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### Glucose-induced insulin release by *Orthosiphon stamineus* in diabetic rats

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The potential effects of medicinal plant, *Orthosiphon stamineus* (OS) which is known as ‘Misai Kucing’ against diabetes has been previously reported. However, the effects on insulin secretion using isolated pancreatic islets have not been carried out. In this study, we identified the effects of OS on stimulation of insulin secretion using streptozotocin induced diabetic rats. Sprague Dawley rats (321.62±21.17 g) were injected with streptozotocin (30 mg/kg) and islets were isolated, processed followed by overnight incubation in glucose solution. Islets were incubated with OS extract at different concentrations; 0.1, 1 and 10 µg/ml in low (3.3 mM) and high (16.7 mM) glucose to identify the insulin secretory response to glucose. The results showed OS significantly improved insulin secretion in response to high glucose only. In the presence of OS at 0.1, 1 and 10 µg/ml, insulin levels were significantly increased at 2.64±0.1, 4.97±1.8 and 8.28±0.1 ng/ml respectively. Our results showed OS increased glucose-induced insulin secretion and thus, the mechanisms by which OS enhanced insulin secretion should be further investigated.