

"BIOPROSPECTING OF MARINE ORGANISMS: EXPLORING
ANTIBACTERIAL ACTIVITIES IN AQUEOUS AND ORGANIC EXTRACTS"

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Table S1 – Marine organisms collected from Parque da Pedra da Risca do Meio, Ceará.

Marine Organism	Phylum	Species
Marine Sponges	Porifera	<i>Aiolochoiria crassa</i>
		<i>Agelas sp.</i>
		<i>Agelas sventres</i>
		<i>Amphimedon compressa</i>
		<i>Aplysina cauliformis</i>
		<i>Aplysina fistularis</i>
		<i>Aplysina lactuca</i>
		<i>Callyspongia vaginalis</i>
		<i>Clathria nicoleae</i>
		<i>Erylus formosus</i>
		<i>Geodia sp.</i>
		<i>Ircinia strobilina</i>
		<i>Mycale sp.</i>
		<i>Niphates erecta</i>
		<i>Pseudosuberites sp.</i>
		<i>Topsentia ophiraphidites</i>

Table S2 – Marine organisms collected from Pacheco Beach, Ceará.

Marine Organism	Phylum	Species
Marine Sponges	Porifera	<i>Amphimedon viridis</i>
		<i>Aplysina fulva</i>
		<i>Haliclona implexiformis</i>
		<i>Ircinia felix</i>
		<i>Tethya sp.</i>
Marine Macroalgae	Chlorophyta	<i>Caulerpa cupressoides</i>
		<i>Caulerpa prolifera</i>
		<i>Caulerpa racemosa</i>
		<i>Caulerpa sertularioides</i>
		<i>Ulva fasciata</i>
		<i>Ulva lactuca</i>
	Phaeophyta	<i>Dictyopteris delicatula</i>
		<i>Lobophora variegata</i>
	Rhodophyta	<i>Amansia multifida</i>
		<i>Botryocladia occidentalis</i>
		<i>Cryptonemia crenulata</i>
		<i>Cryptonemia luxurians</i>
		<i>Cryptonemia sp.</i>
		<i>Dictyurus occidentalis</i>
		<i>Gracilaria domingensis</i>
		<i>Gracilariopsis sjoestedtii</i>
		<i>Halymenia sp.</i>
		<i>Hypnea musciformis</i>
		<i>Osmundaria obtusiloba</i>
		<i>Pterocladella capillacea</i>
		<i>Solieria filiformis</i>

Table S3 – Marine organisms collected from Paracuru Beach, Ceará.

Marine Organism	Phylum	Species
Marine Sponges	Porifera	<i>Chondrilla caribensis</i>
		<i>Cinachyrella alloclada</i>
		<i>Haliclona caerulea</i>
		<i>Haliclona melana</i>
		<i>Placospongia</i> sp.
		<i>Tedania ignis</i>
Marine Macroalgae	Chlorophyta	<i>Anadyomene stellata</i>
		<i>Bryopsis pennata</i>
		<i>Bryopsis</i> sp.
		<i>Caulerpa mexicana</i>
		<i>Codium isthmocladum</i>
		<i>Dictyosphaeria cavernosa</i>
		<i>Enteromorpha prolifera</i>
		<i>Udotea flabellum</i>
		<i>Valonia aegagropila</i>
		<i>Dictyota dichotoma</i>
	Phaeophyta	<i>Dictyota mertensii</i>
		<i>Padina gymnospora</i>
		<i>Sargassum vulgare</i>
		<i>Spatoglossum schroederi</i>
		<i>Acanthophora spicifera</i>
	Rhodophyta	<i>Bryothamnion seaforthii</i>
		<i>Bryothamnion triquetum</i>
		<i>Corallina panizzoi</i>
		<i>Corynomorpha clavata</i>
		<i>Digenea simplex</i>
		<i>Galaxaura</i> sp.
		<i>Gelidiella acerosa</i>
		<i>Gracilaria cervicornis</i>
		<i>Gracilaria ferox</i>
		<i>Gracilaria ramosissima</i>
		<i>Gracilaria wrightii</i>
		<i>Gracilaria</i> sp.
		<i>Laurencia</i> sp.
		<i>Meristiella echinocarpum</i>
		<i>Ochtodes seundiramea</i>

Table S4 – Results of the disk diffusion antibiogram assay for aqueous extracts of marine organisms – average inhibition zone diameter (mm).

