

Produksi lovastatin kapang aspergillus spp dan pengaruhnya terhadap kadar kolesterol dalam darah tikus (*rattus norvegicus* l.) galur sprague dawley

Yanti Rafliyanti, author

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Abstrak

Lovastatin dapat berfungsi menghambat proses pembentukan kolesterol dalam hati, dengan cara penghambatan secara kompetitif terhadap sintesis enzim 3 hydroxy -3-methylglutaryl-koenzim A reduktase (HMG-KoA reduktase). Penelitian bertujuan untuk melakukan skrining kapang *Aspergillus* spp. koleksi University of Indonesia Culture Collection (UICC), fermentasi, dan analisis produksi lovastatin. Hasil skrining lovastatin dari sebanyak 40 biakan *Aspergillus* spp. koleksi UICC 18 biakan (45%) positif menghasilkan lovastatin dan 22 biakan (55%) negatif. *Aspergillus flavus* UICC 360 menghasilkan lovastatin tertinggi dibandingkan sepuluh *Aspergillus* spp. terpilih. Analisis Thin Layer Chromatography (TLC) menunjukkan nilai Rf sepuluh *Aspergillus* spp. hampir sama dengan standart. Analisis High Performance Chromatography (HPLC) mengkonfirmasi lovastatin *Asp. flavus* UICC 360 mempunyai waktu retensi sama dengan standart (13,2 menit).

.....Lovastatin is an acting inhibitor of enzyme 3 hydroxy -3-methylglutaryl-coenzyme A reduktase (HMG-CoA reductase) as competitive inhibitor on biosynthesis of cholesterol. The aims of the research is for the selection, fermentation, and analysis of lovastatin from isolates mold *Aspergillus* spp. at the University of Indonesia Culture Collection (UICC). The results revealed that out of 40 cultures, 18 cultures (45%) produced lovastatin and 22 cultures (55%) were negative. *Aspergillus flavus* UICC 360 showed the highest lovastatin production compared of 10 selected cultures. Thin Layer Chromatography (TLC) analysis amount of 10 *Aspergillus* spp. have similarity of Rf value compared to the standard. High Performance Chromatography (HPLC) analysis confirmed that lovastatin *Aspergillus flavus* UICC 360 has the same retention time with the standard (13.2 minutes).