

Methods : Asthma were revealed in guinea pig by using albumin method with application of injection and atomization inhalation, according to references[1]. After modeling, the model guinea pigs were randomly divided into model group, extract group, extract non - acupoint group, powder acupoint group, powder non - acupoint group. Eight unmodified guinea pigs were used as normal control group. Acupoints choose Ojo, bilateral Feishu and bilateral Shenshu, non-acupoints choose Feishu and Shenshu points next to open 1 cm Department[2]. The patients in the treatment group were treated with 6 hours daily and treated every other day for 7 times. The normal group and the model group were given normal saline. To observe the number of mast cells in BALF[7,8].

## Results and discussion

Tab.1 The influence of different kinds of forms of administration on the number of mast cells ( $\pm s$ , n=8)

group	the number of mast cells	degressed percentage (%)
control	15.17 $\pm$ 2.32	16.48 $\pm$ 2.36
extract -acupoint	16.67 $\pm$ 2.73## $\Delta\Delta$ ■	18.13 $\pm$ 2.90## $\Delta\Delta$ ■
powder-acupoint	22.67 $\pm$ 4.37**## $\Delta\Delta$	23.53 $\pm$ 2.92**## $\Delta\Delta$
extract-non-acupoint	23.50 $\pm$ 4.23**##	28.86 $\pm$ 7.27**##
powder-non-acupoint	35.67 $\pm$ 6.95**	40.51 $\pm$ 4.65**
model	37.67 $\pm$ 5.72**	43.72 $\pm$ 3.21**

Note : Compared with the control , \*P<0.05, \*\*P<0.01 ; Compared with the model , #P<0.05, ##P<0.01 ; Compared with acupoint with same dosage form,  $\Delta$ P<0.05,  $\Delta\Delta$ P<0.01 ; Compared with the model , ■P<0.05, ■■P<0.01.

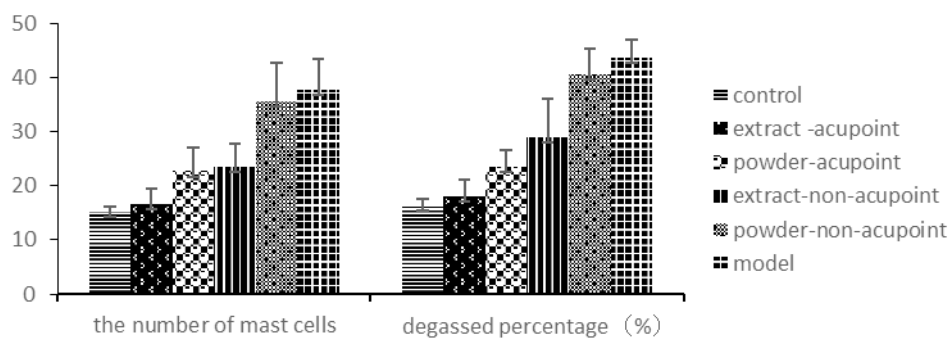


Fig.1 The influence of different kinds of forms of administration on the number of mast cells

It was noted that the mast cells morphology of each group are as follows: control (larger and round); model (small and rupture); powder non-acupuncture points and model group is roughly the same; other groups of the above situation have different degrees of improvement.

The number of mast cells and degassed percentage (%) in BALF was higher than that in the normal group (P <0.01). The number of mast cells in the alveolar lavage fluid of the other treatment group was lower than that of the model group (P <0.01). The above phenomenon was significantly lower in the group (acupoint group and acupoint group) (P <0.01). The above points were lower than those of acupoints (group of ointment and dressing group) (P <0.01).

Our experiment showed that the extract is best, acupuncture better than non-acupuncture points. We speculate that the relative specificity of acupoints may be the associated substance.

## References:

- [1] Gao Yunjuan, Ren Yuan, Wu Guotai. Study on the Current Situation of Asthma Animal Models [J]. Chinese Pharmacology and Clinics, 2012, 28 (5): 231-233.
- [2] Huaxing Bang, Li Lirong, Zhou Haoliang, etc. Development of rat acupoints [J]. Laboratory Animal and Animal Experiment, 1991, (1): 1-5.
- [3] CHEN Yi-ping, LI Chao-jun. Study on Establishment and Research of Animal Model of Bronchial Asthma [J]. Journal of Medicine, 2014, 20 (5): 840-843.

## RESEARCH PROGRESS ON DIHYDROQUERCETIN

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Abstract: Dihydroquercetin is an important anti-tumor element in the treatment of cancer and cardiovascular and cerebrovascular disease prevention and treatment have important applications. This article from three aspects of dihydroquercetin is reviewed in detail in this paper. We through the study of structural characteristics dihydroquercetin and its pharma-

colological action, to improve the application of dihydroquercetin effect to meet the clinical needs of medical applications.

