

Uji Toksisitas Reproduksi Filtrat Buah Luwungan (*Ficus hispida* L.f.) Pada Tikus (*Rattus norvegicus* Berkenhout, 1769) Betina Galur Wistar

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INTISARI

Buah luwungan mengandung berbagai senyawa bioaktif dan telah lolos uji toksisitas akut dan subkronis sehingga merupakan kandidat nutrasetika yang menjanjikan. Konsumsi nutrasetika secara terus menerus dapat mempengaruhi berbagai sistem tubuh, termasuk sistem reproduksi. Beberapa anggota Genus *Ficus* berdampak positif terhadap fungsi reproduksi betina, sementara sebagian lagi berdampak negatif. Penelitian ini bertujuan untuk mempelajari toksisitas reproduktif filtrat buah luwungan menggunakan model tikus Wistar betina. Prosedur uji mengikuti *OECD Guideline Test No. 421* dengan modifikasi. Hewan uji dibagi menjadi 3 kelompok, yaitu kontrol plasebo, perlakuan filtrat buah muda, perlakuan filtrat buah matang. Filtrat buah luwungan segar dengan konsentrasi 100% diberikan pada hewan uji dengan volume 2 mL/individu/hari selama \pm 65 hari setelah hewan dipuasakan selama 5-6 jam. Variabel yang diamati meliputi siklus estrus, indeks ovarium dan indeks uterus indukan serta kuantitas dan kualitas anakan. Data dianalisis secara statistik berdasarkan *one-way* ANOVA dilanjutkan Uji Duncan ($\alpha=0,05$) atau uji Kruskal-Wallis dilanjutkan uji-U Mann Whitney ($\alpha=0,05$). Hasil menunjukkan bahwa filtrat buah muda mengganggu siklus estrus dan menurunkan indeks ovarium. Sedangkan filtrat buah matang menurunkan jumlah dan persentase hidup anakan. Dapat disimpulkan bahwa pemberian filtrat buah luwungan baik muda maupun matang bersifat toksik karena menurunkan fungsi reproduksi tikus betina yang berdampak pada kuantitas dan kualitas anakan.

Kata kunci: *Ficus hispida*, nutrasetika, reproduksi betina, toksisitas reproduktif, tikus Wistar

Reproductive Toxicity Test of Hairy-fig (Ficus hispida L.f.) Fruit Filtrate on Female Wistar Rats (Rattus norvegicus Berkenhout, 1769)

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ABSTRACT

Luwungan (hairy-fig) is a potential nutraceutical in view of the fact that it is rich in bioactive compounds. References stated that several fruits of the Genus *Ficus* have positive effects on female reproductive functions, whereas some others have adverse effects. This study was aimed to assess the female reproductive toxicity of hairy-fig fruit filtrate using Wistar rats as model. Test procedure followed OECD Guideline Test No.421 with modifications. After fasted for 5-6 hours, each animal was administered orally with 2 mL of freshly made unripe or ripe hairy-fig fruit filtrate with concentration of 100% for 65 consecutive days. For control, a group received equal volume of distilled water in the same way. Variables observed including estrous cycle, ovarian and uterine indices of dams, also quantity and quality of pups. Data were analyzed statistically based on one-way ANOVA followed by Duncan Test ($\alpha=0.05$) or Kruskal-Wallis test followed by Mann Whitney U-test ($\alpha=0.05$). Results showed that unripe fruit filtrate disrupted estrous cycle and decreased ovarian index. Meanwhile, ripe fruit filtrate reduced the number of pups and survival percentage of live-borns. It can be concluded that both unripe and ripe hairy-fig fruit filtrates seemed toxic on female reproductive function of Wistar rats, which took effect on both dams and pups.

Keywords : Luwungan (*Ficus hispida* L.f.), bioactive compounds, reproductive toxicity, oral administration