

UGC-AoE in Chinese Medicine Research and Further Development (2001-2011)

To tackle difficult clinical problems, an AoE project with CUHK leading CityU, HKUST and PolyU, has started on Chinese Medicine Research since 2001. Basing on the achievement in the earlier funding phase, a 3-year sustained funding was granted in April 2008 to continue the clinical and non-clinical investigations of two herbal formulae for promoting diabetic wound healing and cardiovascular health, paving the way for drug/product development. From bench to bedside, the project adopted a multi-disciplinary approach to study the herbal formulae in various aspects, including clinical efficacies, mechanisms of actions, gene expression profiling, bioavailability, drug metabolism, herb-drug interaction, chemical engineered product and process development, as well as chemical and biological standardizations. Our results demonstrated that a two-herb formula NF3 was effective in promoting diabetic wound healing through an improvement of tissue regeneration, angiogenesis and anti-inflammation. When compared to placebo group, patients receiving NF3 regimen had smaller ulcer area and shorter healing time. While for cardiovascular health, another two-herb formula DG was found to ameliorate conditions of hypertension, atherosclerosis and stroke in laboratory studies. In addition, patients receiving DG regimen had improved lipid profile and reduced thickening of arterial wall. The major achievements are as follows:

- i) Developing a research methodology that takes a comprehensive approach: from the quality control of herbs, biological mechanisms' exploration to clinical trials. The methodology could be adopted for all future research on herbal supplements.
- ii) Novel methods of quality control have been revealed both on chemical and biological side. It is observed that both chemical and biological standards could be established for a herbal formula.
- iii) Non-healing ulcers and cardiovascular health are both common problems. We can now offer two separate herbal remedies for the promotion of healing and better protection, to be used as supplements to standard medical treatment.

In conclusion, our findings provided scientific evidences towards the usage of these two herbal formulae in the promotion of diabetic wound healing and cardiovascular health. This has undoubtedly shed light to the future development of corresponding health supplements.

**The above summary is written mainly by the project team. The views expressed in the summary do not necessarily represent those of the University Grants Committee/ Research Grants Council.*