P81

Specific antimicrobial activity of *Rhus chinensis* against Gram positive bacteria

Eun-Joo Kum, Hong-Ju Kim, Hee-Young Ryu, Yun-Suk Kwon, Soo-Jin Jeon, Kun Ho Son and Ho-Yong Sohn*

Dept. of Food and Nutrition, Andong National Univ., Andong 760-749, Korea

Rhus chinensis has been used as a traditional antimicrobial agent as well as an antioxidant in Asia including Korea, China, and Japan. By microplate method and disc-paper method, the antimicrobial activity of methanol extract of *Rhus chinensis* was evaluated against different bacteria (4 species of gram positive and gram negative, respectively), and fungi (2 species). Strong antibacterial activity, not antifungal activity, was observed. Organic solvent fractionation showed that ethyl acetate fraction has strongest antibacterial activity. Interestingly, the fraction was active against only gram positive bacteria used. Using silica gel column chromatography, the active compound was further purified. The antibacterial activity of eluent with solvent of methylene chloride:methanol(9:1 v/v) was increased than ethyl acetate fraction; MICs against *Listeria monocytogenes, Bacillus subtilis, Streptococcus mutans* and *Staphylococcus aureus* were 6.25, 12.5, 25, 100 ug/ml, respectively. The active compound is different from methyl gallate, a known antibacterial compound of *Rhus chinensis.* Further studies on purification of active compounds and elucidation of their structure are necessary.