

**PENAPISAN GEN 10- DEACETYLBACCATIN III PADA KAPANG  
ENDOFIT KULIT BATANG SUMATRANA YEW (*Taxus sumatrana*  
(Mequel) de Loub: Taxaceae)**

**ABSTRAK**

Tingginya permintaan kebutuhan produksi bahan aktif antikanker Taxol tidak berbanding lurus dengan kelimpahan *Taxus*. Kapang endofit yang mampu menghasilkan produk bioaktif yang sama dengan tanaman inangnya merupakan potensi yang dapat dikembangkan sebagai sumber alternatif penghasil Taxol. Penelitian ini dilakukan untuk mengetahui kapang-kapang yang memiliki gen DBAT penyandi enzim 10-deacetylbaaccatin III-10-O-acetyl transferase sebagai enzim kunci penghasil Taxol. Pengujian dilakukan pada kapang-kapang endofit yang berhasil ditumbuhkan dari kulit batang *Taxus* Indonesia, *Taxus sumatrana*. Metode yang dilakukan merupakan metode pendekatan genomik. Dua puluh isolat kapang endofit berhasil terseleksi dari kulit batang *Taxus sumatrana* dan telah dikarakterisasi secara morfologi untuk selanjutnya ditapis menggunakan gen DBAT. Terdapat 20% isolat kapang endofit yang diduga positif mengandung DBAT. Hasil sikuensing gen DBAT pada seluruh kapang endofit yang diduga positif memiliki gen DBAT menunjukkan terdapat 3 isolat yang positif mengandung gen DBAT yaitu isolat A, G dan X. Ketiga isolat merupakan kapang Ascomycota. Dari hasil analisis bioinformatika diduga bahwa isolat X merupakan kapang endofit spesies baru yang memiliki gen DBAT.

**Kata Kunci :** *Taxus sumatrana*, Gen DBAT, Kapang endofit.

**SCREENING GENE 10-DEACETYLBACCATIN III IN THE  
ENDOPHYTIC FUNGI BARK OF YEW SUMATRANA (*Taxus sumatrana*  
(Mequel) de Loub: Taxaceae)**

**ABSTRACT**

High demand production of bioactive anticancer Taxol is not directly proportional to the abundance of *Taxus*. Endophytic fungi that can producing the same bioactive products as their host plants. In this case, potential of endophytic fungi can be developed as alternative sources of Taxol production. This research was conducted to determine molds that have the DBAT gene encoding the 10-deacetylbaccatin III-10-O-acetyl transferase enzyme as a key enzyme production of Taxol. Screening were carried out on endophytic fungi that were can grown from the bark of *Taxus* Indonesian, *Taxus sumatrana*. The method used is genomic approach. Twenty endophytic fungi isolates were selected from bark *Taxus sumatrana* and have been morphologically characterized for further screening using the DBAT gene. There are 20% of endophytic fungi isolates that are thought positive for DBAT gene. The results of DBAT gene sequencing on endophytic fungi that were thought to have positive DBAT genes showed that 3 isolates has DBAT gene, there are isolates A, G and X. The three isolates are Ascomycota fungi. Based on bioinformatics analysis, it was suspected that isolate X was a new species of endophytic fungi that had the DBAT gene.

**Keywords:** *Taxus sumatrana*, DBAT gene, endophytic fungi.