

# **Inhibition of electrical activity in mouse pancreatic $\beta$ -cells by the ATP/ADP translocase inhibitor, bongkreikic acid**

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## **Abstract**

Bongkreikic acid causes fatal food poisoning which is associated with hyperglycaemia. Here we demonstrate that bongkreikic acid, a potent inhibitor of the mitochondrial ATP/ADP translocase, inhibits glucose-induced electrical activity in the pancreatic  $\beta$ -cell through the simulation of ATP-sensitive potassium channel (K-ATP-channel) activity. By comparison of its effects with those of oligomycin, we suggest that bongkreikic acid acts by the inhibition of glucose metabolism and may induce hyperglycaemia by impairing  $\beta$ -cel function. Author Keywords: Bongkreikic acid; Metabolism; ATP-sensitive potassium channel; Pancreatic  $\beta$ -cell

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