

DIABETES AND DIABETIC NURSING CARE

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Hypolipidemic activity of *Tamarix articulata* Vahl in diabetic rats

Eddouks M and Hebi M

Moulay Ismail University, Morocco

Objective: *Tamarix articulata* Vahl. (*Tamaricaceae*) is a medicinal plant commonly used in Morocco for many treatments of diabetes and cardiovascular diseases. The objective of this study was to evaluate the hypolipidemic activity of aqueous extract of *T. articulata* in normal and streptozotocin induced rats, phytochemical as well as screening and polyphenol and flavonoid contents of the aqueous extract of *T. articulata* were performed.

Methods: The concentrations of plasma total cholesterol, triglycerides and high-density lipoprotein-cholesterol (HDL-c) were measured in STZ-diabetic and normal rats previously treated by aqueous extract of *T. articulata* (5 mg/kg of body weight). Total phenolic content of the aqueous extract was determined by Folin Ciocalteu method. Concerning flavonoids content, colorimetric AlCl₃ method was used.

Results & Conclusion: A single oral administration in diabetic rats recorded a significant increase in the HDL-cholesterol after 6 hours of treatment with *T. articulata* (5 mg/kg). The results also demonstrated that the aqueous extract of *T. articulata* produced a significant decrease in serum total cholesterol on repeated oral administration in streptozotocin diabetic rats ($p < 0.001$). The total polyphenol and flavonoid contents of *T. articulata* aqueous extract were 102.5 mg EAG/g of extract and 54.83 mg EQ/g of extract, respectively. According to preliminary phytochemical screening of aerial part of *T. articulata*, several classes of chemicals have been found such as polyphenols, flavonoids, tannins, cyanidins (flavones, catechols), mucilage, sesquiterpenes, terpenoids and carbohydrates. *T. articulata* has a hypolipidemic potential and its beneficial role as hypolipidemic agent may be tested in clinical studies.

Biography

Eddouks M is Professor at Moulay Ismail University, Morocco. He is a Researcher in physiology and pharmacology with an M.S. degree in metabolic and molecular endocrinology from the University of Paris 6, France, a specialized certificate in endocrine pharmacology from the University of Paris 7, France, and PhD degrees in physiology and pharmacology from the University of Liege, Belgium, and Sidi Mohammed Ben Abdellah University, Fez, Morocco. After his postdoctoral fellowship at the Department of Physiology, Faculty of Medicine of Montreal, Canada, he is working for the last 14 years on medicinal plants. His research focuses on ethnobiological as well as pharmacological issues in the use of Moroccan medicinal plants for the treatment of diabetes mellitus, obesity, and hypertension. His contribution to this field includes three international books and more than 70 peer-reviewed articles and book chapters of international repute. He is member of the editorial boards of 14 international journals. He is also a member of panel of experts of several international journals. He has been the Dean of Polydisciplinary Faculty of Errachidia(2008-2012).

mohamed.eddouks@laposte.net

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