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FILE: ■ Queens Crape-Myrtle (*Lagerstroemia speciosa*)

■ **Corosolic Acid**

■ **Blood Glucose**

HC 110562-329

Date: May 31, 2007

RE: Study Examines Corosolic Acid's Effects on Plasma Glucose Levels

Fukushima M, Matsuyama F, Ueda N, et al. Effect of corosolic acid on postchallenge plasma glucose levels. *Diabetes Res Clin Pract.* August 2006;73(2):174-177.

The main component of the leaf extract of Queens Crape-Myrtle (*Lagerstroemia speciosa*) is a polyphenol with blood glucose lowering effects. However, this polyphenol does not account for the entire blood glucose lowering activity of the whole extract. Corosolic acid is also extracted from Queens Crape-Myrtle. It is unknown whether corosolic acid has blood glucose lowering activity in humans. The purpose of this study was to test corosolic acid in humans.

Volunteers in Japan (n = 31) with fasting plasma glucose levels between 110 and 140 mg/dl were enrolled in this double-blind, placebo-controlled, crossover study. Subjects who had hypertension, hepatic or renal disease, engaged in heavy exercise, or took any medication were excluded. Nineteen subjects had diabetes. Subjects fasted overnight and then received 10 mg corosolic acid or placebo 5 minutes before a 75 g oral glucose tolerance test. There was a 7-day washout period and then the participants were crossed over to the opposite treatment. Plasma glucose and serum insulin levels were measured for 180 minutes.

There were no significant differences in plasma glucose levels before and 30 min after treatment. Corosolic acid produced lower glucose levels from 60 to 120 min but only reached statistical significance at 90 min (P < 0.05). At 30 min, serum insulin levels were significantly higher in corosolic acid-treated subjects than placebo-treated subjects (P-value not indicated).

The mechanism of action is unknown. The higher insulin at 30 min may explain the lower glucose levels at 90 min. The authors conclude that corosolic acid has a lowering effect on postchallenge plasma glucose levels in humans. The authors do not discuss whether the lowering effect was clinically relevant. The graph of the data shows a small effect.

—Heather S. Oliff, PhD

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