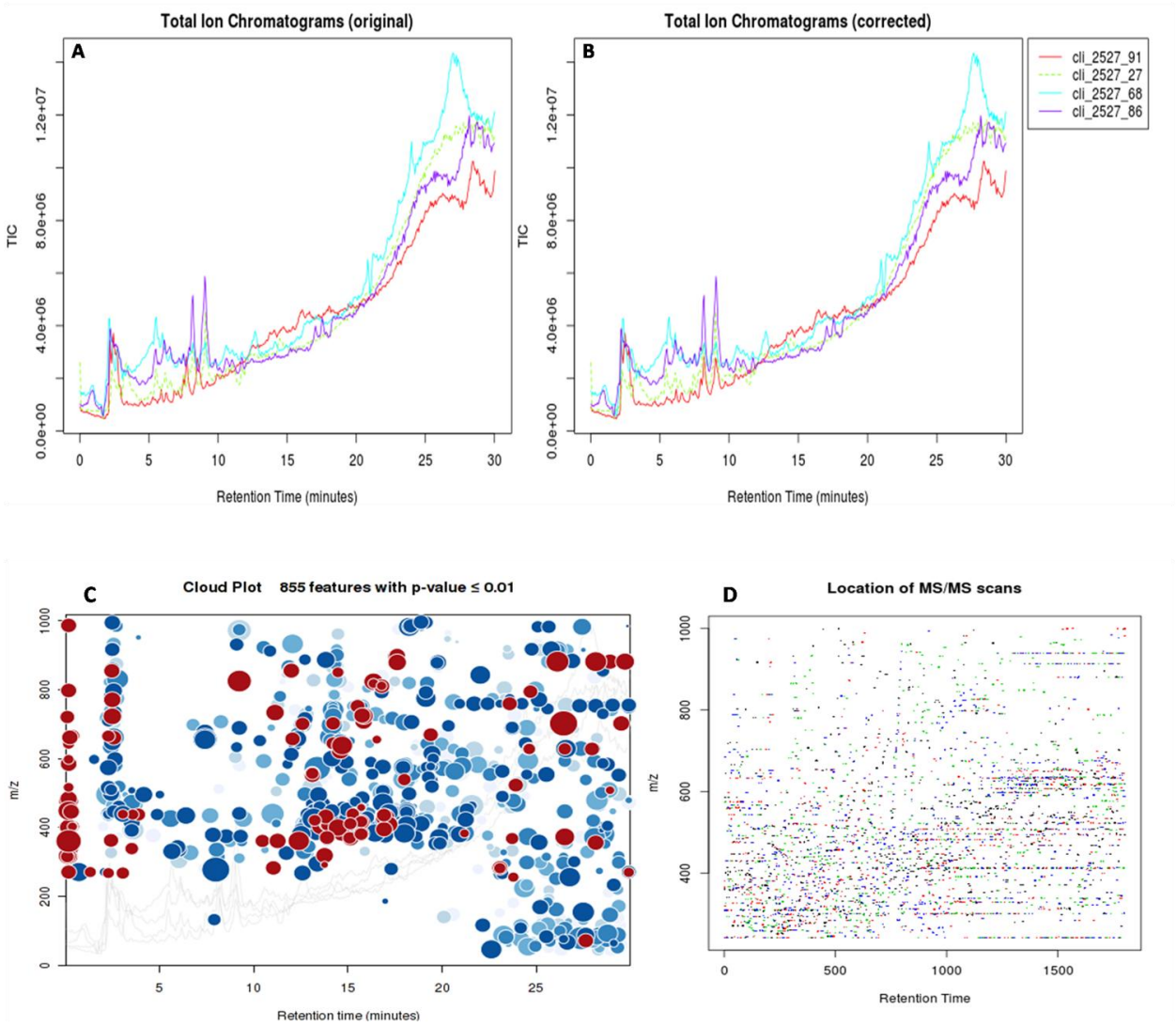


**Figure S7**.The overlay of total ion chromatograms before (**A**) and after (**B**) retention time correction, Cloud plots with 855 features with p-value of ≤0.001 (**C**) and location of MS/MS scans (**D**).

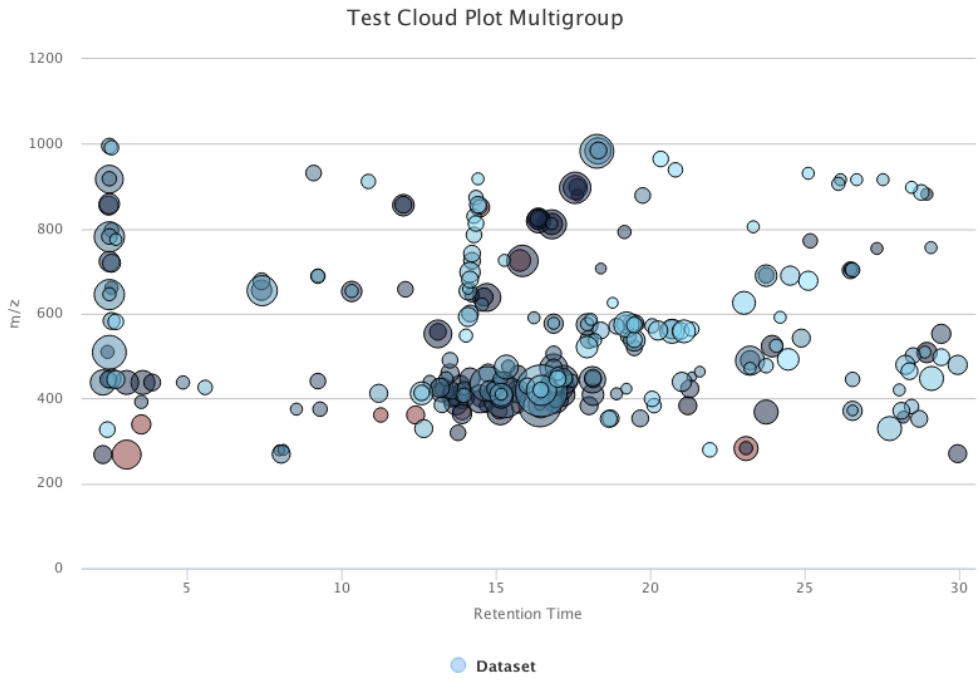


**Figure S8**. Interactive cloud plot analysis for the dataset containing compounds from extracts deriving from the four selected isolates (Cc27, Pv86, Pv91, and Ss68) for metabolomic profiling.