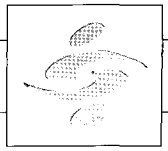

The Anti-Diabetic Effects of *Cortex cinnamomi* Water Extracts in Diabetic Models

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Recent evidences indicate that the overproduction of nitric oxide mediates streptozotocin-induced inhibition of insulin secretion by pancreatic islets. Treatment of mice with streptozotocin results in hyperglycemia and hypoinsulinemia. The diabetogenic effect of streptozotocin was completely prevented if mice were pretreated with *C. cinnamomi* extract. The inhibitory effect of *C. cinnamomi* on streptozotocin-induced hyperglycemia was mediated through the suppression of iNOS (inducible form of nitric oxide synthase) expression. In rat insulinoma RINm5F cell, *C. cinnamomi* extract completely protected interleukin-1β and interferon-γ-mediated cytotoxicity. Incubation with *C. cinnamomi* extract resulted in significant reduction in interleukin-1β and interferon-γ-induced nitric oxide production and iNOS mRNA and protein, findings that correlated well with those of in vivo condition. The molecular mechanism by which *C. cinnamomi* extract inhibited iNOS gene expression appeared to involve the inhibition of NF-κB activation. These results revealed the possible therapeutic value of *C. cinnamomi* extract for the prevention of diabetes mellitus progression.

Key words : *C. cinnamomi* extract, streptozotocin, cytokine, NF-κB