



The indirect effects of San-Huang-Xie-Xin-Tang on dendritic cells through gut microbes

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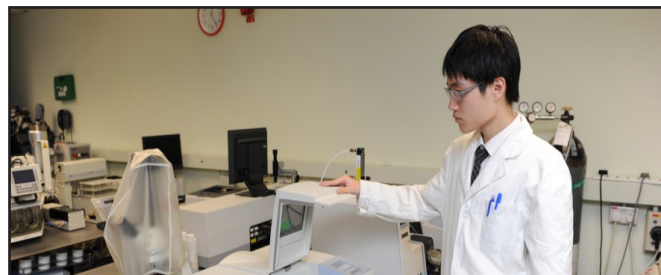
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Abstract:

San-Huang-Xie-Xin-Tang (SHXXT), a Chinese herbal medicinal formula containing *Coptidis Rhizoma* (*Coptis chinensis* Franch.), *Scutellariae Radix* (*Scutellaria bicalensis* Georgi) and *Rhei Radix et Rhizoma* (*Rheum officinale* Baill.), has been used to treat gastritis, gastric bleeding and peptic ulcers. To elucidate whether and how the SHXXT affect the immune response through gut microbes, the methanol extracts (SHXXTME) and polysaccharides (SHXXTPS) from SHXXT was prepared and used to examine the direct and indirect effect on dendritic cells (DCs). On the indirect effect experiments, the methanol extracts and polysaccharides were cultured with three gut microbes, respectively. DCs were then treated with the metabolites in the culture media. Subsequently, DC activation was elucidated by detecting secretion of TNF- α and IL-6. The results revealed that the metabolites of *Escherichia coli* O19 ab cultured with the SHXXTME reversed the inhibitory effect of SHXXTME on DCs. The metabolites of *E. coli* O86 cultured with the SHXXTME increased its inhibitory effect. In addition, the metabolites of *E. coli* O86 cultured with the SHXXTPS reversed its activation effect of SHXXTPS on DCs. The findings in this study indicate that some intestinal bacteria indeed indirectly affect the impact of Chinese herbal medicine on the immune system and the metabolites produced by the certain gut microbes treated with traditional Chinese herbal medicines may reverse the effects on immune cells.

Biography:

Ming-Kuem Lin has completed his PhD at the age of 34 years from National Chung Hsing University and post-



doctoral studies from Plant Biology in University of California, Davis. He is a professor in the Department of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, College of Chinese Medicine, China Medical University. He has published more than 34 papers in reputed journals.

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