Marine Organism	Species	Bacterial strains		
		<i>E. coli</i>	<i>S. aureus</i>	<i>S. epidermidis</i>
Marine Sponges	<i>Agelas sventres</i>	0.00±0.00 A	9.00±1.00 D	0.00±0.00 A
	<i>Amphimedon compressa</i>	8.67±0.58 B	9.67±0.58 D	8.67±1.15 B
	<i>Amphimedon viridis</i>	8.00±0.00 B	0.00±0.00 A	8.00±0.00 B
	<i>Aplysina fistularis</i>	10.00±0.00 C	14.00±0.00 C	13.00±1.00 C
	<i>Aplysina fulva</i>	11.33±1.15 D	15.00±1.73 C	14.00±2.00 C
	<i>Aplysina lactuca</i>	12.33±1.53 D	14.00±4.00 C	15.33±2.31 C
	<i>Mycale</i> sp.	7.00±0.00 B	11.33±2.52 E	8.67±1.15 B
	<i>Pseudosuberites</i> sp.	15.00±1.00 F	19.33±2.31 F	14.67±2.31 G
	<i>Tedania ignis</i>	0.00±0.00 A	15.67±1.53 C	9.33±1.15 D
	<i>Topsentia ophiraphidites</i>	0.00±0.00 A	16.00±0.00 C	10.67±1.15 D
Positive Control	Ampicillin	21.00±1.00 E	22.00±1.00 B	24.00±0.00 E
Negative Control	Distilled water	0.00±0.00 A	0.00±0.00 A	0.00±0.00 A

Diameter of inhibition zone including disk diameter of 6 mm at a volume of 10 µL of extract, water (negative control), or ampicillin (50 µg; positive control) /disk. Means with different letters within a column are significantly different (p <0.05).

Table S5 – Results of the disk diffusion antibiogram assay for organic extracts of marine organisms – average inhibition zone diameter (mm).

Marine Organism	Species	Bacterial strains		
		<i>E. coli</i>	<i>S. aureus</i>	<i>S. epidermidis</i>
Marine Sponges	<i>Agelas sventres</i>	0.00±0.00 A	15.00±1.00 C	12.33±0.58 H
	<i>Aiolochoiria crassa</i>	0.00±0.00 A	9.33±1.15 B	0.00±0.00 A
	<i>Amphimedon compressa</i>	9.00±1.00 B	10.67±0.58 B	9.33±1.15 B
	<i>Amphimedon viridis</i>	9.00±1.00 B	9.00±1.00 B	9.33±0.58 B
	<i>Aplysina cauliformes</i>	15.67±2.89 C	16.33±5.13 C	0.00±0.00 A
	<i>Aplysina fistularis</i>	14.33±0.58 C	16.00±2.00 C	0.00±0.00 A
	<i>Aplysina fulva</i>	16.33±1.15 C	23.00±2.00 D	18.00±0.00 E
	<i>Aplysina lactuca</i>	16.33±1.53 C	19.00±4.58 F	8.33±0.58 B
	<i>Erylus formosus</i>	0.00±0.00 A	0.00±0.00 A	15.00±1.00 F
	<i>Ircinia felix</i>	0.00±0.00 A	10.33±0.58 B	8.00±1.00 B
	<i>Mycale</i> sp.	16.33±1.15 C	22.67±4.16 D	18.33±0.58 D
	<i>Pseudosuberites</i> sp.	17.67±0.58 E	0.00±0.00 A	0.00±0.00 A
	<i>Topsentia ophiraphidites</i>	0.00±0.00 A	18.33±0.58 G	14.00±0.00 G
Marine Macroalgae	<i>Amansia multifida</i>	0.00±0.00 A	24.00±4.00 E	0.00±0.00 A
	<i>Corallina panizzoi</i>	0.00±0.00 A	0.00±0.00 A	9.00±0.00 B
	<i>Cryptonemia crenulata</i>	0.00±0.00 A	0.00±0.00 A	10.00±0.00 B
	<i>Dictyota dichotoma</i>	0.00±0.00 A	8.00±0.00 B	0.00±0.00 A
	<i>Dictyota mertensii</i>	0.00±0.00 A	8.00±0.00 B	8.33±0.58 B
	<i>Gracilaria ramosissima</i>	0.00±0.00 A	0.00±0.00 A	8.67±0.58 B
	<i>Gracilaria</i> sp.	0.00±0.00 A	9.33±0.58 B	8.67±0.58 B
	<i>Laurencia</i> sp.	0.00±0.00 A	0.00±0.00 A	9.00±0.00 B
	<i>Sargassum vulgare</i>	0.00±0.00 A	11.00±2.00 H	0.00±0.00 A
	<i>Valonia aegagropila</i>	0.00±0.00 A	12.00±1.00 I	0.00±0.00 A
Positive Control	Ampicillin	20.00±0.00 D	23.00±0.00 D	22.00±3.00 C
Negative Control	Evaporated acetonitrile	0.00±0.00 A	0.00±0.00 A	0.00±0.00 A

Diameter of inhibition zone including disk diameter of 6 mm at a volume of 10 µL of extract, water (negative control), or ampicillin (50 µg; positive control) /disk. Means with different letters within a column are significantly different (p <0.05).