Potensi Antagonistis Bacillus siamensis LDR Terhadap Aspergillus niger ABP dan ART = Antagonistic Potensial of Bacillus siamensis LDR Against Aspergillus niger ABP and ART

Bella Rineka Putri, author

Abstrak

ABSTRAK
Penelitian tentang potensi antagonis bakteri Gram-positif Bacillus siamensis LDR terhadap pertumbuhan 2 isolat Asp. niger ABP dan ART memiliki selesai. Uji antagonis dilakukan dengan menggunakan metode kultur ganda yang berbeda, yaitu: kultur cakram ganda dan kultur piring tuang. Hasil pengujian pada metode kultur cakram ganda menunjukkan bahwa B. siamensis LDR mampu menghambat pertumbuhan diameter Asp. niger ART (44,83%) dan ABP (39,95%). Sedangkan pada metode pelat tuang, kultur, B. siamensis LDR mampu menghambat pertumbuhan Asp. niger ART (87,98%) dan ABP (92,43%). Fermentasi senyawa antijamur dari B. siamensis telah dilakukan
dengan metode fermentasi menggunakan media Potato Dextrose Broth untuk inkubasi 10, 12 dan 14 hari. Filtrat hasil fermentasi digunakan sebagai pelarut untuk medium medium PDA dan PDB dalam uji antibiotik. Uji antibiotik menunjukkan bahwa efektivitas terbesar
diperoleh dari filtrat fermentasi 14 hari. Hasil pengujian pada media PDA berdasarkan diameter pertumbuhan koloni menunjukkan terhambatnya pertumbuhan Asp. niger ART (74,53%) dan ABP (62,13%). Sedangkan penghambatan pertumbuhan pada medium PDB yang ditentukan berdasarkan produksi biomassa menunjukkan penurunan sebesar 79,80% pada Asp. niger ART dan 51,22% pada Asp. niger ABP versus kontrol. Uji antibiosis dengan metode difusi cakram pada waktu inkubasi media fermentasi hari ke 14 juga selesai. Hasil pengujian pada metode difusi cakram menunjukkan bahwa penghambatan pertumbuhan Asp. niger ART dan ABP pada konsentrasi 2.500 ppm
hingga 20.000 ppm.

ABSTRACT
Research on the potential antagonist of Gram-positive bacteria Bacillus siamensis LDR to the growth of 2 isolates of Asp. niger ABP and ART have finished. The antagonist test was carried out using different multiple culture methods, namely: double disc culture and pour plate culture. The test results on the double disc culture method showed that B. siamensis LDR was able to inhibit the growth of Asp diameter. niger ART (44.83%) and ABP (39.95%). While in the pour plate method, culture, B. siamensis LDR was able to inhibit the growth of Asp. niger ART (87.98%) and ABP (92.43%). Fermentation of antifungal compounds from B. siamensis has been carried out
by fermentation method using Potato Dextrose Broth media for incubation 10, 12 and 14 days. The fermented filtrate was used as a solvent for PDA and PDB medium in the antibiotic test. Antibiotic tests show that the greatest effectiveness obtained from 14 days fermentation filtrate. The test results on PDA media based on the diameter of the colony growth showed inhibition of Asp growth. niger ART (74.53%) and ABP (62.13%). Meanwhile, the inhibition of growth in the GDP medium which was determined based on biomass production showed a decrease of 79.80% in Asp. niger ART and 51.22% on Asp. niger ABP

versus control. Antibiosis test using the disc diffusion method at the incubation time of the 14th day of fermentation media was also completed. The test results on the disc diffusion method showed that the inhibition of the growth of Asp. niger ART and ABP at a concentration of 2,500 ppm
up to 20,000 ppm.