Quality studies on cultivar and tissue culture of *Glycyrrhiza uralensis* Fischer

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Summary

Glycyrrhiza uralensis FISCHER is an important Chinese medicinal plant of the family Leguminosae. The root (Glycyrrhizae Radix or Gan-cao) is one of the oldest and most frequently used medicinal herbs in the history of Chinese herbs. It was first recorded in the Shen-Nong-Pen-Ts'ao-Chin under upper category. It is used for removing heat and toxic materials, eliminating phlegm and relieving cough and moderating the potency of drugs. Recent studies have show that it has anti-ulcer, anti-cancer and anti-AIDS properties. The most important constituent of Gan-cao is glycyrrhizin (GL), which is present in quantities ranging between 6 –14 % in dried roots. GL is nearly 50 times as sweet as sucrose, and it also widely used in pharmaceutical, food industry and others.

To meet the demands of the pharmaceutical industries, G. uralensis is been imported from Mainland China, as it is not cultivated in Taiwan. Studies on this valuable medicinal plant have not been carried out in Taiwan. Tissue culture techniques could be an alternative for the production of compound in large scale. The present investigation was carried out with an objective to establish an efficient protocol for induction and proliferation of callus and also to analyze the calli by high performance liquid chromatograph（HPLC）for the presence ofsecondary metabolites.

Key word：Glycyrrhiza uralensis FISCHER, glycyrrhizin, tissue culture.