IN VITRO ANTICANCER ACTIVITY ONMCF-7 CELL FROM SECONDARY METABOLITES OF ENDOPHYTIC FUNGAL FIG (*FICUS CARICA* L.)

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ABSTRACT

The development of new anticancer drugs is important to solve the problem of side effect from breast cancer treatment therapy which commonly used in recent decades. Fig plant (*Ficus carica* L.) is a potential to produce compounds that have anticancer activity. Endophytic fungi from Fig plant (*Ficus carica* L.)is likely to produce secondary metabolites and has similar activity to Fig plant (*Ficus carica* L.). The objective of this study was to examine the breast anticancer activity of the secondary metabolites secreted in culture media Fig plant (*Ficus carica* L.) of the endophytic fungi. Isolates of endophytic fungi were cultivated in Potato Dextrose Broth media. The broth of cultivation then processed through liquid-liquid extraction using ethyl acetate to obtain an extract and evaporated by a rotary evaporator to obatained the crude extract. Anticancer activity test perform on MCF-7 cells using MTT assay method and the compounds which contain in the extract were analyzed by Thin Layer Chromatography with specific reagents. The results showed that endophytic fungi isolates contain different classes of compounds.Terpenoid, alkaloid, and phenol were identified in Ak and Da1 isolates. Alkaloid and terpenoids were identified in Bu and Ba isolates, and then terpenoid was identified in Da2 isolate. The anticancer activity test showed IC50 value on MCF-7 cells of Ak isolate of 875,995 µg/ml, Bu of 1249,239 µg/ml, and Da1 of 1215,451 µg/ml. Based on its IC_{50} value >500 µg/ml it could be concluded that endophytic fungi isolates from *Ficus carica* L. didn't have anticancer activity against MCF-7 cells.

Keywords:Endophytic fungi, *Ficus carica* L., MCF-7 cell