Plants may be key to diabetes treatment

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(Medical Xpress) -- With the growing worldwide incidence of diabetes, a new study reveals that traditional Aboriginal and Indian plant extracts show potential for managing the disease.

Researchers from Swinburne University of Technology have investigated 12 medicinal plant extracts to determine their potential to slow down two key enzymes in carbohydrate metabolism which affect blood sugar and diabetes.

"Diabetes represents a global public health burden, with the World Health Organisation estimating that more than 180 million people worldwide currently suffer from the disease," said researcher Associate Professor Enzo Palombo.

"More than 800 plants are used as traditional remedies in one or other form for the treatment of diabetes, but the management of the disease without any side effects is still a challenge."

He said that modern drug discovery efforts included exploring traditional compounds from natural sources in the treatment of disease.

"The results obtained in this study showed that most of the traditional plant extracts have good potential for the prevention and management of diabetes."

The study evaluated the activity of seven Australian aboriginal medicinal plants and five Indian Ayurvedic plants against the metabolic enzymes ?-amylase and ?-glucosidase that break down carbohydrates from the diet into simple sugars. It also investigated the antioxidant properties of these plants.

Of the twelve plant extracts evaluated, Australian sandalwood (Santalum spicatum) and the Indian kino tree (Pterocarpus marsupium) had the greatest effect in slowing down both enzymes.

The extracts of Sandhill wattle (Acacia ligulata), pale turpentine bush (Beyeria leshnaultii), velvet bean (Mucuna pruriens) and tar vine (Boerhaavia diffusa) were effective against ?-glucosidase only.

The study further found that wanderrie wattle (Acacia kempeana) and Sandhill wattle had an antioxidant effect, eliminating free radicals which are heavily implicated in diabetes.

Their findings are published in *BMC Complementary and Alternative Medicine*.

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