

PE7) Effects of Anti-ecotoxic Glycoprotein Isolated from *Ulmus davidiana* Nakai on Fecal Malodor and Feed Efficiency in Mice

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1. 서론

Ulmus davidiana Nakai (UDN) has been traditionally used as a herbal medicine in Korea. In the present study, we investigated the anti-ecotoxic potential of a 116 kDa glycoprotein isolated from UDN (UDN glycoprotein) fecal malodor and feed efficiency in mice. We demonstrated that UDN glycoprotein (200 µg/ml) has inhibitory effects on viability of colon epithelial HT-29 cells induced by bisphenol A (BPA), an ecotoxicological endocrine disrupting chemical. UDN glycoprotein has did not show significant difference on the weight of ecotoxicity-related organ (liver, heart, kidneys and spleen) and the levels of serum Glutamate Oxaloacetate Transaminase (GOT), Glutamate Pyruvate Transaminase (GPT), and Lactate Dehydrogenase (LDH) in mice for 2 weeks, compared to the control. Additionally, UDN glycoprotein reduced the level of hydrogen sulfide (H₂S) and ammonia(NH₃) as a marker of fecal malodor in mice. Interestingly, UDN glycoprotein has ability to improve mouse feed efficiency. In conclusion, our data indicate that anti-ecotoxic activity of UDN glycoprotein in colon epithelial cells is related to increase feed efficiency and reduce fecal malodor in mice.

2. 참고문헌

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