

International Conference on

DIABETES AND HEALTHCARE &

International Conference on

FOOD SCIENCE AND TECHNOLOGY

June 25-26, 2018 | Toronto, Canada

Hypoglycemic, Hypolipidemic and Biochemical characteristic of *Berberis vulgaris*

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Diabetes mellitus is a chronic hyperglycemic disorder with disturbance in carbohydrate and lipid metabolism resulting from deficiency in insulin secretion and/or insulin action. Medicinal plants and herbal medicines such as *Berberis vulgaris* have long been used for centuries in the treatment and prevention of hyperglycemia and hyperlipidemia, however, their effects have not yet been proven by valid research. Hence, in this study other than measuring minerals in *B. vulgaris*, we aimed to evaluate its ethanolic extract effects on glucose and lipid profile in diabetic rats. Sixty male Wistar rats were randomly designated to five equal groups of 12 each. Diabetes was induced in animals, by intra-peritoneal injection of alloxan monohydrate. Healthy and diabetic controls received distilled water, positive diabetic controls received

metformin, experimental diabetic animals (groups 4 and 5) received *Berberis vulgaris* extract the doses of 400 and 800 mg/kg, daily for 30 days. Blood samples were collected from the animals' heart and their glucose and lipid profiles were measured with autoanalyzer and HPLC. The results indicated that iron level in *Berberis vulgaris* fruit was considerably high. In diabetic rats administration of *B. vulgaris* fruit extract in 800 mg/kg dose decreased glucose and lipid profile significantly ($p < 0.05$). The present investigation showed that the *Berberis vulgaris* fruit extract alleviates glucose and lipid profile level and might be used efficiently in hyperglycemia and hyperlipidemia, especially in diabetic patients. It may also be beneficial in iron deficiency.

Biography

Mahmoud Rafeian-kopaei is Head of Medical Plants Research Centre. He is from Shahrekord University of Medical Sciences, Shahrekord, Iran. He has published more than 500 papers and 7 Books.

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