

The self-assemble nanoparticles of *Ophiopogon japonicus* extracts to reduce ROS and NO induced by LPS from the molecular level analysis

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O*phiopogon japonicas*(OJP) is a kind of food ingredients for generally considered to improve immunity in Taiwan. The extract of OJP also has the effect of improving immunity and is used in the treatment of Chinese medicine. The nanoparticles (NPs) produced by chitosan (CS) and OJP water extracts after self-assembly have good cell affinity and have the ability to scavenge the oxidative nitrogen scavenging activity generated by LPS. And these NPs can promote cell proliferation. We used the reaction surface method (RSM) to analyze the optimum parameters of the most chitosan and OJP extracts, and found the optimal composition parameters through cell experiments. We performed cytotoxicity test, ROS assay, intracellular NO assay, and quantitative PCR to reduce the expression of MCP1, MIP2a, iNOS, COX2, TNF- α and other genes induced by LPS, further flow cytometry and antibody confirmation of expression at the protein level.

Biography

Yi-Cheng Ho is an Associate Professor of BioAgricultural of Sciences at the National Chiayi University, Chiayi, Taiwan. He obtained his ph.D in 2000 from Chung-Hsing University, Taichung, Taiwan. His research interests lie in the field of molecular dynamic simulation, molecular biology, biomaterials and biochemical tools to develop deeper insights into biological reaction mechanisms. Prof. Ho's research covers a broad range of topics in analytical and biochemistry, nanomaterials, plant-microbial interaction and biotechnology. Her primary research focus is in the design and application of highly and selective biological and chemical ligand integrating by molecular simulation design for nanotechnologies.

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