

THE APPLICATION OF CHINESE HERBAL MEDICINE IN PREVENT *SALMONELLA ENTERICA* SEROVAR TYPHIMURIUM INFECTION

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Objective : *Salmonella* is a common zoonotic pathogen causing salmonellosis in human and severe infections in animals. It constitutes a major public health problem and creates severe economic impacts in many countries. *Salmonella enterica* serovar Typhimurium is one of the important serotypes causing salmonellosis transmitted from animals to humans.

Method : Eight herbal plants and four traditional Chinese medicine (TCM) formulas were used to evaluate their efficiency on preventing *S. Typhimurium* infection by a murine model.

Results : *Coptidis rhizome* (CR) and Si Jun Zi Tang (SJZT) could significantly decrease the bacterial load in organs and blood after challenge, and they also prevented the mice from body weight loss caused by infection. *Scutellariae radix* (SR), CR, *Gardeniae fructus* (GF) and SJZT decreased infection-induced IFN- γ level in serum and TNF- α level in intestinal tissue.

Conclusion : Chinese herbal medicine showed their potential in preventing *S. Typhimurium* infection. This study offers an alternative way to diminish the risk of *Salmonella* infection in human and animals and the development of multidrug-resistant strains by using varied characteristics of herbal plants as infection prevention agents.

Key words : *S. Typhimurium*, Chinese herbal medicine