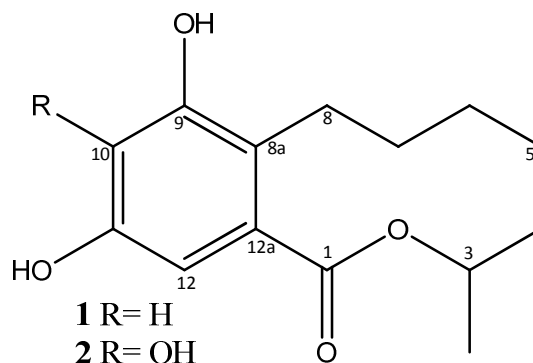


## Two new macrolides from endophytic fungus marine red algae *Pyropia spiralis*

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**Abstract:** Oceans have provided several compounds base for biological activities on earth The marine environment is an unexplored source for isolation of new micobres (bacteria, fungi, actinomycetes, cyanobacteria and diatoms) that are potent producers of bioactive secondary metabolites [1,2]. For the example 10-membered macrolides, a group of polyketides, are recognized as an important source of medicine with multiple potent biogical activities including anti-fungal, antimalarial, cytotoxic, and nematicidal activities [3]. In the search for new bioactive substances, the fungi (designate Ps-03) for isolated marine red algae specie *Pyropia spiralis*, collected from the beach Ponta da Fortaleza, Ubatuba – SP. The fungus was grown on rice solid medium at room temperature under static conditions for 21 days. The rice culture was extracted with EtOAc. The crude extract obtained was dried and partitioned yielding three fractions: aqueous (FAq), acetonitrile (FAc) and hexane (FH). Among the fractions tested only the FAc fraction was that showed potent activity antifungal (IC<sub>50</sub> xxx) against pathogen *Cladosporium cladosporioides* and *C. pharospermum*. The cytotoxicity evaluation was also performed and the results indicated that fraction FAc possessed activity against of HCT-116 and MCF-7 with the IC<sub>50</sub> of 9,85 µg/mL and 10,29 µg/mL, respectively. The FAc (650 mg) was subjected to column chromatography under pressure (CC) over silica C-18, eluting with a H<sub>2</sub>O-MeOH gradient, to yield 7 fractions. The Fr. 5 (66 mg) was purified by HPLC-DAD with a H<sub>2</sub>O-MeOH gradient (65-100 %) isolated two new compounds **1** (14 mg) and **2** (3 mg). The analysis to HR-ESI-MS, <sup>1</sup>H and <sup>13</sup>C dado NMR spectrum, indicated them molecular formula C<sub>14</sub>H<sub>18</sub>O<sub>4</sub> [M + H]<sup>+</sup> in 251,1259 *m/z* and C<sub>14</sub>H<sub>18</sub>O<sub>5</sub> [M + H]<sup>+</sup> in 267,1231 *m/z*, respectively. Compared to the literature data [3], both belonging to 10-membered macrolides.



**Figure 1.** Compounds **1** and **2** isolated from marine red algae endophytic fungus Ps-03.

### References:

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