

KARAKTERISASI DAN UJI ANTAGONIS JAMUR ENDOFIT
TANAMAN *Uncaria gambir* (W.Hunter) Roxb. TERHADAP PATOGEN
Fusarium oxysporum* f.sp. *cubense

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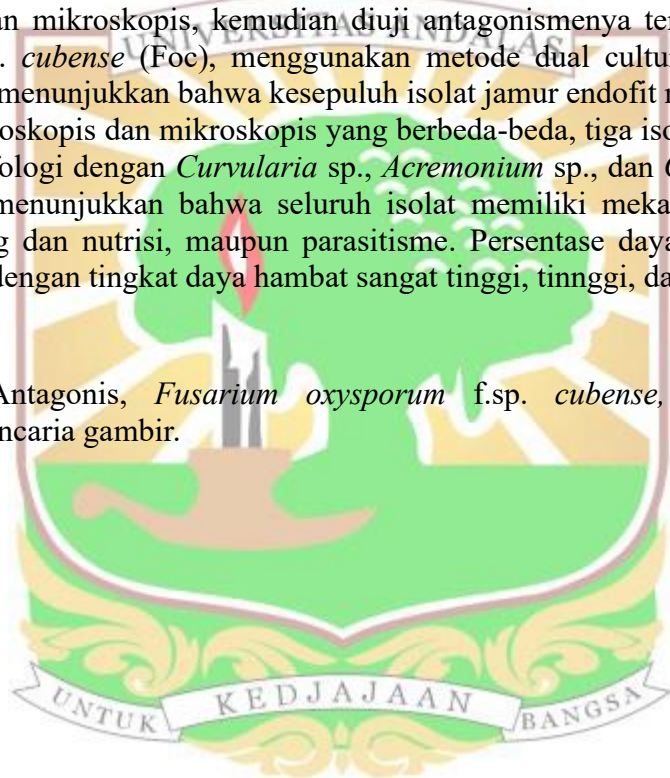


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ABSTRAK

Tanaman gambir (*Uncaria gambir* (W.Hunter) Roxb.) merupakan tanaman obat yang produktivitasnya di Sumatera Barat menurun akibat serangan patogen, salah satunya jamur *Fusarium*. Penelitian ini bertujuan untuk mengetahui karakter morfologi jamur endofit dari tanaman gambir (*Uncaria gambir* (W.Hunter) Roxb.) dan menganalisis kemampuan antagonistiknya dalam menghambat pertumbuhan *Fusarium oxysporum* f.sp. *cubense* (Foc). Penelitian dilakukan dengan metode survei menggunakan sepuluh isolat jamur endofit koleksi Laboratorium Biota Sumatera yang dikarakterisasi secara makroskopis dan mikroskopis, kemudian diuji antagonismenya terhadap *Fusarium oxysporum* f.sp. *cubense* (Foc), menggunakan metode dual culture selama 7 hari inkubasi. Hasil menunjukkan bahwa kesepuluh isolat jamur endofit memiliki karakter morfologi makroskopis dan mikroskopis yang berbeda-beda, tiga isolat menunjukkan kemiripan morfologi dengan *Curvularia* sp., *Acremonium* sp., dan *Cladosporium* sp. Uji antagonis menunjukkan bahwa seluruh isolat memiliki mekanisme antibiosis, kompetisi ruang dan nutrisi, maupun parasitisme. Persentase daya hambat kisaran 24,0%-88,7%, dengan tingkat daya hambat sangat tinggi, tinggi, dan rendah.

Kata kunci: Antagonis, *Fusarium oxysporum* f.sp. *cubense*, jamur endofit, karakterisasi, *Uncaria gambir*.



ABSTRACT

Gambir (*Uncaria gambir* (W. Hunter) Roxb.) is a medicinal plant whose productivity in West Sumatra has declined due to pathogen attacks, one of which is caused by the fungus *Fusarium*. This study aimed to determine the morphological characteristics of endophytic fungi isolated from gambir (*Uncaria gambir* (W. Hunter) Roxb.) and to analyze their antagonistic ability to inhibit the growth of *Fusarium oxysporum* f. sp. *cubense* (Foc). The study was conducted using a survey method involving ten endophytic fungal isolates from the Sumatra Biota Laboratory collection. The isolates were characterized based on their macroscopic and microscopic morphological characteristics and subsequently tested for antagonistic activity against *Fusarium oxysporum* f. sp. *cubense* (Foc) using the dual culture method with a seven-day incubation period. The results showed that the ten endophytic fungal isolates exhibited diverse macroscopic and microscopic morphological characteristics. Three isolates showed morphological similarities to *Curvularia* sp., *Acremonium* sp., and *Cladosporium* sp. The antagonistic assay showed that all isolates exhibited antibiosis, competition for space and nutrients, and parasitism. The inhibition percentages ranged from 24.0% to 88.7%, corresponding to very high, high, and low inhibition levels.

Keywords: Antagonism, *Fusarium oxysporum* f.sp. *cubense*, endophytic fungi, Characterization, *Uncaria gambir*.