Key words: Dihydroquercetin; Research progress; Outlook; Pharmacological effects

Dihydroquercetin as an important kind of flavonoids compounds exists in various plants, the content is higher in the larch, especially Douglas fir. Nowadays, dihydroquercetin anticancer, because of oxidation, antiviral, resistance to radiation, resistance to diseases of the cardiovascular system, improve microcirculation of capillary, improvement the action such as brain blood circulation, antiplatelet agglomeration. This article emphatically from the structure and function of the second hydrogen quercetin, detection means, the extraction method and application development and so on four aspects elaborates the research progress on its.

**1 Dihydrogen grid structure and function of the skin pigment** Dihydro quercetin (dihydroquercetin), alias taxifolin (taxifolin), also called taxifolin, Douglas fir, double hydrogen quercetin or (2R, 3R) - dihydro quercetin. Formula for  $C_{15}H_{20}O_7$ , the relative molecular mass is 304.25, the CAS: 480-18-2, the physical properties: light yellow powder, colorless needle crystal (50% ethyl alcohol), melting point is 240 degree. Solvent soluble in ethanol, acetic acid, such as boiling water, slightly soluble in cold water, almost insoluble in benzene.

Dihydro quercetin has many important biological active function, and activate a variety of enzymes can be enough to produce different physiological effect. Dev. et al. The study found that 2 hydrogen quercetin can of normal lymphocytes increase produce different degree of inhibition. The study found that two hydrogen quercetin can slightly inhibit the growth of p shape cell carcinoma (HTB43), in a certain concentration range gently stop HTB43 cells grow.

**2 Detection method** The detection method has five methods include, thin layer scanning method; spectrophotometry; high performance liquid chromatography; reversed phase high performance liquid chromatography and the last method is that high performance liquid chromatography - mass spectrum usage.

**3 The extraction technology** Assassination plum rose extract technology was studied by the method of solvent extraction, dahurian rose fruit rose stalk dihydro quercetin was extracted in research. In the extraction process by orthogonal test to determine dihydro quercetin extracted from dahurian rose fruit rose the optimal conditions for: extraction temperature 30 t, acetone concentration was 70%, and solid-liquid ratio is 1:16 and time take 4 h.

**4 Summary and Prospect** This article from the structure and function of dihydro quercetin, detection method and take the four aspects are detailed described the research progress of extraction technology. Because the second hydrogen quercetin has medicinal properties such as anti-tumor, anti-virus, anti-oxidation, so now extensively applied in medicine, health care products, food, agriculture, industry, tobacco industry, such as further depth development dihydro quercetin extraction technology is very important for its development and should be used.

Reference:

[1] Wang X, Meng M, Gao L, et al. Permeation of astilbin and taxifolin in Caco-2 cell and their effects on the P-GP [J]. International Journal of Pharmaceutics, 2009, 378: 1-8.

[2] Ambika Devi M, Das N P. In vitro effects of natural plant polyphenols on the proliferation of normal and abnormal human lymphocytes and their secretions of interleukin-2 [J]. Cancer Lett, 1999, 69 (3): 191-196.

[3] Kawaii S, Tomono Y, Katase E, et al. Effect of citrus flavonoids on HL-60 cell differentiation. Anti-Cancer Res, 1999, 19(2A): 1261-1269.

[4] Kandaswami C, Perkins E, Drzewiecki G, et al. Differential inhibition of proliferation of human squamous cell carcinoma and embryonic fibroblast like lung cells in culture by plant flavonoids[J]. Anti-Cancer Drugs, 1992, 3(5): 525-530.

[5] Kliukien R, Šarlauskas J, Narimantas Č. Inhibition of phthalocyanine sensitized photo hemolysis of human erythrocytes polyphenolic antioxidants: description of quantities structure - activity relationships[J]. Cancer Lett, 2000, 157(1): 39-44.

[6] Yun B S, Lee I K, Kim J P, et al. Lipid peroxidation inhibitory activity of some constituents isolated from the stem bark of Eucalyptus globulus[J]. Archives of pharmacal research, 2000, 23(2): 147-150.

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## MAIN PHARMACODYNAMIC RESEARCH OF QIXUANYIJIANG ON TREATMENT FOR HYPERTHYROIDISM

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**Abstract** Objectives: The purpose was to study and develop the curative effect and mechanism of Qixuanyijiang on hyperthyroidism. Methods: By dividing 60 SD female rats into control group and model group, hyperthyroidism model rats were copied by injecting Yersinia enterocolitica into rats' caudal vein. The model groups were randomly divided into model group, Qixuanyijiang high, medium, low dose group and positive medicine group respectively. Then indicate the changes in the appearance, weight, serum and thyroid tissue of Qixuanyijiang-treated group. Results: Qixuanyijiang could significantly improve the body weight of hyperthyroidism rat, and reduce the levels of serum 3,5,3' - triiodothyronine (T3), thyroxine (T4), increase the levels of thyrotropic-stimulating hormone (TSH), and improve the thyroid tissue pathological changes. Conclusions: The result indicated that Qixuanyijiang has a good therapeutic effect to hyperthyroidism rat.

Key Words: Qixuanyijiang; hyperthyroidism; Pharmacodynamics

Reference