TITLE: PURIFICATION OF PIGMENT PRODUCED BY *PSEUDOGYMNOASCUS* SP. FROM ANTARCTICA.

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ABSTRACT:
Considering the increased demand for natural compounds, fungi and bacteria have been proven to be a good alternative as a source for natural dyes: they experience fast growth, pigments can be extracted from the extracellular media and production process can generally be optimized. Antarctic's fungi are considered important for natural pigments' production research based on the fact that it uses pigments as a form of protection from the long periods of exposure to UV rays or other ambient stressors. Moreover, these fungal communities, not as widely subjected to studies compared to microorganisms from other regions, can be a source of new species and a rich pool of unprecedented natural products with unique chemical structures. Taking this into consideration, this study aimed to purify the extracellular pigment produced by *Pseudogymnoascus* sp, isolated from marine sediments in Antarctica. The isolate was cultured in petri dishes containing 1% Malt Agar for 20 days at 15ºC. The pink-reddish pigment was extracted from the solid medium using acetone, dried, and weighed afterward. 1g of the extract was dissolved in 1 mL of water and the solution was subjected to purification by column chromatography, using a C18 column (reverse phase) as the stationary phase and a gradient of methanol in water as the mobile phase, starting with a concentration of 20% to 100% methanol, thereafter the column was eluted with 100% acetonitrile. Using this purification methodology, it was possible to obtain three different fractions, all with a reddish coloration, but while two of those had an intense red, the other one didn't have such strong coloration. The difference in the fraction collection time caused by the difference in polarity between them may mean that the pigment studied is formed by more than one compound. The fractions were sent to NMR analysis to elucidate their chemical structures. Once these substances are identified it will be possible to assert the success of the purification, as well as infer the biological role of these compounds for the fungus, what other properties it may have, and, thus, have a greater picture of the possibilities and applications that the pigment of this species of *Pseudogymnoacus* has to offer.

Keywords: natural pigment, column chromatography, Antarctic fungus.

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