



[Antidiabetic effects of Justicia spicigera Schltdl \(Acanthaceae\).](https://arctichealth.org/en/permalink/ahliterature122422)

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Author: Rolfy Ortiz-Andrade
Angel Cabañas-Wuan
V́ctor E Arana-Argáez
Angel Josabad Alonso-Castro
Rocio Zapata-Bustos
Luis A Salazar-Olivo
Fabiola Domínguez
Marco Chávez
Candy Carranza-Álvarez
Alejandro García-Carrancá

Author Affiliation: Facultad de Química, Universidad Autónoma de Yucatán, Mérida, Yucatán, México. rolffy@uady.mx

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Mice
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Solvents - chemistry
Sulfonic Acids - metabolism

Abstract:

Justicia spicigera is a plant species used for the Teenak (Huesteca Potosina) and Mayan (Yucatan peninsula) indigenous for the empirical treatment of diabetes, infections and as stimulant.

To evaluate the cytotoxicity, antioxidant and antidiabetic properties of *J. spicigera*.

The effects of ethanolic extracts of *J. spicigera* (JSE) on the glucose uptake in insulin-sensitive and insulin-resistant murine 3T3-F442A and human subcutaneous adipocytes was evaluated. The antioxidant activities of the extract of JSE was determined by ABTS and DPPH methods. Additionally, it was evaluated the antidiabetic properties of JSE on T2DM model.

JSE stimulated 2-NBDG uptake by insulin-sensitive and insulin-resistant human and murine adipocytes in a concentration-dependent manner with higher potency than rosiglitazone 1mM. JSE showed antioxidant effects in vitro and induced glucose lowering effects in normoglycemic and STZ-induced diabetic rats.

The antidiabetic effects of administration of *J. spicigera* are related to the stimulation of glucose uptake in both insulin-sensitive and insulin-resistant murine and human adipocytes and this evidence justify its empirical use in Traditional Medicine. In addition, *J. spicigera* exerts glucose lowering effects in normoglycemic and STZ-induced diabetic rats.

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