INTISARI

KERAGAMAN GENETIK DAN AKTIVITAS ANTIJAMUR *STREPTOMYCES* ASAL PERAKARAN TANAMAN OBAT

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Streptomyces yang diisolasi dari perakaran tanaman obat mungkin memiliki potensi besar dalam menghasilkan senyawa-senyawa bioaktif. Penelitian ini dilakukan untuk mengetahui keragaman genetik dan aktivitas antijamur 6 *Streptomyces* yang diisolasi dari rizosfer berbagai tanaman obat.

Keragaman genetik dianalisis menggunakan Rep-PCR dengan primer BOX A1R, 16S rDNA-RFLP, dan NRPS-RFLP. Aktivitas antijamur dianalisis dengan menggunakan *Colletothricum capsici* sebagai jamur indikator.

Keragaman genetik keenam *Streptomyces* terbagi menjadi 5 kelompok berdasarkan Rep-PCR, 3 kelompok berdasarkan 16S rDNA-RFLP, dan 2 kelompok berdasarkan NRPS-RFLP. Ada 4 *Streptomyces* yang memiliki aktivitas antijamur dan hasil ini berkorelasi dengan keragaman gen NRPS.

Kata Kunci: Keragaman, *Streptomyces*, RFLP, gen NRPS

ABSTRACT

GENETIC DIVERSITY AND ANTIFUNGAL ACTIVITY OF *STREPTOMYCES* FROM MEDICINAL PLANT RHIZOSPHERE

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Streptomyces which isolated from medicinal plant rhizosphere may have a great potential to produce bioactive compounds. This research was conducted to determine genetic and antifungal activity of six *Streptomyces* isolated from medicinal plant rhizosphere.

Genetic diversity was analyzed using Rep-PCR with BOX A1R primer, 16S rDNA-RFLP, and NRPS-RFLP. Antifungal activity was analyzed using *Colletothricum capsici* as an indicator fungal.

Genetic diversity of six *Streptomyces* divided into 5 groups based on Rep-PCR method, 3 groups based on 16S rDNA-RFLP, and 2 groups based on NRPS-RFLP. There are 4 *Streptomyces* which have antifungal activity and the result was correlated to NRPS gene diversity.

Keyword: Diversity, *Streptomyces*, RFLP, NRPS gene