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Measurement of Lectin in Korean mistletoes according to the kinds of host trees and seasons by ELISA

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It has been well known that mistletoe has various biological activities including immunoadjuvant activities and antitumor effects. One of the main components having such activities has been ascribed to the lectin. Most of the information and data about mistletoe are from European mistletoes whereas Korean mistletoe has very few. We have, however, shown that Korean mistletoe preparations have various biological activities like European are except that Korean mistletoe has lectins with different specificity from European one. It was therefore attempted to investigate the lectin contents of extract prepared with Korean mistletoes corrected according to the varying host trees and seasons. Assay of lectins in mistletoe preparations was by ELISA based on two sites sandwich using monoclonal antibody specific to lectin present in Korean mistletoe.

The standard lectin used for the calibration curve was lectin -IIU purified by immunoaffinity chromatography from Korean mistletoe. The lectin content varied between 235 and 670ng/mg of powdered extract. The lectin contents in extracts prepared with eight different host trees such oak, poplar, chine quince, pear, wild pear, jujube tree, chestnut and cherry trees. Oak tree showed the highest content compared with other 7 trees. This information might be very useful to those who are interested in the development of functional foods and drugs. since Korean mistletoe was registered to KFDA as a food resource last year. (Aug. 2001)