



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.

Acknowledgments This work was financially supported by a project grant from the National ‘Eleventh Five-Year’ Support Program (Grant No. 2008BAI53B09), Henan Province Outstanding Scientific and Technological Innovation Team (Grant No. TCJ2014-391) and Zhengzhou Municipal Science and Technology Innovation Team Program (Grant No. 131PCXTD612).

39

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

Yulin Zhou, Zhenzuo Wang, Lixin Xu, Haifeng Tang, Di Wang, Qingfan Meng*. *School of Life Sciences, Jilin University, Changchun, China*

10.1136/jim-2016-000328.39

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.

40

EFFECTS OF HONGLANHUA-MEDICATED WINE ON SKIN IN MICE

^{1,2}Zhenna Fu, ¹Mingsan Miao*. ¹*Department of Pharmacology, Henan University of Chinese Medicine, Zhengzhou, China;* ²*Graduate School, Tianjin University of Chinese Medicine, Tianjin, China*

10.1136/jim-2016-000328.40

Objectives To study the effect of honglanhua-medicated wine on mice skin.

Methods Groups of mice were administered different amounts of honglanhua-medicated wine. The same shaved area of skin from each mouse was evaluated for percentage of moisture, SOD activity and hydroxyproline content.

Results Compared with the control group, in the wine group, skin SOD activity and skin hydroxyproline content tended to increase, while skin moisture content was significantly increased ($p < 0.01$). A high dose of honglanhua-medicated wine significantly improved skin SOD activity ($p < 0.05$), while high and middle doses significantly increased skin hydroxyproline content ($p < 0.01$). High, middle and low doses of honglanhua-medicated wine significantly improved skin moisture content ($p < 0.01$).

Conclusions The results show that honglanhua-medicated wine increased skin moisture content, SOD activity and hydroxyproline content, indicating that honglanhua-medicated wine has a cosmetic effect by locking in skin moisture, rejuvenating skin, increasing skin elasticity, etc, in line with its use in traditional Chinese medicine to enhance beauty. The moistening, antioxidant and emollient properties of honglanhua-medicated wine should be further explored.

Acknowledgments This research was financially supported by the National 'Eleventh Five-Year' Support Program (Grant No. 2008BAI53B09), College of Science and Technology Innovation Team (Grant No. 2012 IRTSTHN011) and Zhengzhou Municipal Science and Technology Innovation Team Program (Grant No. 131PCXTD612).

41 ANTIDIABETIC ACTIVITY OF TEA POLYSACCHARIDES IN MICE WITH ALLOXAN-INDUCED DIABETES

Yang Liu, Shuai Li, Yingkun Cheng, Chenliang Li, Di Wang, Guodong Yan*. *School of Life Sciences, Jilin University, Changchun, China*

10.1136/jim-2016-000328.41

Objectives Tea has been viewed as a health drink since ancient times in China. Tea polysaccharides (TPS) extracted from tea possess antidiabetic and hypolipidemic activity. After cancer and cardiovascular diseases, diabetes is the third most common cause of death. As existing treatment is inadequate, research for better drugs should be carried out. The present study aimed to investigate the potential antidiabetic and hypolipidemic activity of tea polysaccharides in mice with alloxan-induced diabetes.

Methods Diabetic mice were divided into five groups which were orally treated with 125 mg/kg metformin and TPS at doses of 200, 400 and 800 mg/kg for 21 days. After 3 weeks of treatment, mice were sacrificed and blood was collected. Levels of blood glucose and lipids were measured using an enzyme-linked immunosorbent assay.

Results After 3-week treatment, similarly to metformin, TPS significantly decreased levels of blood glucose and increased levels of serum insulin. Treatment with metformin and TPS normalized levels of total triglycerides (TG) and total cholesterol (TC), and restored the balance between low-density lipoprotein cholesterol (LDL-C) and high density lipoprotein cholesterol (HDL-C).

Conclusions The results of the present study indicate that TPS may be a potential pharmaceutical agent for the treatment of diabetes as it normalized blood glucose and lipid levels in mice with alloxan-induced diabetes.

42 THE EFFECT OF SHENG JIANGSAN ON INFLAMMATORY FACTORS IN THE ALLERGIC RHINITIS RAT MODEL

¹Ting Wang, ²Fengjie Wang*, ³Baigen Wang. ¹*Department of Pharmacology, Henan University of Chinese Medicine, Zhengzhou, China;* ²*The Third Hospital Affiliated to Henan University of Chinese Medicine, Zhengzhou, China;* ³*Zhongzhou Henan Coal Mine Machinery Factory Hospital, Zhengzhou, China*

10.1136/jim-2016-000328.42

Objectives To observe the effect of the traditional Chinese compound Sheng Jiangsan on the allergic rhinitis rat model.

Methods Male Wistar rats weighing 180–200 g were maintained under laboratory conditions for 3 days. Rat nasal smears were collected and proved negative for eosinophils. Once a day for 7 days, a pipette was used to administer 10 μ L of olive oil solution containing 10% diisocyanate into the anterior nostrils (5 μ L per nostril, two drops each). A rhinitis symptoms total score of >5 points and nasal secretions containing a large number of eosinophils indicated successful establishment of allergic rhinitis in rats. Every other day, each rat should be given two drops of diisocyanate olive oil solution to maintain sensitization until the end of the experiment.

Results Sheng Jiangsan administered for 14 consecutive days to the nasal cavity of rats with allergic rhinitis can significantly relieve the symptoms of allergic rhinitis (sneezing, nasal itching, runny nose, etc), reduce the rhinitis symptom total score and significantly decrease the eosinophil count in nasal secretions. Ling Shu nasal spray delivered to rats with allergic rhinitis significantly decreased serum IL-4 and IgE levels and significantly increased serum IFN- γ levels.

Conclusions The traditional Chinese compound Sheng Jiangsan can reduce rhinitis symptoms in the allergic rhinitis rat model, by reducing nasal secretions, inflammation and pathological changes in nasal mucosa.

43 STUDIES ON THE IMMUNOMODULATORY ACTIVITY OF *LONICERAE JAPONICAE* FLOS EXTRACTS IN THE HYDROCORTISONE-INDUCED IMMUNOSUPPRESSED MOUSE MODEL

Liang Wang, Xiaodan Lv, Yumeng Liu, Xi Zhao, Di Wang, Jianhui Zhang*. *Department of Chemistry and Pharmacy, Zhuhai College of Jilin University, Zhuhai, China*

10.1136/jim-2016-000328.43

Objectives *Lonicerae japonicae flos* is widely applied to improve the human immune system in Chinese traditional medicine. However, there are few systematic pharmacodynamic and pharmacological studies of *L. japonicae flos* extracts (LF). Our present study aimed to evaluate the immunomodulatory activity of LF and its underlying mechanisms in an immunosuppressed mouse model.

Methods LF (50, 100 and 200 mg/L of chlorogenic acid) was administered for 31 days. From the 10th day, hydrocortisone (HC, 4 mg/kg) was administered as an immunosuppressant. The spleen index, body weight, lymphocyte proliferation assay, cytotoxic activity assay of natural killer cells, ELISA assay and Western blotting assay were used to assess the immunomodulatory activity of LF.

Results LF strongly ameliorated the reduction in the spleen index and body weight caused by HC. After 200 mg/L LF treatment, NK cell activity increased by 28.3% and T lymphocyte proliferation was upregulated by 17.8% compared with the HC group. Serum levels of IL-1, IL-2, IL-6, TNF- α and nitric oxide (NO)