

Pharmacognostic Research of the *Schinus* (Anacardiaceae) from Patagonia Argentina †

Ileana B. Toledo ^{1,2}, Luz A. Arancibia ^{1,3}, Marina Kritsanida ⁴, Raphael Grougnet ⁴, María L. Flores ^{1,2}, Osvaldo L. Córdoba ^{1,5,*}

¹ GQMBRNP y AAI-CRIDEICIT, Facultad de Ciencias Naturales y Ciencias de la Salud, Universidad Nacional de la Patagonia San Juan Bosco, Km 4, s/Nº, Comodoro Rivadavia, 9000, Chubut, Argentina

² Farmacognosia, Facultad de Ciencias Naturales y Ciencias de la Salud, Universidad Nacional de la Patagonia San Juan Bosco, Km 4, s/Nº, Comodoro Rivadavia, 9000, Chubut, Argentina; ileato@yahoo.com.ar (I.B.T.), okyflore@yahoo.com.ar (M.L.F.)

³ Química Orgánica III y IV, Facultad de Ciencias Naturales y Ciencias de la Salud, Universidad Nacional de la Patagonia San Juan Bosco, Km 4, s/Nº, Comodoro Rivadavia, 9000, Chubut, Argentina; luz@unpata.edu.ar (L.A.A.)

⁴ Laboratoire de Pharmacognosie, UMR CNRS 8638 COMETE, Faculté de Pharmacie de Paris, Université Paris, Sorbonne Paris Cité, 4 avenue de l'Observatoire, 75006 Paris, France; marina.kritsanida@parisdescartes.fr (M.K.)

⁵ Química Biológica II, Facultad de Ciencias Naturales y Ciencias de la Salud, Universidad Nacional de la Patagonia San Juan Bosco, Km 4, s/Nº, Comodoro Rivadavia, 9000, Chubut, Argentina; okylola@gmail.com (O.L.C.)

* Correspondence: okylola@gmail.com (O.L.C.);

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Abstract: *Schinus johnstonii* F.A. Barkley, “molle blanco”, “molle ceniciento”, inhabits the Phytogeographic district of the Golfo San Jorge; *S. patagonicus* (Phil.) I.M. Johnst. ex Cabrera, “laura”, in Patagonia Andina. Tehuelche medicine described it as antirheumatic, antiseptic, and balsamic. Previously we determined carbohydrates, tannins, flavonoids, quinones, steroids, and terpenes. The aim of this work was the chemical and bioactivity analysis concerning the traditional uses of both species, collected in summer in Comodoro Rivadavia and Trevelin. A vouchers specimens were deposited at the Herbario Regional Patagónico, N° 7069, 7658. The leaves were dried, grounded, extracted with different solvents, and analyzed by chromatography, RMN, cytotoxicity (*Artemia salina*), and antioxidant and antibacterial activity. The methanol extract was fractionated with Centrifugal Partition Chromatography. The main metabolites in both species were quercetin, kaempferol, rhamnetin, cyanidins, and phenol acids. In *S. johnstonii* biflavonoids (amentoflavone) and triterpenes were also determined; in *S. patagonicus*, α - and β -amyrins, lupeol, and lupeone. Biflavonoids and other phenols were described in Anacardiaceae. Acetone extracts showed important cytotoxicity, LD₅₀= 47 and 21 μ g/ml, “molle blanco” and “laura”, respectively, and 95% DPPH inhibition. Biflavonoids fraction was active against *Pseudomonas aeruginosa* (ATCC 27853) and *Escherichia coli* (ATCC 25299), MIC=100 μ g/ml. Bioactivity evidence is related to metabolites and traditional uses.

Keywords: *Schinus*; ethnopharmacognosy; Patagonia Argentina; phenols; flavonoids; bioactive metabolites.

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Conflicts of Interest

The authors declare no conflict of interest.