Hypoglycemic Activity of Protein Extract of *Moringa oleifera* Leaves in Diabetic Mice

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*Moringa oleifera* Lam. has been used in folk medicine for the treatment of diabetes due to its hypoglycemic effect already described in the scientific literature and fairly credited to the compounds produced by secondary metabolism. However, there are no reports of the involvement of proteins from *M. oleifera* leaves on hypoglycemic action. Thus, this study aimed to evaluate the effect of these proteins on blood glucose levels in diabetic mice. Proteins were extracted from the powdered leaves, precipitated with ammonium sulfate (0-90%) and submitted to exhaustive dialysis against distilled water. Different doses of the protein extract were administered intraperitoneally to alloxan-induced diabetic mice (glycemia > 250 mg/dL). The hypoglycemic effect was evaluated by measuring the blood glucose levels at different times (0, 1, 3 and 5 hours). Leaf extract, at 300 mg/kg reduced glucose levels by 35% and 49% after 3 and 5 hours of injection, respectively, compared to 0 hour. At a dose of 500 mg/kg, the hypoglycemic effects were more significant with reduction in blood glucose of 48% and 58% during the times mentioned above. In subdiabetic animals (150 < glycemia < 200 mg/dL), the leaf extract at 300 mg/Kg prevented the hyperglycemia observed in the negative control group, one hour after treatment. This work demonstrates the pharmacological potential of proteins from *M. oleifera* in reducing the glycemia of diabetic mice.

Keywords: *Moringa oleifera*, leaf proteins, hypoglycemic activity

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