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ISOLATION AND CHARACTERIZATION OF A NEW BOSTRYCIN ANALOGUE PRODUCED BY A NOVEL ENDOPHYTIC FUNGUS OF THE GENUS DIAPORTHE

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The search for bioactive natural products as a basis for developing new drugs to treat existing and emerging diseases has driven numerous studies, primarily involving plants and microorganisms. Microorganisms are among the main producers of bioactive substances, and fungi have attracted great interest due to their high biosynthetic capacity. Species of the genus *Diaporthe*, especially those that are endophytic, are widely recognised for their ability to produce a diverse array of metabolites with various biological activities. In this context, this study aimed to isolate and characterise the compounds produced by a new species of *Diaporthe* (MMSRG-125), isolated from stem explants of the Amazonian plant camu-camu (*Myrciaria dubia* (Kunth) McVaugh). Initially, the fungal strain was cultivated in potato-dextrose medium for 50 days at 28 °C. After the incubation period, the aqueous phase and the mycelium were separated by filtration, resulting in two extracts: the broth extract and the mycelial extract. The methanolic extract of the mycelium was subjected to fractionation by vacuum liquid chromatography (VLC) and compound isolation using HPLC. Structural characterisation was performed by NMR and mass spectrometry (MS). As a result, two anthraquinone derivatives, analogues of bostrycin, were isolated and characterised: 4-hydroxybostrycin and a novel analogue, 4-hydroxy-6-ethoxybostrycin. These findings highlight the potential of this new *Diaporthe* species as a promising source for the production of bioactive compounds and novel structural analogues with possible biological applications.

Keywords: *Diaporthe sp., endophytic fungus, anthraquinone, bostrycin, isolation and structural characterisation*