

ABSTRAK

Maria Priska Oktaviani Perangin-angin, NIM 4161220014 (2016). Aktivitas Antibakteri Ekstrak Etil Asetat Bakteri Simbion Spons Asal Perairan Sibolga Terhadap *Multi Drug Resistant Organisms* (MDRO)

Penelitian ini bertujuan untuk menentukan spesies bakteri simbion spons dan menganalisis senyawa metabolit sekunder pada ekstrak etil asetat bakteri simbion spons yang berpotensi sebagai antibakteri. Penelitian ini dilakukan dengan mengisolasi dan mengidentifikasi bakteri dari spons lalu uji aktivitas antibakteri, bakteri diekstraksi dan dilakukan uji aktivitas antibakteri, dan senyawa dianalisis menggunakan Kromatografi Lapis Tipis. Hasil penelitian menunjukkan spesies bakteri simbion spons adalah *Bacteroides* (H1, H5, dan H6), *Bacillus* (H2), *Chromohalobacter* (H3, H4, dan H8), *Serratia* (H7 dan H10), *Pseudomonas* (H9, H11, P4, dan P5), dan *Acinetobacteria* (P1, P2, P3, dan P6). Isolat H3, H7, H9, H10, H11, P1, P2, P3, P4, dan P6 dapat menghambat *S. lugdunensis* MRSA, H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, P1, P2, P3, dan P4 dapat menghambat *Klebsiella pneumoniae* ESBL, dan H2, H3, H6, H7, H9, P1, P3, dan P6 dapat menghambat *Pseudomonas aeruginosa* ESBL. Ekstrak EEAH3 dan EEAH10 dapat menghambat *S. lugdunensis* MRSA, EEAH3, EEAH6, EEAH7, EEAH8, dan EEAP3 dapat menghambat *K. pneumoniae* ESBL, dan EEAH3, EEAH6, dan EEAP6 dapat menghambat *P. aeruginosa* ESBL. Ekstrak EEAH3, EEAH7, EEAH10, EEAP3, dan EEAP6 mengandung senyawa alkaloid dan EEAH3, EEAH6, EEAH7, EEAH8, dan EEAP3 mengandung senyawa tanin.

Kata Kunci: *Bakteri Simbion Spons, Bakteri MDRO, Identifikasi Bakteri, Antibakteri, Metabolit Sekunder*



ABSTRACT

Maria Priska Oktaviani Perangin-angin, NIM 4161220014 (2016). Antibacterial Activity of Ethyl Acetate Extract of Sponge Symbiont Bacteria from Sibolga Waters Against Multi Drugs Resistant Organisms (MDRO) Bacteria.

This study aims to determine sponge symbiont bacteria species and analyze secondary metabolite compounds in ethyl acetate extract of sponge symbiont bacteria that have the potential to be antibacterial. This research was conducted by isolating and identifying sponge symbiont bacteria and antibacterial activity tests, bacteria extracted and antibacterial activity tests, and compounds were analyzed using Thin Layer Chromatography. The results showed that sponge symbiont bacteria species are *Bacteroides* (H1, H5, and H6), *Bacillus* (H2), *Chromohalobacter* (H3, H4, and H8), *Serratia* (H7 and H10), *Pseudomonas* (H9, H11, P4, and P5), and *Acinetobacteria* (P1, P2, P3, dan P6). H3, H7, H9, H10, H11, P1, P2, P3, P4, and P6 isolates were able to inhibit *Staphylococcus lugdunensis* MRSA, H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, P1, P2, P3, and P4 isolates were able to inhibit *Klebsiella pneumoniae* ESBL, and H2, H3, H6, H7, H9, P1, P3, and P6 were able to inhibit *Pseudomonas aeruginosa* ESBL. Extracts of EEAH3 and EEAH10 were able to inhibit *S. lugdunensis* MRSA, EEAH3, EEAH6, EEAH7, EEAH8, and EEAP3 were able to inhibit *K. pneumoniae* ESBL, and EEAH3, EEAH6, and EEAP7 were able to inhibit *P. aeruginosa* ESBL. Extracts of EEAH3, EEAH7, EEAH10, EEAP3, and EEAP6 contain alkaloid and EEAH3, EEAH6, EEAH7, EEAH8, and EEAP3 contain tannin.

Keywords: *Sponge Symbiont Bacteria, MDRO Bacteria, Bacterial Identification, Antibacterial, Secondary Metabolites*

