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ANTI-FATIGUE EFFECT OF KAWAYANG TINIK (BAMBUSA BLUMEANA) SHOOT EXTRACTS IN MICE

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Background *Bambusa blumeana* (Kawayang tinik), a native vegetable in the Philippines, has two active components proven to manifest anti-fatigue effects, the bamboo leaves' flavonoids (Zhou, *et al.* 2010) and bamboo shavings' triterpenoids (Zhang, *et al.* 2006).

Objectives This study determined the improvement in the exercise endurance of mice treated with bamboo shoot fresh and ethanol extracts and the change in their body weight. This also investigated the effect of bamboo shoot extract (BSE) on the blood glucose, blood urea nitrogen (BUN), hematological values, liver (histopathological), and the feed and water intake of mice.

Methods After 21 days of treatment, exhaustive- swimming test was conducted to observe the time endurance, blood glucose, BUN, and hematological values while the body weight, and feed and water intake were measured during the progression of the study.

Result The bamboo shoot fresh extract was found to have a significant effect on prolonging the exercise endurance of mice as compared to the negative control and the bamboo shoot ethanol extract. However, the bamboo shoot extract did not affect the remaining parameters except the histopathology. The histopathology of the livers showed that the experimental animals were exposed to toxic substances; the bamboo shoot fresh extract group showed the largest number of aberrations such as severe congestions and massive necrosis of hepatocytes.

Conclusion The findings suggested that bamboo shoot fresh extract can delay the occurrence of fatigue. This may be attributed to the presence of biochemical compounds such as triterpenoid and flavonoid though at a certain concentration bamboo shoot fresh extract can be considered a toxicant.