Incidence of the Nordihydroguaiaretic Acid Content on the In Vitro Antiviral Activity of Extracts Obtained from Larrea divaricata Cav. (Zygophyllaceae)

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SUMMARY. The South American species Larrea divaricata Cav. (Zygophyllaceae) has been widely used in folk medicine against infectious diseases. In previous studies, we reported that several extracts obtained from the aerial parts of this species and the nordihydroguaiaretic acid (NDGA), its main lignan, inhibited Junin Virus (JUNV) in vitro. In this work, the objective was to assess whether NDGA is truly responsible for the antiviral activity produced by the extracts. Therefore, the presence and amount of NDGA in extracts were determined by HPLC. We established that NDGA in the extracts analyzed is required to inhibit JUNV and observed that some components of the bioactive extracts would increase the antiviral effect of NDGA. On the other hand, we estimated the selectivity index for NDGA against JUNV. Thus, NDGA and extracts containing this lignan exhibited potential therapeutic effects against the etiologic agent of the Argentine Hemorrhagic Fever, an endemo-epidemic illness in this country.

KEY WORDS: HPLC, Junin virus, Larrea divaricata, Nordihydroguaiaretic acid, Selectivity index.

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