



## Separation and Purification of Effective Constituents of Rhizoma Paridis Saponins by Serum Pharmacochemistry Guiding

Shuli MAN<sup>1</sup>, Wenyuan GAO<sup>1\*</sup>, Yanjun ZHANG<sup>2</sup>, Chaoyi MA<sup>1</sup>, Lijing HUANG<sup>2</sup>,  
Yiwen LI<sup>2</sup>, Changxiao LIU<sup>3</sup> & Luqi HUANG<sup>4</sup>

<sup>1</sup> School of Pharmaceutical Science and Technology, Tianjin University, Tianjin 300072, China

<sup>2</sup> Tianjin University of Traditional Chinese Medicine, Tianjin, China

<sup>3</sup> Tianjin Institute of Pharmaceutical Research, Tianjin 300193, China

<sup>4</sup> Institute of Chinese Materia Medica,  
China Academy of Chinese Medicinal Sciences, Beijing 100700, China

**SUMMARY.** Oral administration to rats of Rhizoma Paridis saponins (RPS) from *Paris polyphylla* var. *yunnanensis* extracts have been found to show strong anti-tumor activity, but the effective constituents were not known. To detail the effective components in RPS, we investigated the serum pharmacochemistry after oral administration of RPS and detected eight kinds of Paridis saponins in the rat serum. Then we purposefully purified a mixture (PM) from RPS to further research. By comparison of tumor weight, spleen index, antitumor rate and numbers of metastases, PM showed a considerable activity as RPS. In conclusion, the serum pharmacochemistry can help us purposefully to separate and purify RPS and to obtain a potential antitumor agent which may be better than parent drugs.

**KEY WORDS:** Anti-tumor effect, HPLC-MS, *Paris polyphylla*, Serum pharmacochemistry, Steroidal saponin.

\*Author to whom correspondence should be addressed. *E-mail:* pharmgao@tju.edu.cn