Effects of (–)-epicatechin, a flavonoid on lipid peroxidation and antioxidants in streptozotocin-induced diabetic liver, kidney and heart

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Abstract:
The present study was designed to elucidate the antioxidant effect of (–)-epicatechin in streptozotocin (STZ)-induced diabetes in rats. Intraperitoneal administration of (–)-epicatechin at doses of 15 and 30 mg/kg to diabetic rats for a period of 35 days resulted in a significant decrease in blood glucose, thioarbituric acid reactive substances and hydrogen peroxides and a significant increase in the concentration of glutathione and the activities of catalase, superoxide dismutase and glutathione peroxidase. (–)-Epicatechin at a dose of 30 mg/kg was found to be more effective. Administration of insulin to diabetic rats normalized the changes caused by STZ.

Key words:
(–)-epicatechin, antioxidants, streptozotocin diabetes, insulin