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## Effects of Chinese Medicines against Acanthamoeba

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*Acanthamoeba castellanii* is opportunistic protists that is known to cause Acanthamoeba Keratitis (AK) and Granulomatous Amoebic Encephalitis (GAE). Current treatments for both AK and GAE are becoming more challenging due to the resilient nature of cyst form of Acanthamoeba. The objective of this study is to determine the Anti-Acanthamoeba effects of *Dictmanus Dasycaarpus* (白鲜皮), *Glycyrrhiza Uralensis* (甘草), *Prunella Vulgaris* (夏古草) and Cornu *Saiga Tatarica* (羚羊角) against *Acanthamoeba Castellanii* belonging to the T4 genotype, as well as their cytotoxicity effect on human cells. Amoebicidal and amoebistatic assays were performed with *P. Vulgaris*, *G. Uralensis*, *D. Dasycaarpus* and Cornu *S. Tatarica* at concentrations of 150 and 200 µg/ml to determine their effects against the viability and growth of *A. Castellanii*. Lactate Dehydrogenase (LDH) assay was conducted to measure the cytotoxicity level of Chinese medicine on human cells. Results showed that all Chinese medicines exhibited amoebicidal activity with a significant reduction of at least 50% in the number of viable Acanthamoeba at 200 µg/ml. In addition, all Chinese medicines, except *D. Dasycaarpus*, showed lowest cytotoxicity effects (<10%) against HeLa cells at both 150 and 200 µg/ml. In conclusion, these findings showed that these Chinese medicines exhibited amoebicidal, amoebistatic against *A. Castellanii* belonging to the T4 genotype and no cytotoxicity effect against human cell lines.

### Biography:

Dr Gew Lai Ti is senior lecturer in Sunway University, she is also appointed as Programme Leader of BSc (Hons) Biomedicine. She is currently working drug delivery, antimicrobial nanocoating. She uses green solvents for chemical synthesis and extractions in her research projects. She shows concern on the use of hazardous organic solvents and her desire to reduce the use of organic solvents in chemical processes. She is determined to work on projects that in line with Sustainable Development Goals. She is one of the recipients of SSHN (High level Scientific Stay) scholarship for young researcher from France Embassy in Malaysia.