



**Abstract 37 Figure 1** Responsive surfaces and contours

common method is inoculation with *T. mentagrophytes* into an infected skin wound. Tinea symptoms, a skin lesion and pathological changes indicate the successful establishment of a tinea corporis model. The scratch method is easy to perform and has better repeatability and induction for a short period of time. It meets clinical pathological indications and can be used for drug screening and validation. The puncture method is sensitive to Chinese herbal medicine and decoction and so can be used to study antifungal Chinese drugs with weak potency.

**Conclusions** Although the existing animal model can reflect some clinical criteria or performance, it cannot fully reflect clinical characteristics. We should improve the animal model according to the clinical standards of Chinese medicine and Western medicine.

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#### STUDIES ON THE ANTIDIABETIC ACTIVITY OF APIGENIN IN MICE WITH STREPTOZOTOCIN-INDUCED DIABETES

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**Objectives** A complex endocrine and metabolic disorder, diabetes mellitus affects about 6% of the population worldwide and is rapidly reaching epidemic proportions. The present study aimed to evaluate the antidiabetic effects of apigenin in mice with streptozotocin (STZ)-induced diabetes.

**Methods** Diabetes in mice was induced by intraperitoneal injection of a single dose of STZ (200 mg/kg body weight) dissolved in 0.1 mol/L citrate buffer at pH 4.5. Non-diabetic mice serving as a control group only received citrate buffer. Diabetic mice were randomly divided into three groups (n = 10): a diabetic group, a metformin hydrochloride group (120 mg/kg) and an apigenin-treated group (100 mg/kg).

**Results** Apigenin treatment for 4 weeks strongly reversed the abnormal reduction in body weight ( $p < 0.01$ ) and decreased blood glucose by nearly 22.7% compared with diabetic mice ( $p < 0.001$ ). The oral glucose tolerance test (OGTT) was used to avoid false positive results obtained from fasting blood glucose levels. Compared with the non-treated diabetic mice, apigenin treatment significantly prevented blood glucose levels from increasing, especially at 30, 60 and 120 min ( $p < 0.05$ ). Moreover, apigenin treatment strongly increased serum insulin and pyruvate kinase sensitivity. Furthermore, superoxide dismutase and glutathione peroxidase were significantly enhanced and malondialdehyde was decreased by apigenin, indicating the antioxidant effect of apigenin.

**Conclusions** The results show that apigenin possesses antioxidant and antidiabetic properties, further supporting the use of apigenin in folk medicine for diabetic mellitus.

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#### EFFECTS OF HONGLANHUA-MEDICATED WINE ON SKIN IN MICE

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