

## Screening of Four Malaysian Isolated Endophytes with Candesartan in a Microtiter Plate

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**Abstract :** The goal of study was to screen the effects of candesartan and four endophytic fungi for their potential in microbial biotransformation. In this experiment, four types of unidentified fungi with the codes of TH2L1, TH2R10, TH1P35 and TH1S46 were used in screening process by MECFUS (Microtiter plate, Elicitors, Combination, Freeze-drying, UHPLC, Statistical analysis) protocol. The experiment was carried out by using 96-well microtiter plate (MTP) with different media and elicitors. Various media with two concentrations of Potato Dextrose Broth (PDB) and elicitors used were to induce the production of secondary metabolites from the fungi as well as the biotransformation of the drug compound. After incubation, cultures were extracted by freeze drying method and finally analyzed by ultra-High performance Liquid Chromatography (uHPLC). The extracts analyzed by uHPLC followed by LC/MS, demonstrated the presence of biotransformation products from the drug compound and elicitation of the secondary metabolism from the fungi by the occurrence of the additional peaks. From the four fungi, TH1S46 showed highly potential produced secondary metabolites as well as the biotransformation of candesartan. For other fungi, they responded when candesartan was introduced. Moreover, the additional peaks produced in uHPLC need to be further investigation by using LC-MS or NMR.

**Keywords :** biotransformation, candesartan, endophytes, secondary metabolites

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