

## The effect of buceng extracts on androgen production in Sprague Dawley male rats

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### Abstrak

(Eurycomalongifolia Jack) yang digunakan secara turun temurun untuk meningkatkan vitalitas pria. Namun mekanisme kerja buceng terhadap peningkatan vitalitas masih belum jelas. Penelitian ini bertujuan untuk mengetahui apakah buceng dapat meningkatkan kadar Testosteron (Te), Luteinizing Hormone (LH), dan Follicle Stimulating Hormone (FSH) pada tikus. Metode: 20 tikus jantan Sprague Dawley umur 3 bulan dibagi menjadi 2 grup secara random masing-masing terdiri dari 10 ekor. Setelah satu minggu aklimatisasi, kelompok kontrol diberi aquadest 2 mL. Kelompok perlakuan diberi 2 mL ekstrak buceng (25 mg) selama 7 hari berturut-turut, kemudian diperiksa kadar Te, LH, dan FSH, masing-masing dengan metode RIA dan IRMA. Data dianalisis menggunakan t-test tidak berpasangan untuk membandingkan kadar Te, LH, dan FSH pada kedua grup. Hasil: Rerata kadar Te pada kelompok perlakuan (3,55 pg/mL) lebih tinggi secara bermakna dibanding kelompok kontrol (1,00 pg/mL)  $p = 0.003$ . Rerata kadar LH tidak berbeda bermakna pada kedua kelompok (0,12 pg/mL vs 0,11 pg/mL,  $p = 0,81$ ), demikian juga FSH (0,15 pg/mL vs 0,14 pg/mL,  $p = 0,088$ ). Kesimpulan: Pemberian ekstrak buceng meningkatkan kadar testosteron yang mungkin berperan pada peningkatan vitalitas pria.

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<b>Abstract</b><br>

Background: Buceng is a combination of plant of purwoceng (*Pimpinella alpina* Molk) and pasak bumi (*Eurycomalongifolia* Jack) that has been traditionally used to enhance adult male vitality. However, the mechanism of action of buceng has not been understood. This study was aimed to elucidate whether buceng could increasing Testosterone (Te), Luteinizing Hormone (LH), and Follicle Stimulating Hormone (FSH) level in rats. Methods: 20 male Sprague Dawley rats were randomly assigned into two groups. After one week of acclimatization, control group was given aquadest 2 mL, while treated group B received 2 mL (containing 25 mg) buceng extract for seven successive days. The plasma concentration of Te, LH, and FSH were assessed by RIA and IRMA method respectively. Independent t-test was used to analyze the different concentration of Te, LH, FSH between the two groups. Results: Testosterone level of treated group was significantly higher (3.55 pg/mL) compared to control group (1.00 pg/mL),  $p = 0.003$ . LH concentrations of treated group (0.12 pg/mL) was slightly but not significantly higher compared to control group (0.11 pg/mL),  $p = 0.810$ . Likewise, the FSH level was not significantly different between the two groups (0.15 vs 0.14 pg/mL,  $p = 0.088$ ). Conclusion: Administration of buceng extract increases testosterone level which might play a role in enhancing male vitality.