III SIMPÓSIO INTERNACIONAL EM INVESTIGAÇÕES QUÍMICO-FARMACÊUTICAS
I ENCONTRO IBERO-AMERICANO DE PLANTAS MEDICINAIS DR. MAHABIR GUPTA
I CONGRESSO LUSO-BRASILEIRO DE CIÊNCIAS E TECNOLOGIAS EM SAÚDE

Área: FAR 08

PHARMACOLOGICAL PROFILE OF METHANOL EXTRACT FROM *Dalbergia brownei* (Jacq.) Urb.

Juan Morán-Pinzón[1]*, *Mahabir Gupta*[2], José López-Pérez[1], Dionisio Olmedo[2], Lorena Cruz[3], Miguel Díaz[3], Eily Mondolis[1], Milagros Moreno[1], Itzel Sánchez[1], Estela Guerrero-De León[1]

[1]*Centro de Investigaciones Psicofarmacológicas, Medicine School, Universidad de Panamá;* [2]*CIFLORPAN, Faculty of Pharmacy, Universidad de Panamá;* [3]*Dirección de Farmacia y Drogas, Ministerio de Salud, Panamá. *e-mail: coljamp@gmail.com.*

INTRODUCTION

Panamanian flora is one of the richest in the world, but its medical and economic potential has not been completely studied. *Dalbergia brownei* (Jacq.) belonging to the Fabaceae family was selected by Bioprospecting method to study his antinociceptive and anti-inflammatory activity in several animal models. Neither use in traditional medicine nor phytochemical studies have been described at this moment for this specie.

MATERIAL AND METHODS

The plant material was collected in Veraguas, Panama, identified and a voucher specimen was deposited at the Herbarium of University of Panama (Florpan 4668). The leaves of plant were used to obtain the methanolic extract of *Dalbergia brownei* (Ext-Db). All animal protocols performed in our study were approved by Bioethics Committee of the Pharmacology Department, School of Medicine (CBF-02DEC11).

We performed a Hippocratic screening test in rats to determinate its pharmacological profile. The analgesic activity was evaluated by: writing test, formalin test and hot plate model in mice; meanwhile the anti-inflammatory activity was determined using carrageenan-induced plantar edema model in rats. Also, the antioxidant activity was performed by evaluating the free radical scavenging activity against DPPH.

RESULTS

We found along with 24 hours of screening that the Ext-Db did not showed any pharmacological effect and did not induce toxicological effects in rats after 14 days. In the writhing test this plant did not inhibit the nociceptive stimuli however, in late phase on formalin and hot plate test the extract showed a significative inhibitory effect (62.04% and 76.08%, respectively). Pretreatment of rats with Ext-Ap reduced the volume of paw edema at several time, however this effect was more significantly during first 2 hours ($p < 0.05$). In relation his antioxidant activity, the extract studied showed an excellent activity against DPPH radical (96% of inhibition), which was similar to standard Quercetin.

CONCLUSIONS

These results provide evidence that Ext-Db has a safe profile and antioxidant, analgesic, anti-inflammatory effects, suggesting its potential for future studies related to determinate the compounds present in the extract as well as their possible use as candidate in the treatment of inflammation.

ACKNOWLEDGMENTS

SENACYT for financial support through SNI Program and VIP-Universidad de Panamá.