

P13: A TOXICITY STUDY OF MORUS ALBA L. LEAF EXTRACT

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ABSTRACT

Morus alba L. , a member of Moraceae family, commonly known as mulberry (Thai name : Mon), is widely cultivated in the north and northeast region of Thailand. *Morus alba* L. leaf extract can reduce plasma glucose level in streptozotocin-induced diabetic rats. Thus, it is possible to develop an antidiabetic drugs from this extract.

The objective of this study was to establish the acute and subchronic toxicity of *Morus alba* L. leaf extract. In acute toxicity study , the *Morus alba* L. leaf extract was administered intraperitoneally and orally into mice and Wistar rats. Following a single i.p. dose, the LD₅₀ of *Morus alba* L. leaf extract in the mice and Wistar rats were approximately 4 and 5 g/kg, respectively. But when this extract was administered orally , doses as high as 5 g/kg did not cause any significant toxic effects. There was no death in these groups of animal. The only abnormal signs and symptoms were CNS depression and respiratory depression. Moreover, all animals were recovered within 15-30 minutes. In subchronic toxicity study, the *Morus alba* L. leaf extract was administered orally into Wistar rats for 60 days at doses 1,2 and 3 g/kg/day. All doses of *Morus alba* L. leaf extract did not significantly affect blood chemistry and hematologic values when compared to the control group. Microscopic examination of major organs indicated no significant histopathological abnormalities.

In conclusion , our result suggested that *Morus alba* L. leaf extract is safe for used.. Pharmacological dosage form of *Morus alba* L. leaf extract might be a valuable drug in the future.

Key words: *Morus alba* L., leaf extract, acute toxicity, subchronic toxicity