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Downregulation of proinflammatory liver gene expression by *Justicia spicigera* and kaempferitrin in a murine model of obesity-induced by a high-fat diet.

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ABSTRACT

Justicia spicigera is a plant used in traditional Mexican medicine to treat various diseases such as heart diseases and to improve blood circulation, with little scientific evidence. Therefore, this study evaluated the effect of the leaves of the plant and of kaempferitrin (main active ingredient), on biochemical, physiological, and inflammation markers related to obesity induced by a high-fat diet in male Wistar rats for eight weeks. The results indicated that *J. spicigera* powder has the ability to significantly decrease ($p \leq 0.05$) the percentage of accumulated fat, and consequently, weight gain, as well as serum triglyceride concentrations. In addition, both *J. spicigera* powder and kaempferitrin generated transcriptional adaptations by negatively modulating the expression of pro-

inflammatory genes such as *Tlr4*, *Tnf- α* , *Nlrp3*, *Caspase-1*, *Il-18*, *Il-1 β* , *Srebp-1c*, *Ppar- γ* and *Ucp2* and overexpressing *Ppar- α* vascular mediators such as E-Selectin and von Willebrand Factor associated with metabolic homeostasis was evaluated in an obesity model using a high fat diet.

BIOGRAPHY (upto 200 words)

María Jaramillo has completed his PHD from Instituto Politécnico Nacional- She has over 71 publications that have been cited over 1645 times, and her publication h-index is 22. She has been serving as an editorial board member of several reputed journals.



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