

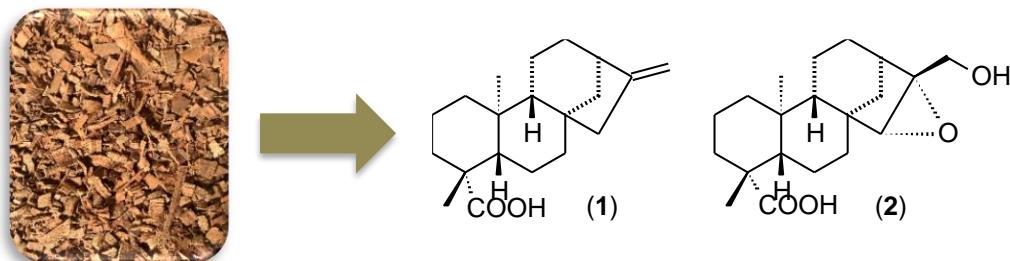
XYLOPIA POLYANTHA R. E. FRIES (ANNONACEAE): A NEW NATURAL SOURCE OF ENT-KAURANE DITERPENES

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Xylopia polyantha R. E. Fries (Annonaceae), commonly known as “pindaíba” and “embira,” is a tree species endemic to Brazil, occurring in the Amazon phytogeographic domain, particularly in terra firme forests. Its distribution extends across the North and Central-West regions of the country. According to the literature, no phytochemical studies have been reported for *X. polyantha*, making this an unprecedented investigation. The hexane extract of the bark of *X. polyantha*, obtained by maceration (room-temperature extraction), was subjected to classical chromatographic techniques (CC, CCDA, and CCDP), resulting in the isolation and identification of two compounds belonging to the *ent*-kaurane diterpene class, identified as kaurenoic acid and 15 β ,16 β -epoxy-17-hydroxy-*ent*-kaurane-19-oic acid. The presence of kaurenoic acid is remarkable in this species, accounting for approximately 50% of the hexane extract. Structural elucidation was performed through 1D/2D ^1H and ^{13}C NMR experiments, along with comparisons with data previously reported in the literature. Although both diterpenes are already known, this is the first report of their occurrence in *X. polyantha*. The high concentration of kaurenoic acid in the bark of this species highlights *X. polyantha* as a new and significant natural source of this diterpene, reinforcing the importance of the genus *Xylopia* within the Annonaceae family as a reservoir of bioactive metabolites. Moreover, this study contributes to chemosystematic knowledge, considering that kaurenoic acid has been recognized as a chemical marker present in nearly all investigated species of *Xylopia*. Research on this species is still ongoing; however, the preliminary results described herein not only expand the chemical and chemophenetic knowledge of the genus but also provide a basis for future studies, including the biological evaluation of these diterpenes and their potential pharmacological applications.



Keywords: *Xylopia polyantha*; Annonaceae; *ent*-kaurane diterpenes; kaurenoic acid.

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