

Effect of Medicated Serum of Feiliuping Extractum (肺瘤平膏) and Its Decomposed Recipes on Immune Synapse Formation between Tumor Antigen Loaded Dendritic Cells and T Cells: An in Vitro Study

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ABSTRACT Objective To explore the probable immune regulation mechanism of Feiliuping Extractum (肺瘤平膏) in treating tumor. **Methods** The Feiliuping Extractum was decomposed into Jiedu Recipe (解毒方), Yiqi Recipe (益气方) and Yiqi Jiedu Recipe (益气解毒方), and the medicated serums were prepared. The dynamic interaction between mature dendrite cells and T cells in vitro was observed by scanning electron microscope (SEM) and laser scanning confocal microscope (LSCM). The dendrite cell culture was set as the blank group, while the tumor antigen loaded dendrite cells was divided into the load group, Jiedu group, Yiqi group, Yiqi Jiedu group, the whole recipe group and the low, medium and high dose of dexamethasone (DX) group, and four concentration ratios ($10^6/10^6$, $10^6/10^5$, $10^5/10^6$, $10^5/10^5$, dendrite cell/ T cell) were set in each group. On the 2nd day of cell culture, Jiedu group, Yiqi group, Yiqi Jiedu group and the whole recipe group were given 1ml of corresponding medicated serum to the cell, and the low, medium and high dose of DX groups were given DX sodium phosphate injection with the concentration of 37.5, 75.0 and 150.0 mg/ml, and the blank group and the load group were added 1 ml of incomplete RPMI-1640 culture medium. On the 8th day of culture, the T cell number and the immune synapse number in each group were compared at the 3rd and 6th hour of mixed culture. **Results** At the 30th minute of mixed culture of tumor antigen loaded dendrite cells and T cells, the immune synapse formation was observed. At the 3rd hour, T cells proliferated significantly. After 6 hours, along with the decrease of immune synapses, the cell distribution tended to be even gradually. In the whole recipe group, the T cell number and immune synapse number at the 3rd and 6th hour were larger significantly than the other groups ($P < 0.05$). In each drug administration group, the synapse number at the ratio of $10^6/10^6$ was larger significantly than the other ratios ($P < 0.01$). In each group, the synapse number at the 6th hour had no statistically significant difference from that at the 3rd hour in different ratios ($P > 0.05$). **Conclusion** Feiliuping Extractum could regulate the formation of immune synapse and promote the stimulation of the tumor antigen loaded dendrite cells on the proliferation of T cells. The whole recipe performs better than the decomposed recipes.

Keywords tumor; Feiliuping Extractum; dendrite cell; loading tumor antigen; immune synapse; T cell

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• 信 息 窗 •

第一部中医药综合性法律正式颁布

2016 年 12 月 25 日, 国家主席习近平发布第五十九号主席令, 《中华人民共和国中医药法》已由第十二届全国人民代表大会常务委员会第二十五次会议通过, 自 2017 年 7 月 1 日起正式施行。这部为传统中医药振兴而制定的国家法律的诞生, 将为继承和弘扬中医药、促进中医药事业健康发展提供有力的法律支撑。

中医药是中华民族的瑰宝, 是我国独特的卫生资源、潜力巨大的经济资源、具有原创优势的科技资源、优秀的文化资源和重要的生态资源。历经数千年不断丰富发展, 中医药以其深邃的哲学思想为中华民族繁衍昌盛做出了卓越贡献, 被誉为打开中华文明宝库的钥匙。国家卫生计生委副主任、国家中医药管理局局长王国强在全国人大常委会办公厅新闻发布会上指出, 中医药法作为第一部全面、系统体现中医药特点的综合性法律, 将党和国家关于发展中医药的方针政策用法律形式固定下来, 将人民群众对中医药的期盼和要求用法律形式体现出来, 对中医药行业发展具有里程碑意义。

这部法律明确了中医药事业的重要地位和发展方针, 提出“中医药事业是我国医药卫生事业的重要组成部分。国家大力发展中医药事业, 实行中西医并重的方针”; “发展中医药事业应当遵循中医药发展规律, 坚持继承和创新相结合, 保持和发挥中医药特色和优势”; “国家鼓励中医西医相互学习, 相互补充, 协调发展, 发挥各自优势, 促进中西医结合”。

当前, 我国正在不断深化医药卫生体制改革, 为推进健康中国建设和全面建成小康社会奠定坚实基础。随着健康观念变化和医学模式转变, 中医药日益显示出独特优势, 在我国卫生与健康工作中发挥着越来越重要的作用。制定中医药法, 对深化医药卫生体制改革、促进健康中国建设具有重要意义, 也有助于提升中医药的国际影响力, 增强中华文化软实力, 适应“走出去”战略需要。