

**ANALISIS HUBUNGAN KEKERABATAN BAKTERI SIMBIONS SPONS  
TERKAIT DENGAN SINTESIS SENYAWA BIOAKTIF  
MENGUNAKAN PENANDA 16S RNA**

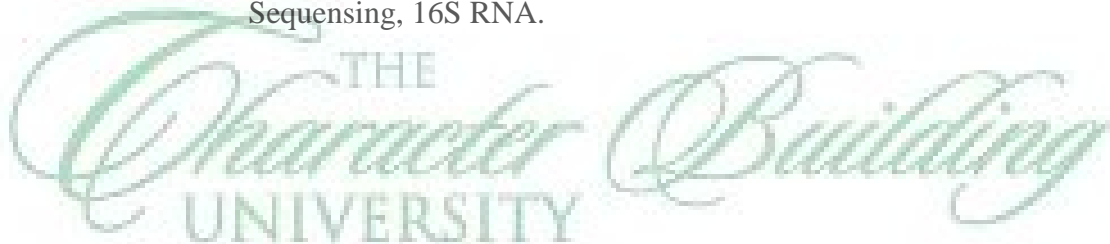
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**Abstrak**

Spons sebagai penghasil senyawa bioaktif seperti antibakteri, antifungal, antitumor dan antivirus. Kemampuan spons dalam menghasilkan senyawa bioaktif dikarenakan hubungan simbiotik dengan mikroorganisme dalam hal ini bakteri yang bersimbion dengan spons. Penelitian ini bertujuan untuk melakukan karakterisasi molekuler isolat bakteri simbion spons berdasarkan sekuen gen *16S RNA*. Pada penelitian ini menggunakan 2 isolat bakteri simbion spons yang telah diisolasi DNA hasil isolasi DNA dilanjutkan dengan amplifikasi gen *16S RNA* dengan menggunakan mesin amplifikasi PCR (*Polymerase Chain Reaction*). Hasil dari amplifikasi dilanjutkan dengan sequencing gen *16S RNA*. Hasil dari sequencing gen *16S RNA* dilanjutkan dengan BLASTN untuk melihat kesamaan di NCBI (*National Center for Biotechnology Information*). Hasil dari blastn dilanjutkan membuat pohon filogenetik untuk melihat kesamaan dari gen *16S RNA* lainnya pada bakteri pada NCBI (*National Center for Biotechnology Information*). Berdasarkan analisis filogenetik menggunakan gen *16S RNA* diperoleh hasil bahwa isolat 1 bakteri simbion spons homolog dengan gen *16S RNA* pada genus *Idiomarina* sp sebesar 93 %, sedangkan pada isolat 2 bakteri simbion spons homolog dengan genus *Exiguobacterium* sebesar 99 %.

**Kata Kunci:** BLASTN, Genus *Idiomarina*, Genus *Exiguobacterium*, Spons, Sequencing, 16S RNA.



**ANALYSIS OF RELATIONSHIP BETWEEN SPACES BACTERIA  
RELATIONSHIP WITH SYNTHESIS OF BIOACTIVE COMPOUNDS  
USING RANDE 16S RNA**

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**Abstract**

Sponges as a producer of bioactive compounds such as antibacterial, antifungal, antitumor and antiviral. The ability of the sponge to produce bioactive compounds is due to the symbiotic relationship with microorganisms in this case the bacteria that are symbiont with the sponge. This study aims to characterize the molecular isolates of spongy symbionts of sponges based on 16S RNA gene sequences. In this study using 2 isolates of spongy symbiont symbion which have been isolated DNA of DNA isolation followed by amplification of 16S RNA gene by using PCR (Polymerase Chain Reaction) machine. Results from amplification followed by Sequencing Gen 16S RNA. The results of the sequencing of 16S RNA gene followed by BLASTN to see the similarities in NCBI (National Center for Biotechnology Information). The results of the blast continued to create a phylogenetic tree to see the similarity of other 16S genes of RNA in bacteria at NCBI (National Center for Biotechnology Information). Based on phylogenetic analysis using Gene 16S RNA, the result showed that the isolates were symmetrical spongy homologous with 16S RNA genes in *Idiomarina* sp genus with 93%, while in isolate 2 sphere symbionos symbologies were homologous with *Exiguobacterium* genus of 99%.

Keyword : BLASTN, Genus *Exiguobacterium*, Genus *Idiomarina*, Sequencing, Sponges, 16S RNA.

