

EFFECT OF MARINE SPONGES *PETROMICA CITRINA* AND *AGELAS SP.* ON
SACCHAROMYCES CEREVISIAE MULTIDRUG RESISTANCE PROTEIN PDR5P

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The search for new compounds that can act as multidrug resistance inhibitors is a very promising approach to improve chemotherapy efficacy. This kind of resistance is often promoted by ABC transporters. The protein Pdr5p, from *Saccharomyces cerevisiae*, confers resistance to several drugs. Studies demonstrate that marine sponges can be a great source of new natural products with interesting biological activities. In this study, extracts obtained from sponges collected in the Brazilian coast were tested against Pdr5p ATPase activity. The extracts from *Petromica citrina* and *Agelas sp.*, were submitted to dose response curves, with IC₅₀ values of 30,71 µl/ml and 142,98 µl/ml, respectively. These extracts were partitioned with solvents of increasing polarity. The partitions which better inhibited the ATPase activity were ethyl acetate and butanol from *Petromica citrina* and dichloromethane from *Agelas sp.*, which were also submitted to dose response curves, showing IC₅₀ of 69,20 µg/ml, 45,84 µg/ml and 125,38 µg/ml, respectively. These results showed that these extracts probably contain new compounds with modulatory effects on multidrug resistance transporters. Future assays aiming the identification of compounds responsible for the inhibition will be done.