

Bioactivity-Guided Fractionation and Identification of Antidiabetic Compound of *Syzygium polyanthum* (Wight.)'s Leaf Extract in Streptozotocin-Induced Diabetic Rat Model

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Methodology

Effects of different doses of squalene in STZ-induced diabetic rats

Thirty-six diabetic rats were divided into six groups (n = 6). Four groups were treated respectively with the following doses of squalene (SQ); 20 mg/kg B.W., 40 mg/kg B.W., 80 mg/kg B.W., and 160 mg/kg B.W. The fifth group received metformin (500 mg/kg B.W.) and served as the positive control. The sixth group was treated with saline (10 mL/kg B.W.) and served as the negative control. All treatments were given orally twice daily for 6 days. Fasting blood glucose levels were measured before (day 0) and 6 days after treatment.

Results

As shown in Figure S1, 20 mg/kg of SQ, administered twice daily for 6 days, had no significant effect on the BGL of diabetic rats when compared with the pre-treatment levels. However, higher doses of SQ, 40, 80, and 160 mg/kg, were shown to reduce BGL significantly ($P < 0.05$ – 0.001). The observed effect was comparable to metformin (500 mg/kg).

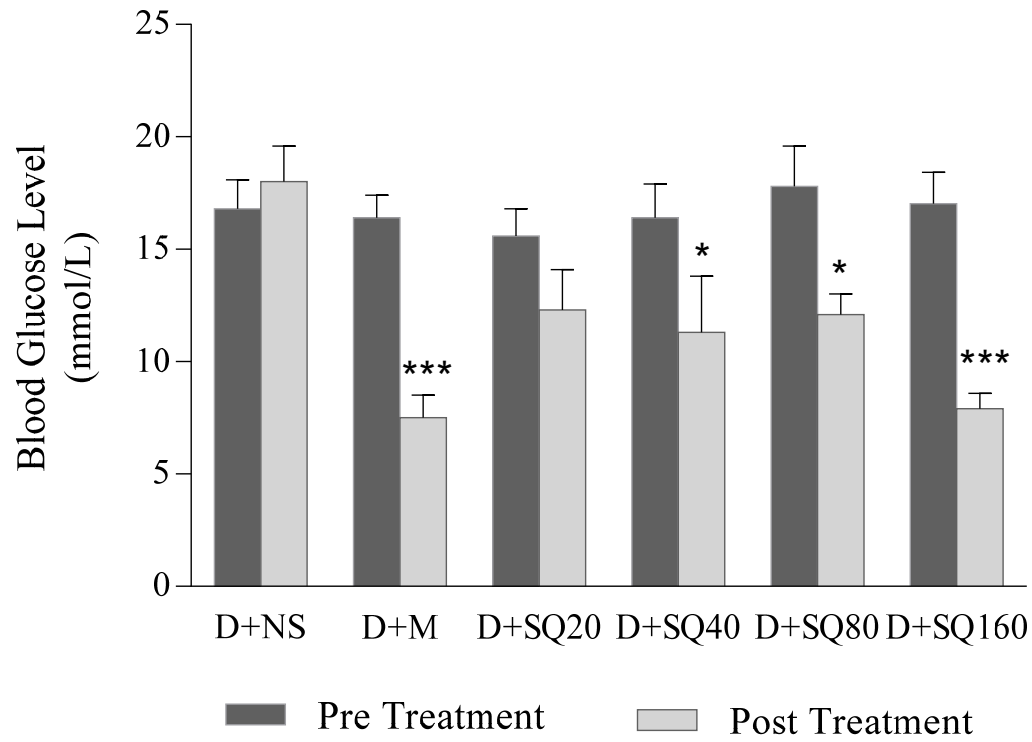


Figure S1. Effects of squalene, administered twice daily for 6 days, on the blood glucose levels of STZ-induced diabetic rats. D + NS, D + M, D + SQ 20, D + SQ 40, D + SQ 80 and D + SQ 160 referred to diabetic rats treated with normal saline (NS), metformin 500 mg/kg B.W. (M), and squalene (SQ) at the doses of 20 mg/kg, 40 mg/kg, 80 mg/kg and 160 mg/kg, respectively. The values are expressed as mean \pm SEM (n=6). Pre-treatment and post-treatment differences of BGL were analyzed by using the paired *t*-test, * *P* < 0.05; ** *P* < 0.01; *** *P* < 0.001.