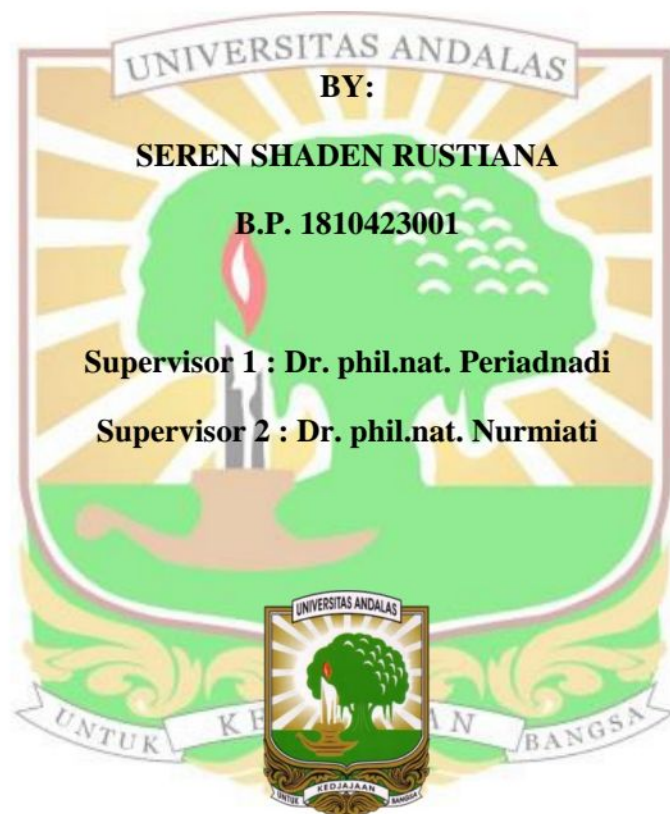


**ANTIMICROBIAL POTENCY OF MISTLETOE FROM TEA  
PLANT (*Scurrula ferruginea* (Roxb. ex Jack) Danser) AND ITS  
ANTIOXIDANT ACTIVITIES**

**BIOLOGY UNDERGRADUATE THESIS**



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## ABSTRAK

Benalu teh (*Scurrula ferruginea* (Roxb. ex Jack) Danser) dikenal sebagai salah satu tanaman obat yang sudah digunakan secara luas sebagai obat tradisional. Benalu the mengandung senyawa dari isolat flavonoid yaitu golongan falvon atau flavonol. Penelitian tentang “Potensi Antimikroba Benalu Dari Tanaman Teh (*Scurrula ferruginea* (Roxb. ex Jack) Danser) Dan Aktivitas Antioksidannya” telah dilakukan dari bulan Maret sampai Juli 2022 di Laboratorium Riset Mikrobiologi, Jurusan Biologi, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Andalas. Metode yang digunakan dalam penelitian ini adalah Metode Eksperimen dan data dianalisa menggunakan Rancangan Tersarang. Penelitian ini bertujuan untuk menentukan aktivitas antimikroba dari beberapa perlakuan ekstrak benalu teh, menentukan daya hambat tertinggi dari ekstrak benalu teh terhadap mikroba uji dan menentukan Konsentrasi Hambat Minimum (KHM) dan Konsentrasi Bunuh Minimum (KBM) dari benalu teh terhadap masing-masing mikroba uji, serta aktivitas antioksidan dan polifenol dari benalu teh. Hasil penelitian menunjukkan bahwa daya hambat tertinggi dihasilkan oleh ekstrak segar terhadap *Escherichia coli*, *Staphylococcus aureus* dan *Candida albicans*. KHM ekstrak segar terhadap *E. coli* (50%) dan terhadap *S. aureus* (25%). Sedangkan KBM tidak didapatkan pada masing-masing mikroba uji. Aktivitas antioksidan dan kandungan polifenol yang tertinggi ditemukan pada ekstrak segar, diikuti oleh rebus keringan, seduh keringan dengan jeruk nipis, dan seduh keringan.

**Kata Kunci :** Antimikroba, Antioksidan, Benalu Teh, KHM, KBM



## ABSTRACT

Mistletoe (*Scurrula ferruginea* (Roxb. ex Jack) Danser) is known as one of medicinal plants which has been widely used in traditional medicine as therapeutic herbs. The mistletoe plant contains compounds from flavonoid isolates, namely the flavone or flavonol group. Research on "Antimicrobial Potency of Mistletoe From Tea Plant (*Scurrula ferruginea* (Roxb. ex Jack) Danser) and Its Antioxidant Activities" was conducted from March to July 2022 at the Microbiology Research Laboratory, Department of Biology, Faculty of Mathematics and Natural Sciences, Andalas University. The method used in this study is the experimental method and the data were analyzed using a nested design. This study aims to determine the antimicrobial activity of several treatments of tea mistletoe extract, determine the highest inhibitory power of the tea mistletoe extract against the microbes and determine the Minimum Inhibitory Concentration (MIC) and Minimum Lethal Concentration (MLC) of the tea mistletoe against each microbe, as well as antioxidant and polyphenolic activity of tea parasites. The results showed that the highest inhibition was produced by the fresh extract against *Escherichia coli*, *Staphylococcus aureus* and *Candida albicans*. MIC of fresh extract against *E. coli* (50%) and against *S. aureus* (25%). Meanwhile the MLC was not found in each microbe. The highest antioxidant activity value and polyphenol content were found in fresh extract, followed by boiled dry, brewed dry with lime, and brewed dry.

**Keywords :** *Antimicrobial, Antioxidant, MIC, MLC, Tea Mistletoe*

