

P3 ANTIDIABETIC EFFECT OF *COMBRETUM DECANDRUM* IN STREPTOZOTOCIN INDUCED DIABETIC RATS

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ABSTRACT

Leaves of Sa-Gae-Krur (*Combretum decandrum* Roxb.) have been used as an traditional medicine for diabetes mellitus, especially in Northeast of Thailand. However, there is no experimental evidence of its hypoglycemic effect. Therefore, this study has an objective to evaluate the antidiabetic activity of the extract of Sa-Gae-Krur both in normal and diabetic rats. 50% ethanolic extract of dried Sa-Gae-Krur leaves was used in all experiments. Adult male rats (250-330 g) were made diabetic by injection of streptozotocin intraperitoneally at dose of 45 mg/kg. One week after streptozotocin injection, the fasting blood glucose was determined by glucose oxidase test. Rats with fasting blood glucose above 180 mg/100ml were considered as diabetic and included in the experiment. The diabetic rats were randomly given either distilled water, various doses of extract or insulin for 3 consecutive days. The orally administration of Sa-Gae-Krur at doses of 0.5, 0.75 and 1 g/kg/d significantly ($P<0.05$) decreased the glucose plasma level by 43.6 ± 8.43 (n=4), 58.78 ± 12.72 (n=5) and 37.0 ± 5.45 (n=6) % respectively. In the insulin treated group (Mixtard HM[®], 4U/kg/d), the plasma glucose were drastically decreased by 87.67 ± 2.15 (n=6) %. Interestingly, the extract of Sa-Gae-Krur at doses of 1 g/kg/d had no hypoglycemic effect on normal rats. These results suggest that the Sa-Gae-Krur leave extract possesses antidiabetic effects in streptozotocin-induced diabetic rats.

Key words : *Combretum decandrum* Roxb, antidiabetic activity, medicinal plant