



Tiliroside Isolated from *Agrimonia pilosa* Ledeb.: Enhanced Adiponectin Secretion and GLUT4 Translocation in 3T3-L1 Cells

Li L. SONG §¹, Dong LI §¹, Mi X. ZHANG ², Peng W. ZHUANG ²,
Zhe L. YAN ², Jin N. LI ¹, Yan R. DENG ¹ & Yan J. ZHANG *²

¹ The College of traditional Chinese Medicine &

² Tianjin Key Laboratory of Chemistry and Analysis of Chinese Materia Medica,
Tianjin University of Traditional Chinese Medicine,

312 Anshan west Road, Nankai District, Tianjin, 300193, People's Republic of China

SUMMARY. Three kinds of insulin resistance cell models were used to study how *Agrimonia pilosa* Ledeb (AP) extracts affect glucose uptake in cells. One flavone glycoside, tiliroside, was isolated from AP by bioassay-guided chromatographic fractionation and tested it on promoting glucose uptake. Adipocytes were used to identify the response of tiliroside on insulin resistance related mRNA expression. It was found that glucose transporter factor 4GLUT4 translocation and the number of IR were enhanced by tiliroside treatment. Our findings indicate that tiliroside from AP may be beneficial for diabetic complications through its enhanced adiponectin secretion and GLUT4 translocation.

KEY WORDS: Adiponectin secretion, *Agrimonia pilosa* Ledeb., 3T3-L1 cells, GLUT4, Isolation of tiliroside, Translocation.

* Author to whom correspondence should be addressed. E-mail: zyjsunye@163.com

§ Both are all the first author and have the same contribution on the paper.