

New rat-model study builds evidence backing botanical extract's blood sugar management properties



The extract of *Pterocarpus marsupium*, a plant used in Ayurvedic medicine, may have blood sugar management properties, according to a new rat-model study.

Published in the *Journal of Dietary Supplements*, the researchers looked at the effects of *Pterocarpus marsupium*, also known as Indian kino, on rats that have been induced with type 2 diabetes.

They found that the lipid profile in diabetic rats were significantly reverted to near normal levels by administration of the 5% extract at a dose of 200 mg/kg body weight, indicating that the botanical extract could effectively reduce the inflammation and hyperglycemic condition in diabetic rats, and may be explored as a blood sugar management ingredient in humans.

"The present study found that [the extract] exhibits significant ameliorative potential by modulating the lipid metabolic enzymes, thereby controlling glucose and lipid metabolism in the liver of [diabetic] rats," wrote the researchers, who are affiliated with Annamalai University in India.

Manufacturer Sami Lab Pvt. Ltd, which makes a branded Indian kino extract ingredient called pTerosol, funded the study and provided the extract. The ingredient is marketed and distributed globally by Sami Labs' subsidiary Sabinsa Corporation.

Study design

Male Wistar rats were used in the experiment. Some of the rats were then induced with diabetes using streptozotocin injection.

The rats were divided in nine groups, with a control group of diabetic rats not given any of the botanical extract, and then eight groups receiving varying concentrations of the extract.

The researchers then analyzed the rats' cholesterol, triglycerides, lipid marker enzymes, and other indicators of blood sugar levels.

Results

They found that diabetic rats supplemented with the extract at 5% fraction showed a significant reduction in the serum glucose level compared to rats given the 2.5% fraction, both at a dosage of 200 mg/kg body weight.

Supplemented rats also exhibited lowered oxidative stress and inflammatory markers such as TNF-alpha, IL-6 in their diabetic hepatic tissue. Lipid profile improved for the diabetic rats that were given the extract.

“We postulate that Pterocarpus marsupium extract might be effective as a plant-based antihyperglycemic, anti-inflammatory, and anti-hyperlipidemic agent without any side-effects,”the researchers wrote.

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“Molecular Action of Inflammation and Oxidative Stress in Hyperglycemic Rats: Effect of Different Concentrations of Pterocarpus marsupiums Extract”

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