

CARACTERIZAÇÃO QUÍMICA DE FUNGOS ENDOFÍTICOS ASSOCIADOS A ESPÉCIE *Annona jahnii* (ANNONACEAE)

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ABSTRACT:

Endophytic fungi are microorganisms which live in association with plant species, generally inhabiting the interior of tissues and organs without causing damage to the host. Despite their ecological importance, these endophytes are considered a promising source of secondary metabolites. Therefore, this study aimed to study the endophytic fungi of *Annona jahnii* and evaluate the chemical profile of its extracts. For the extracts elaboration, 15 fungal strains were randomly selected from the collection of microorganisms of the GBQF research group of Federal University of Roraima. Strains were inoculated in duplicate in test tubes containing BDL, ISP2 and Oat in liquid environment and incubated in a Shaker at 30°C and 120 rpm for 15 days. After the period, the mycelia were separated from the liquid environment. The mycelia were extracted with Hexane (Hex) followed by Methanol (MeOH) and the liquid environment with Ethyl acetate (AcOEt), giving the fungal extracts Hexane (EH), Ethyl acetate (EAC) and Methanolic (EM). The extracts were weighed and submitted to the yield calculation. Then, the chemical prospection of the extracts was initially performed by thin layer chromatography (TLC), in order to preliminarily observe the presence of alkaloids, flavonoids, terpenes and coumarins. The extracts that presented the most promising results were submitted to an exploratory analysis by mass spectrometry, using the chemical ionization source at atmospheric pressure (APCI) in the positive acquisition mode. After the analysis it was verified that in extracts EH of fungi from 29 to 142 In ISP2 presented higher yields with 0.062g and 0.022g, respectively. The fungus 273 (0.072g), 515 (0.062g) and 464 (0.029g) fermented in BDL were the most promising ones in the extract EM and in the extract EAC fungus 515 (ISP2) was the one that provided greater mass (0.11265g). As regards to TLC prospecting, polar extracts (EAC and MS) are composed of alkaloids, flavonoids and coumarins and the apolares (EH) are composed of terpenes. Analyzes by APCI revealed a similar chemical profile between the EH extract of fungus 29 and the EAC extract of fungus 281 grown in ISP2, as well as between the EM extracts of fungus 273 and 515 cultivated in BDL. Therefore, the results obtained in this study are of great relevance and are considered unpublished for the species *A. jahnii*, since it contains endophytic fungi with the potential to produce chemical compounds of biotechnological interest.

Keywords: Natural resources, Endophytic fungi, Secondary metabolites.

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