

Insulina Vegetal

Scientific name: *Cissus sicyoides* Linné.

Family: Vitaceae

Popular names: insulina, insulina vegetal, cipó pucá, cortina japonesa, uva brava, anil trepador, cipó juca, tinta dos gênios. ^(3,4,5)

Used parts: aerial parts ⁽³⁾

Botanical characteristics: it is an arbustive plant, with aerial roots and hermaphrodite flowers. ⁽⁵⁾

Habitat: Brazil, tropical region ⁽⁵⁾

Chemical composition: kaempferol 3-O-ramnoside, quercetin 3-O-ramnoside, phenolic compounds, quinines, steroids, terpenes ^(3,4)

Indications: antihyperglycemic and, analgesic, anti-inflammatory, antirheumatic, diabetes treatment, anticonvulsive, antihypertensive, heard problems. ^(1,2,3,4,5,6)

Other information: leaf decoctions of *Cissus sicyoides* (princess vine) are taken widely as a popular remedy for diabetes mellitus in Brazil, where its common name is 'vegetal insulin'. However, there have been practically no attempts so far to determine scientifically whether it has anti-diabetic effects and we decided to administer leaf decoctions, over extended periods, to normal and streptozotocin-diabetic rats, and investigate the effects of this treatment on the physiological and metabolic parameters that are altered in diabetic animals. The experimental model adopted was shown to be appropriate by running a parallel treatment with insulin, which led to expected improvements in several abnormal parameter values. The decoction treatment significantly reduced the intake of both food and fluid and the volume of urine excreted, as well as the levels of blood glucose, urinary glucose

and urinary urea, in comparison with controls. Lipid metabolism was not affected by the treatment; nor was the level of hepatic glycogen in diabetic animals, which indicated that the mechanism responsible for the improvement in carbohydrate metabolism, observed in animals treated with the decoction, could not involve inhibition of glycogenolysis and/or stimulation of glycogenesis. The fact that normal animals treated with *C. sicyoides* exhibited no changes in any of the measured parameters suggests that its mode of action in diabetic animals does not resemble those of sulphonylurea or insulin. It may, however, act in a similar way to biguanide, via inhibition of gluconeogenesis. ⁽⁶⁾

References:

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