

CYTOTOXIC LIGNOIDS FROM TWIGS OF *Nectandra leucantha* Ness & Mart. (LAURACEAE)

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Lauraceae comprises approximately 50 genera with 3000 species, which are predominantly found in tropical and subtropical regions worldwide.[1,2] In Brazil, there are about 22 genera and 400 species, including the genus *Nectandra*. [1] Previous studies have shown that *Nectandra* is essentially composed by phenylpropanoids, alkaloids and lignoids which exhibit antifungal, antitumor, trypanocidal and anti-inflammatory properties. [1,3] As part of our continuous research focusing the characterization of bioactive compounds, this work describes the fractionation of extracts from twigs of *N. leucantha* and *in vitro* cytotoxic activity evaluation. *N. leucantha* twigs were collected in Perequê Ecological Park, Cubatão/São Paulo State. After drying and grinding, the plant material was subjected to sequential extraction with hexane (EH) and with MeOH (EM). The hexane extract (EH) was subjected to successive fractionation (SiO₂ and Sephadex LH-20) resulting in four lignoids, namely [1,2-dimethoxy-6-[2'-methoxy-4'-(8'-propenyl)phenoxy]-4-(8-propenyl)benzene] (**1**) dehidrodieugenol B (**2**), [1,2-dimethoxy-6-[2'-methoxy-4'-(8'-propenyl) phenoxy]-4-(7-hydroxy-8-propenyl)benzene] (**3**) and [1-hydroxy-2-methoxy-6-[2'-methoxy-4'-(8'-propenyl)phenoxy]-4-(7-hydroxy-8-propenyl)benzene] (**4**) (Figure 1), previously detected in the leaves extracts [4]. The MeOH extract (EM) was partitioned into the hexane (H-EM), CH₂Cl₂ (D-EM) and EtOAc (A-EM) phases and bioactivity was detected only in H-EM. Therefore, this extract was purified by column chromatography, to afford compounds **1** and **2**. Compounds **1** – **4** were characterized by analysis of ¹H and ¹³C NMR spectra as well as HRESIMS. As showed in figure 1, the treatment of B16F10Nex2 cell lines (murine melanoma) with EH and H-EM at 100 µg/mL exhibited cell viability < 5%, indicating an expressive potential. Due the isolation of compounds **1** – **4** in the bioactive extracts/phases, our results suggested that these lignoids could be responsible for the detected cytotoxic potential since they are found as main compounds in these extracts, as determined by HPLC. (FAPESP, CAPES and CNPq)

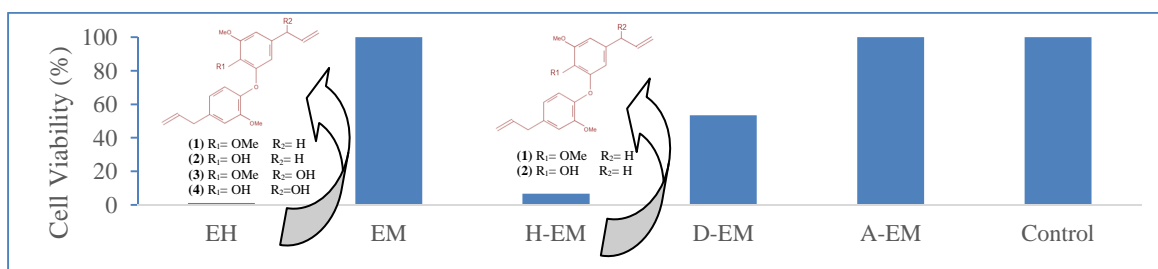


Figure 1. Cell viability against B16F10Nex2 cell lines and chemical composition of crude hexane and MeOH extracts from twigs of *N. leucantha*.

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