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Antioxidant and Antithrombin Activity of Korean Mistletoe, *Viscum album*Hee Young Ryu, Jong-Bae Kim<sup>1</sup>, Jong-Sik Kim<sup>2</sup> and Ho-Yong Sohn\*

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Mistletoe is a semi-parasite plant growing on various deciduous trees all over the world. It has been used as a traditional medicine for bacterial and viral infection, hyperpiesia, and tumor treatment in European Union and Asia. The strong antitumor and immuno-stimulating activities of Korean mistletoe were reported previously, and its cytotoxicity and apoptotic cell death against different tumor cells were largely dependent on the proteinous lectin in mistletoe. In this study, the antithrombin and the antioxidant activity of Korean mistletoe were investigated. The cold water extract of Korean mistletoe showed strong thrombin inhibitory activity, and ignorable DPPH scavenging activity. The sequential organic solvent fractionation using n-hexane, ethyl acetate and butanol showed that the ethyl acetate fraction contains antithrombin compounds. The thrombin inhibitory activity at 5 mg/ml was over 1500%, whereas the thrombin inhibition of aspirin at 1.5 mg/ml was 300%. The ethyl acetate fraction reacts with anthrone, not reacts with ninhydrin, and its total polyphenol content was 2.8%(w/w). These results suggested that the major active compounds is non-proteinous phenolic compounds combined with glycoside. The ethyl acetate fraction of cold water extract of Korean mistletoe showed strong DPPH scavenging activity (IC<sub>50</sub>=59 µg/ml). Our results showed that the Korean mistletoe is a potential source for antithrombosis.

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Association Between *SET Domain-Containing Protein 7 (SETD7)* Gene Polymorphism and Growth Traits in Landrace PigsSang-Hyun Han, Kwang-Yun Shin, Sung-Soo Lee, Hong-Shik Oh<sup>1</sup> and In-Cheol Cho

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The association of *SET domain-containing protein 7 (SETD7)* gene polymorphisms with growth traits were investigated in one of important pig breed Landrace. *SETD7* polymorphism was detected by PCR-RFLP with *MspI* restriction enzyme. In the population, three kinds of genotypes(AA, AB, and BB) were found, showing their frequencies 23.4, 49.4, and 33.8%, respectively. Associations of the *SETD7* genotypes with growth traits, including body weight at birth (WB), 3 weeks (W3), 10 weeks (W10), and 20 weeks (W20), average daily gain (ADG), back fat thickness (BF), and eye muscle area (EMA), were analyzed in Landrace pigs. Interestingly, measured values were slightly higher in heterozygotes than those of two homozygotes in WB, W10, W20, and ADG, respectively. While there was no significance found in all traits tested in this study, however pigs containing *SETD7* allele B showed higher weight, thinner BF, shorter D90 and larger EMA in finishing of pig production, thus we suggested that *SETD7* allele B comes a positive effect into improving pig production and which will be an useful molecular marker for breeding of Landrace pigs.

**Key words:** SETD7, polymorphism, association, growth trait, Landrace pig