



Isolated and / or identified alkaloids of *Hippeastrum puniceum* (LAM.) Kuntze (Amaryllidaceae)

Claudia Masrouah Jamal^{1,*}; Leticia Carlesso Soprani¹; Jean Paulo de Andrade²; Jaime Bastida³; Warley de Souza Borges².

¹Department of Pharmaceutical Sciences, Federal University of Espírito Santo - UFES, ES-Brazil

²Department of Chemistry, Federal University of Espírito Santo - UFES, ES-Brazil.

³University of Barcelona, Catalonia-Spain.

*e-mail: cmjamal@gmail.com

Plant species of the family Amaryllidaceae are used in traditional medicine for the treatment of uterine tumor, wounds or as tea preparation for stomach discomfort. They also present antioxidant activities, antiviral, immunostimulatory, antimalarial, and have the ability to inhibit the enzyme acetylcholinesterase, which is linked to Alzheimer's disease. *Hippeastrum puniceum*, popularly known as lily, lacks studies regarding its chemical characterization and possible biological activities. In this way this work aimed to isolate and / or identify the alkaloids from the methanolic extract of the *Hippeastrum puniceum* bulbs. The bulbs of *H. puniceum* were collected in the Catimbau National Park, PE. The fresh plant material was triturated and macerated with methanol for 48h at room temperature. With a methanolic extract the selective extraction for alkaloids was carried out and other fractions were obtained: Hp01 (Hexane), Hp02 (Ethyl Acetate) and Hp03 (Ethyl Acetate: Methanol 3:1). Later, these fractions were submitted to GC / MS analysis and to classical fractionation and purification techniques. Analysis of extracts and fractions by GC-MS showed the presence of 11 alkaloids, such as 9-O-demethyllycoramine, lycoramine, galantamine, assoanine, kirkine, 8-demethylmaritidine, pancratine, 11-hydroxyvittatine, pseudolycorine, 2 α -hydroxyhomolycorine and lycorine. Of these, four were isolated and identified from the class of isoquinoline alkaloids, 9-O-demethyllycoramine, 9-demethyl-2 α -hydroxyhomolycorine, lycorine and tazettine. The alkaloids shown in figure 1 were isolated and their structures were elucidated on the basis of uni and bidimensional NMR experiments and mass spectrometry. The results obtained in this research will contribute to the knowledge of the chemical composition of *Hippeastrum puniceum* and also to define chemical markers for the quality control of this species.

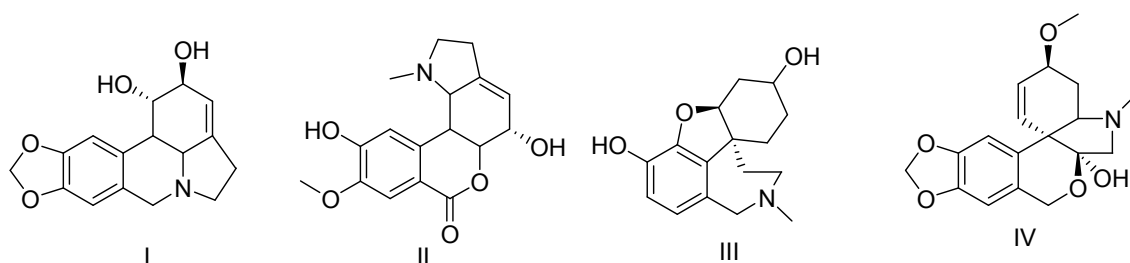


Figure 1: Alkaloids isolated from *Hippeastrum puniceum* [(I) Lycorine; (II) 9-demethyl-2 α -hydroxyhomolycorine; (III) 9-O-demethyllycoramine and (IV) tazettine].

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