Received: August 4, 2011 Accepted: October 28, 2011

Chemical Composition of *n*-BuOH Extract of *Potentilla anserina* L. and its Protective effect of EAhy926 Endothelial Cells under Hypoxia

Dailin LIU¹, Shu WANG², Ling ZHANG² & Lingzhi LI^{1,2*}

 ¹ Tianjin Key Laboratory for Biomarkers of Occupational and Environmental Hazard, Medical College of Chinese People's Armed Police Forces, Tianjin 300162, P. R. China.
² Department of Pharmaceutical Chemistry, Medical College of Chinese People's Armed Police Forces, Tianjin 300162, P. R. China.

SUMMARY. The protective role of *n*-BuOH extract of *Potentilla anserina* roots was measured by MTT method and colorimetric method on human umbilical vein endothelial cells (EAhy926) under hypoxia injury. The extract tested (3 mg/mL, 1.5 mg/mL) remarkably increased cell viability, the activity of superoxide dismutase (SOD) and the concentration of nitrogen monoxidum (NO), and at same time reduced the release of lactate dehydrogenase (LDH) and endothelin (ET-1) in cells during hypoxia injury. From this extraction, five compounds were isolated and determined as adenosine (1), daidzin (2), puerarin (3), 3'-methoxypuerarin (4) and daidzein 8-C-apiosyl glucoside (5) on the basis of physico-chemical properties and spectroscopic analysis, including 1D- and 2D-NMR spectral data. Compound 2-5 were isolated from genus *Potentilla* for the first time. Compound 1 was first isolated from the title plant.

KEY WORDS: Human umbilical vein endothelial cells, Isoflavones, *n*-BuOH extract, *Potentilla anserine*, Protective role under hypoxia injury.

^k Author to whom correspondence should be addressed: *Email: lzlwj@hotmail.com*