

synovial fibroblasts [J]. Trends Mol Med, 2010, 16(10): 458-468.

[1] 翟中和, 王喜忠, 丁明孝. 细胞生物学 [M]. 4 版. 北京: 高等教育出版社, 2011: 372-376.

[2] MALEMUD CJ. The PI3K/Akt/PTEN/mTOR pathway: a fruitful target for inducing cell death in rheumatoid

arthritis? [J]. Future Med Chem, 2015, 7(9): 1137-1147.

[3] XING R, JIN Y, SUN L, et al. Interleukin-21 Induces Migration and Invasion of Fibroblast-like Synoviocytes from Patients with Rheumatoid Arthritis [J]. Clin Exp Immunol, 2016, 184(2): 147-158.

The Effect of *Qingre Huoxue Fang* (清热活血方) on Migration and Adhesion of Fibroblast-like Synoviocytes of Rheumatoid Arthritis Induced by Tumor Necrosis Factor α

ZHI Kai¹, LIU Chunfang², CAO Wei¹, LIN Na², GAO Yaru¹, WANG Haixia¹, WU Ziyang¹

(1. Guang'anmen Hospital, China Academy of Chinese Medical Sciences, Beijing 100053; 2. Institution of Chinese Materia Medica, China Academy of Chinese Medical Sciences)

ABSTRACT Objective To observe the possible functional mechanism of *Qingre Huoxue Fang* (清热活血方) in treating rheumatoid arthritis in active phase. **Methods** Synovial tissues of patients with rheumatoid arthritis were separated to prepare primary generation of rheumatoid arthritis fibroblast-like synoviocytes (RA-FLS). Tumor necrosis factor α (TNF- α) was adopted to induce migration and adhesion of RA-FLS. A blank group (without medicine and TNF- α intervention) , an induced group (induced by TNF- α of 10 or 20 ng/mL) , and the *Qingre Huoxue Fang* low, middle and high dose groups (*Qingre Huoxue Fang* of 20, 100, 500 ng/mL respectively and induced by TNF- α) were set. Migration distance and square, OD value of adhesion and adherence inhibition rate of cells in each group were examined. And the expression of related proteins in PI3K/Akt signal pathway, including PI3K, p-Akt and Akt, was tested. **Results** Migration distance and square, adhesion OD value, as well as the expression of PI3K and p-Akt protein increased in the induced group compared with those in the blank group ($P < 0.01$); Compared with the induced group, each *Qingre Huoxue Fang* dose group could all restrain cell migration and adhesion, as well as the expression of PI3K and p-Akt protein. It had the best effects when the dose was of 500 ng/mL ($P < 0.05$ or $P < 0.01$). **Conclusion** By lowering the expression of protein PI3K and p-Akt in RA-FLS, *Qingre Huoxue Fang* could relieve synovial inflammation and destruction of joint; thereby restrain migration and adhesion of RA-FLS.

Keywords rheumatoid arthritis; fibroblast-like synoviocytes; *Qingre Huoxue Fang*; cell migration; cell adhesion

(收稿日期: 2016-01-18; 修回日期: 2016-05-29)

编辑: 邓 媛

第 31 次全国特色医疗名医学术交流暨肝病糖尿病论坛通知

为总结交流中医药特色医疗在治疗肝病、糖尿病方面的新经验新成果,由中国民间中医药研究开发协会特色医疗分会和北京聚医杰医药科学研究院联合主办,定于 2016 年 12 月 17 日—18 日(16 日报到) 在广东深圳市召开本次会议,特邀请有特色医疗技术的名医、乡村中医、民间中医,尤其是在肝病、糖尿病方面有专长者参会交流。

一、会议内容: 1) 特邀肝病、糖尿病专家作中医药治疗肝病、糖尿病的学术讲座及培训; 2) 成立本会“中医药防治糖尿病研究专家委员会”,补充调整本会“中医药防治肝病研究专家委员会”成员; 3) 举行《中医药治疗糖尿病经验荟萃》一书的首发; 4) 评选表彰优秀学术论文、优秀学术成果; 5) 参会代表学术交流; 6) 会后组织代表赴香港澳门地区考察学习。

二、征文要求: 运用中医药治疗肝病、糖尿病的经验总结或治疗其他常见病、多发病的特色医疗经验,稿件需打印,附 200 字以内作者简介,邮寄或发电子邮件至信箱 13366005273@163.com。

三、有关说明: 1) 向参会代表颁发“积极参与肝病糖尿病研究”纪念奖章及纪念品; 2) 具有副高以上职称或对肝病糖尿病有专长者可申请加入专家委员会; 3) 请参加考察的代表在当地公安局办好港澳通行证。

四、会议费用: 参会报名费 300 元,会务、资料及培训费 1500 元; 会议食宿统一安排,费用自理,港澳地区考察参观三晚四天。

五、报名方法: 请在 11 月 30 日前报名,将报名费 300 元、交流论文(无论文也可报名)、个人技术简介、聘任专家委员会申请、二寸蓝底像片 4 张用快递寄至: 北京市 100036-98 信箱,深圳会议会务组,叶续宗收,邮编: 100036,电话: 010-83210238、18600893817、18515917952。