Department of Life Science

Oxidants and Antioxidants Application in Biomedicine

The major goal of my laboratory is to explore the roles and molecular mechanisms of oxidants and antioxidants in health promotion, disease prevention and therapeutic application, especially in the cardiovascular system, nephrology and urology and gastrointestinal system. We now focus on the deep ocean water bioactive molecules on thrombosis, ischemia/reperfusion injury, diabetes, skin diseases and hyperlipidemia.

Techniques used in study

Cell culture (primary cell, adipose mesenchymal stem cell) Ischemia/reperfusion in kidney, bladder, liver and heart of rat model

Reactive oxygen species measurement in vitro and in vivo Immunohistochemistry and western blot analysis MicroRNA and target gene interaction technique Human clinical trials

Chiang-Ting Chien, Dean and Distinguished Professor Department of Life Science, College of Science ctchien@ntnu.edu.tw

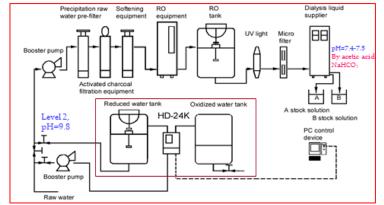
Background:

PhD in Physiology, National Taiwan University, College of Medicine, Taiwan

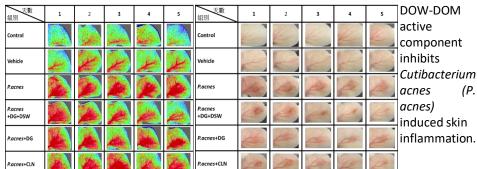
Funding:

Ministry of Science and Technology National Taiwan Normal University





A setup (HD-24K) for production of rich H2 dialysate to the extracorpore al system



Publications

- 1. Chien CY, Wen TJ, Cheng YH, Tsai YT, Chiang CY, <u>Chien CT</u>* (2020, Jul). Diabetes upregulates oxidative stress and downregulates cardiac protection to exacerbate myocardial ischemia/reperfusion injury in rats. Antioxidants (Basel). 9(8):679.
- 2. Chen YH, Chiang CY, Chang TC, <u>Chien CT*</u> (2020, Sep). Multiple progressive Thermoprotection improves cardiac ischemia/reperfusion-induced left ventricular contractile dysfunction and structural abnormality in rats. Transplantation. 104(9):1869-1878.