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# ISOLATION AND CHARACTERISATION OF FLAVONOIDS FROM *Ptychopetalum olacoides* Benth.

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**Abstract**: Purpose of study: *Ptychopetalum olacoides* Benth. belongs to Olacaceae family, popularly known as muirapuama [1]. Preparations with the stem of the species *P. olacoides* are used to "weakness of the nerves," where the main symptoms are fatigue, depression, tremors, and sexual impotence [2], however, little is known about the phytochemical profile of the species. Therefore, the aim of the present work is contribute for the chemical knowledge of this species. Methods: The powder of bark and wood of *P. olacoides* (500g) was extracted with a solvent gradient of polarity under sonication using hexane, ethyl acetate and methanol, respectively. An amount of 2.6 g of the methanolic extract was restructured in methanol and was chromatographed using Sephadex LH-20 using MeOH as eluent. A total of 438 fractions were analyzed by thin layer chromatography (TLC) on silica gel using Hex: EtOAc (1:1) (v/v), revealed with UV lamp and 1% vanillin solution in ethanol and gathered to 12 fractions (MEF1-12). MEF8 (20 mg) was subjected to separation by preparative HPLC using Phenomenex C18 column (30 cm x 10 mm x 5 microns) with mobile phase consisting of a mixture of $H_2O$/AcOH (99:1) (solvent A) and MeOH (solvent B) at a constant flow rate of 5 mL/min using 65% of B and 35% of A in a isocratic elution mode. Three compounds were isolated and analyzed by $^{1}H$ and $^{13}C$ NMR, UV and LC/MS. Results: Compounds were identified as 3-*O*-methylquercetin (**1**), 3,4'-*O*-dimethylquercetin (**2**) and 3,7-*O*-dimethylquercetin (**3**) (Figure 1). NMR data of compounds **1**-**3** were in agreement with those reported in the literature [3]. UV analysis with $AlCl_3$/HCl confirmed the presence of a free –OH in C-5 and the absence of O atom in C-6 for all compounds and the presence of free –OH in C-3' and C-4' for the compounds **1** and **3** [4]. Conclusions: This class of compounds has already been identified in this species however they were isolated for the first time in *P. olacoides*.

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**Figure 1:** Flavonoids present in the methanolic extract of the species *P. olacoides*.