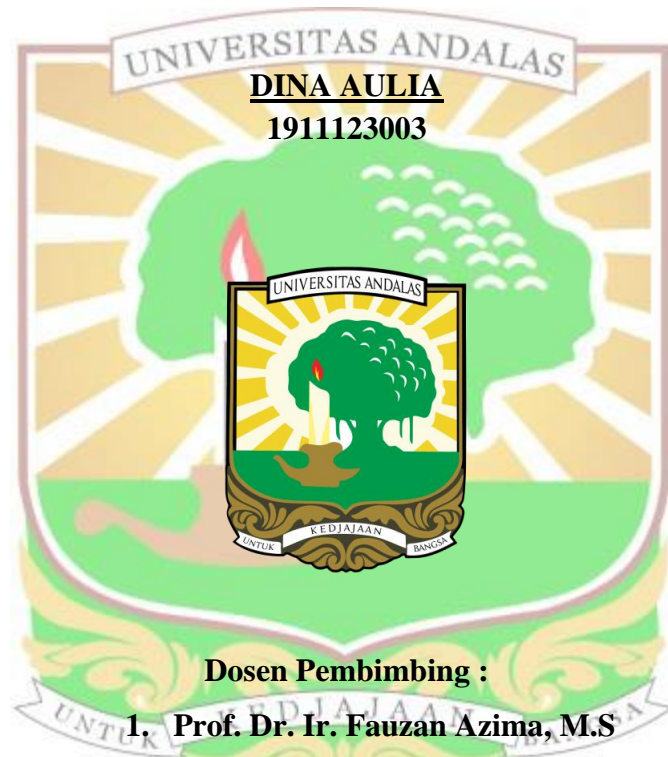


**PENGARUH PENAMBAHAN *CASSIA VERA* TERHADAP MUTU
TEH CELUP HERBAL BENALU TEH (*Scurulla atropurpurea* (BL)
Dans) SERTA PENGARUHNYA TERHADAP RESPON IMUN
MENCIT (*Mus musculus*)**



**FAKULTAS TEKNOLOGI PERTANIAN
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Pengaruh Penambahan *Cassia vera* Terhadap Mutu Teh Celup Herbal Benalu Teh (*Scurulla atropurpurea* (BL) Dans) Serta Pengaruhnya Terhadap Respon Imun Mencit (*Mus Musculus*)

Dina Aulia, Fauzan Azima, Cesar Welya Refdi

ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui pengaruh penambahan *Cassia vera* terhadap mutu teh celup herbal benalu teh serta pengaruhnya terhadap respon imun mencit. Penelitian menggunakan rancangan acak lengkap (RAL) yang terdiri dari 5 perlakuan dan 3 ulangan. Data dianalisis secara statistik menggunakan ANOVA yang dilanjutkan dengan Duncan's New Multiple Range Test (DNMRT) pada taraf signifikans 5%. Pengamatan terhadap teh herbal benalu terdiri dari analisis kadar air, aktivitas antioksidan, total polifenol, total bahan larut air, angka lempeng total, uji antioksidan IC₅₀, dan uji organoleptik. Perlakuan terhadap teh herbal adalah penambahan bubuk *cassia vera* sebanyak 0%, 2%, 4%, 6% dan 8%. Parameter uji *in vivo* terdiri dari jumlah total leukosit, persentase leukosit, aktivitas dan kapasitas fagositosis sel makrofag. 15 ekor mencit putih jantan dibagi menjadi 5 kelompok dosis yaitu minuman benalu 100%, *cassia vera* 100%, dan teh herbal benalu dengan penambahan *cassia vera* dengan dosis bervariasi yaitu 40%, 70%, dan 100%/20 g BB Mencit. Hasil penelitian menunjukkan bahwa penambahan *cassia vera* memberikan pengaruh nyata terhadap aktivitas antioksidan, total polifenol, total bahan larut air, jumlah lempeng total, organoleptik aroma dan rasa, jumlah leukosit, aktivitas fagositosis dan kapasitas fagositosis pada produk teh herbal. Serta antioksidan IC₅₀ pada air seduhan teh. Namun tidak memberikan pengaruh nyata terhadap kadar air, organoleptik warna dan persentase leukosit. berdasarkan analisis fisikokimia dan mikrobiologi teh herbal benalu, perlakuan terbaik adalah perlakuan E dengan (penambahan *cassia vera* 8%) dengan kadar air (6,67%), aktivitas antioksidan (37,45%), total polifenol (192,95 mgGAE/g) , total bahan larut air (23,00%), Angka pelat total (8,2 x 10² antioksidan IC₅₀ (64,96 ppm) dengan preferensi hedonik panelis terhadap warna 3,73 (suka), aroma 4,33 (suka) dan rasa 4,13 (suka). teh herbal benalu dengan penambahan *cassia vera* mampu meningkatkan jumlah total leukosit sebesar 7.233, 8.083, 9.133/ μ L darah, aktivitas fagositosis makrofag sebesar 68,33%, 74%, dan 81%. Sedangkan kapasitas fagositosis makrofag sebesar 151, 187.3, dan 195.3 sel.

Kata Kunci : Benalu, *cassia vera*, antioksidan, immunomodulator

The Effect Of The Addition Of *Cassia vera* On The Quality Of Herbal Tea Bag Tea Benalu (*Scurulla atropurpurea* (BL) Dans) And Its Influence On The Immune Response Of Mice (*Mus musculus*)

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ABSTRACT

The aim of this research was to determine the effect of adding *Cassia vera* on the quality of benalu herbal tea and its effect on the immune response of mice. The research used a completely randomized design (CRD) consisting of 5 treatments and 3 replications. Data were analyzed statistically using ANOVA followed by Duncan's New Multiple Range Test (DNMRT) at a significance level of 5%. Observations on benalu herbal tea consisted of analysis of water content, antioxidant activity, total polyphenols, total water soluble ingredients, total plate count, IC₅₀ antioxidant test, and sensory tests. The treatment for herbal tea is the addition of 0%, 2%, 4%, 6% and 8% cinnamon powder. *In vivo* test parameters consist of total leukocyte number, leukocyte percentage, activity and phagocytic capacity of macrophage cells. 15 male white mice were divided into 5 dose groups, namely 100% benalu drink, 100% *cassia vera*, and benalu herbal tea with the addition of *cassia vera* at varying doses, namely 40%, 70%, and 100%/20 g of the mice's body weight. . The results showed that the addition of *cassia vera* had a real influence on antioxidant activity, total polyphenols, total water soluble ingredients, total plate count, organoleptic aroma and taste, number of leukocytes, phagocytic activity and phagocytic capacity in herbal tea products. as well as the IC₅₀ antioxidant in tea brewing water. Spice. However, it did not have a real effect on water content, organoleptic color and leukocyte percentage. based on physicochemical and microbiological analysis of benalu herbal tea, the best treatment was treatment E with (addition of 8% *cassia vera*) with water content (6.67%), antioxidant activity (37.45%), total polyphenols (192,95 mgGAE/g) , total water soluble ingredients (23.00%), Total plate count (8.2 x 10² antioxidant IC₅₀ (64.96 ppm) with panelists' hedonic preferences for color 3.73 (like), aroma 4.33 (like) and taste 4.13 (like). Varying doses of benalu herbal tea with the addition of *cassia vera* were able to increase the total number of leukocytes by 7,233, 8,083, 9,133/ μ L blood, macrophage phagocytic activity by 68.33%, 74%, and 81%. Meanwhile, the phagocytic capacity macrophages were 151, 187.3, and 195.3 cells.

Keywords – Benalu, *cassia vera*, antioxidant, immunomodulator