

***Dendropanax morbifera* and *Rubus coreanus* Miq. Extracts Inhibits the Formation of Uric Acid Crystal by Reducing Xanthine Oxidase Activity**

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Uric acid is the end product of purine metabolism in human body, originating from hypoxanthine after enzyme catalysis by Xanthine oxidase (XOD). Hyperuricemia results as a result of either over-generation of uric acid or a reduction in its excretion. *In silico* modelling methods such as Absorption, Distribution, Metabolism, Excretion and Toxicity (ADMET) prediction, Autodock 4.2.6 program were used to study the potential inhibitory compounds of XOD. Also we investigated the inhibition of XOD activity by using the extracts of *Dendropanax morbifera* and *Rubus coreanus* Miq spectrophotometrically. According to ADMET data, several compounds from *D. morbifera* and *R. coreanus* plants, were found to be more potent in inhibiting the XOD activity than allopurinol. XOD inhibitory activity is evaluated by quantifying the formation of uric acid by measuring the absorbance at 290 m (A_{290}). *D. morbifera* extract inhibited XOD activity at 250 µg/ml, however the extracts from *R. coreanus* has inhibited XOD activity at 25 µg/ml. The major compound of *R. coreanus*, ellagic acid significantly increased the inhibition rate from 9 µg/mL and showed a 71% suppression rate at 15 µg/mL. Finally, these results suggested a potential inhibitory activities of the extracts from *D. morbifera* and *R. coreanus* Miq, but further research is needed to validate to ensure their safe usage as drug.

Key words: *Dendropanax morbifera*, *Rubus coreanus* Miq, Uric acid, Hyperuricemia, Xanthine oxidase

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