

**ISOLASI DAN UJI ANTIBAKTERI ISOLAT SIMBION
SPONS DARI PULAU PASUMPAHAN TERHADAP
Escherichia coli DAN *Staphylococcus aureus***

SKRIPSI SARJANA BIOLOGI



**OLEH :
WIWIK DWI JAYANI
B.P. 1910421012**

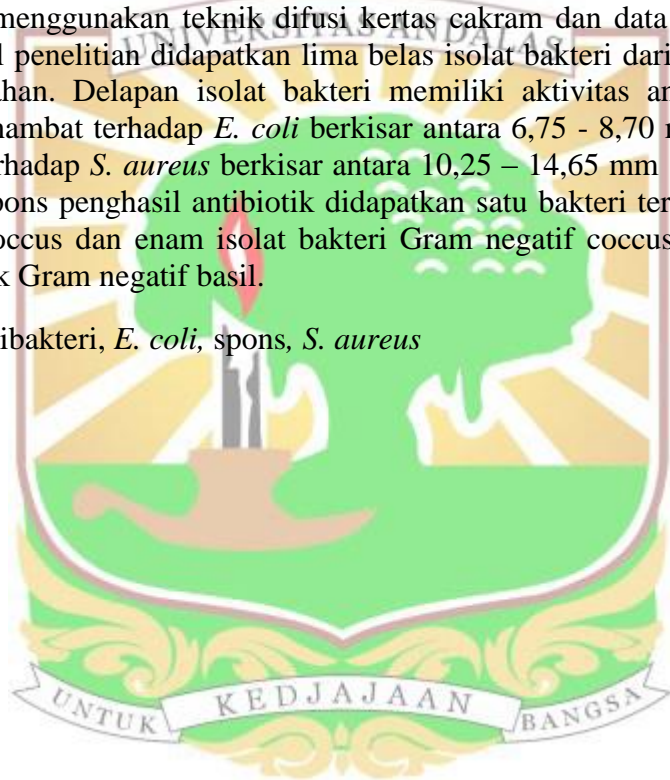
**PEMBIMBING
Dr. Fuji Astuti Febria**

**DEPARTEMEN BIOLOGI
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS ANDALAS
PADANG, 2023**

ABSTRAK

Penelitian tentang isolasi dan uji antibakteri isolat simbiosis spons terhadap *Escherichia coli* dan *Staphylococcus aureus* telah dilakukan pada bulan April – Juli 2023 di Laboratorium Riset Mikrobiologi, Departemen Biologi, FMIPA dan Laboratorium Mikrobiologi, Jurusan Teknologi Hasil Pertanian, Fakultas Teknologi Pertanian, Universitas Andalas. Penelitian ini bertujuan untuk menemukan bakteri simbiosis spons dan menguji kemampuan antibakteri isolat bakteri simbiosis spons terhadap pertumbuhan *E. coli* dan *S. aureus* serta karakterisasi isolat bakteri simbiosis spons. Penelitian menggunakan metode survey. Pengujian antibakteri terhadap *E. coli* dan *S. aureus* menggunakan teknik difusi kertas cakram dan data dianalisis secara deskriptif. Hasil penelitian didapatkan lima belas isolat bakteri dari lima jenis spons Pulau Pasumpahan. Delapan isolat bakteri memiliki aktivitas antibakteri dengan diameter zona hambat terhadap *E. coli* berkisar antara 6,75 - 8,70 mm dan diameter zona hambat terhadap *S. aureus* berkisar antara 10,25 – 14,65 mm dan karakteristik isolat bakteri spons penghasil antibiotik didapatkan satu bakteri termasuk kelompok Gram positif coccus dan enam isolat bakteri Gram negatif coccus serta satu isolat bakteri termasuk Gram negatif basil.

Kata kunci : antibakteri, *E. coli*, spons, *S. aureus*



ABSTRACT

Research on the isolation and antibacterial testing of sponge symbiont isolates against *Escherichia coli* and *Staphylococcus aureus* was carried out in April – July 2023 at the Microbiology Research Laboratory, Department of Biology, FMIPA and Microbiology Laboratory, Department of Agricultural Product Technology, Faculty of Agricultural Technology, Andalas University. This research aims to find sponge symbiont bacteria and test the antibacterial ability of sponge symbiont bacterial isolates against the growth of *E. coli* and *S. aureus* as well as characterization of sponge symbiont bacterial isolates. The research uses a survey method. Antibacterial testing against *E. coli* and *S. aureus* used the paper disk diffusion technique and the data was analyzed descriptively. The results of the research obtained fifteen bacterial isolates from five types of sponges on Pasumpahan Island. Eight bacterial isolates had antibacterial activity with inhibition zone diameters against *E. coli* ranging from 6.75 - 8.70 mm and inhibition zone diameters against *S. aureus* ranging from 10.25 - 14.65 mm and the characteristics of antibiotic-producing sponge bacterial isolates showed that one bacteria belonged to the Gram-positive coccus group and six isolates of Gram-negative coccus bacteria and one bacterial isolate belonged to the Gram-negative bacilli.

Keywords : antibacterial, *E. coli*, sponge, *S. aureus*

