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PN101 – OPTIMIZATION OF THE EXTRACTION OF ACTIVE COMPOUNDS FROM VEGETAL DRUGS USING EXPERIMENTAL DESIGN AND MULTIRESPONSE ANALYSIS

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Experimental design and multiresponse analysis are powerful tools in the characterization and optimization of pharmaceutical processes. In this work, this kind of analysis was used in the optimization studies of the extraction of active compounds from *Bauhinia forficata* Link with hidroalcoholic solutions. Preliminary tests were performed in order to select the extraction method to be used in the optimization studies. Three distinct methods were analyzed: sonification, maceration and a heated stirred reactor, indicating the later as the most efficient. Next, a three factors and three levels Box-Behnken design and multiresponse analysis were used for the extraction process optimization. The studied factors include the extraction temperature (30 to 70 °C), the relation between the water to ethanol mass (0 to 1) and the ratio between plant to solvent mass (0.1 to 0.2). Polynomial models relating the solids and the flavonoid content in the extract with the studied variables were adjusted by non-linear regression. The optimization of the models allowed the determination of the best extraction conditions: Temperature of 50 °C; plant to solvent mass of 0.2; the relation between the water to ethanol mass of 0.039.

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PN102 – BENEFIC EFFECTS OF CHRONIC TREATMENT BY *DIOCLEA GRANDIFLORA* SEEDS EXTRACT

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The analgesic potential of some medicinal plants including *Dioclea grandiflora* Mart. Ex Benth (Fabaceae) has been evaluated. The aim of this work was to evaluate the ability of the hidroalcoholic extract of *D. grandiflora seeds* (HDg) to produce some side effects. Forty Swiss male mice (25-35 g) (N=10) were treated with saline (0.1 ml/10 g, ip), HDg (500 mg/kg, ip and orally) and morphine (MPH) (6 mg/kg, ip) daily for 30 days, respectively. The following parameters were observed and measured in the 0 (before treatment), 7th, 14th, 21st and 30th day of treatment: presence of ptosis, time of catalepsy (s) and reaction time evaluated in hot plate apparatus (s). The results showed that both the ptosis and catalepsy measures of HDg treated groups were similar to control in all evaluations. In the hot plate test, the HDg, ip (14th day) increased significantly ($p<0.05$) the reaction-time (HDg: 7.4 + 0.2) in comparison with control group (3.9 + 0.6) while the MPH group reduced this parameter indicating a tolerance effect. Similar results were observed in all other evaluations. According to these data we may conclude that chronic HDg treatment (500 mg/kg, ip) has not presented side-effects such as analgesic tolerance, ptosis and catalepsy commonly found in opioid analgesic drugs.