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Table of Contents

Stelliosphaerols A and B, Sesquiterpene–Polyol Conjugates from an Ecuadorian Fungal Endophyte

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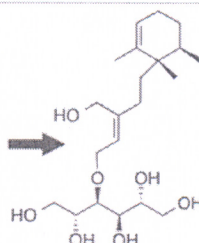
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Abstract



Endophytic fungi are plant tissue-associated fungi that represent a rich resource of unexplored biological and chemical diversity. As part of an ongoing effort to characterize Amazon rainforest-derived endophytes, numerous fungi were isolated and cultured from plants collected in the Yasuni National Park in Ecuador. Of these samples, phylogenetic and morphological data revealed a previously undescribed fungus in the order Pleosporales that was cultured from the tropical tree *Duroia hirsuta*. Extracts from this fungal isolate displayed activity against *Staphylococcus aureus* and were thus subjected to detailed chemical studies. Two compounds with modest antibacterial activity were isolated, and their structures were elucidated using a combination of NMR spectroscopic analysis, LC-MS studies, and chemical degradation. These efforts led to the identification of stelliosphaerols A (1) and B (2), new sesquiterpene–polyol conjugates that are responsible, at least in part, for the *S. aureus* inhibitory activity of the fungal extract.

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