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BIOLOGICAL POTENTIAL OF LEAVES OF *Marlierea eugeniopsoides* PHENOLIC PROFILE BY HPLC-ESI-MS/MS

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INTRODUCTION

The species, *Marlierea eugeniopsoides*, focus of this study, is popularly known as "guamirim or guamirim-branco". Studies in the literature report the presence of this species in some regions of Santa Catarina and Rio Grande do Sul. However, studies that evaluate the chemical composition and biological activity of this species are rare. Therefore, the objective of this study is to evaluate the phenolic profile of the leaves of *M. eugeniopsoides* by HPLC-ESI-MS / MS and its potential of inhibition of the alpha-glucosidase *in vitro*.

MATERIAL AND METHODS

The leaves of *M. eugeniopsoides* were collected in April 2017 in Itajaí, SC, Brazil, and subjected to maceration in methanol for 7 days. After this period, the crude methanolic extract (EBMF-ME) was submitted to a liquid-liquid partition in order to obtain the fractions dichloromethane (FDCMF-ME) and ethyl acetate (FAEF-ME). For chemical evaluation by HPLC-ESI-MS/MS, the sample was compared to the retention time and fragmentation pattern of 45 phenolic compounds in order to identify and quantify the presence of these compounds in the sample. The inhibition of the α-glucosidase enzyme was performed using the method proposed by KIM et al., 20044 modified by ZIHPENG et al., 20115. 50 µg.mL-1 acarbose solution was used as standard. A negative control using only solventwas performed.

RESULTS

Twenty phenolic compounds were identified in analyzed samples, the FAEF-ME being the fraction with the highest number of compounds analyzed (16). Miricetrin was the compound with major concentration in the FAEF-ME). From FAEG-ME fraction, galic acid was de major compound. Both fraction (FAEF-ME and FAEG-ME) obtained high percentage of inhibition of the α-glucosidase enzyme (99%). More studies are needed to assess the CI of the samples.

CONCLUSIONS

Further studies are needed to identify which compounds are responsible for biological activity.

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