

LC-MS Analysis and Biological Activities of Steroid Saponins in Garlic**Hirromichi Matsuura****College of Pharmacy, University of Illinois at Chicago, Chicago, IL 60612, USA**

Plants of the genus *Allium* have been used traditionally both as a food and medicine and are known for the production of steroid saponins, as well as organo-sulfur compounds, as their main secondary metabolites. As a continuation of our studies on steroid saponins of *Allium* species with medicinal potential, I here report new methodology for the analysis of steroid saponins by LC-MS analysis, and present biological activity data demonstrating the anti-inflammatory effect of the glycoside fraction from garlic.

Electrospray LC-MS methodology provides a rapid means of phytochemical analysis in plant extracts

and was developed for the detection of steroid saponins in garlic and related plants. Using this technique, characteristic ion peaks of steroid saponins can be detected and identified in the glycoside fraction of each plant, providing a good chemical marker for identification of garlic and its preparations.

The anti-inflammatory effect of garlic fractions was evaluated by adjuvant-carrageenan induced inflammation model *in vivo* in rats. The data which I present shows the glycoside fraction derived from a methanolic extract of garlic to exhibit significant anti-inflammatory effect.

Hirromichi Matsuura
College of Pharmacy, University of Illinois at
Chicago, Chicago, IL 60612, USA