

Sinergisme Fraksi Butanol Metabolit Sekunder Kapang Endofit 1.3.11 dengan Doxorubicin dalam Modulasi Daur Sel T47D dan MCF-7

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Abstract: The synergic effects of *n*-butanolic fraction of secondary metabolite of endophytic fungus 1.3.11 (FB) and doxorubicin (Dox) on cell cycle regulation and the expression of Bcl-2 gene expression were investigated on MCF-7 and T47-D cells by flow cytometry and immunocytochemical techniques respectively. The results showed that after 12 hours of incubation period with FB at its IC₅₀ dose, MCF-7 cell cycle was inhibited at G₁ phase while Dox inhibited the cell cycle at G₂/M phase. Similar results were observed in T47-D cells when incubated with Dox and FB individually under the same treatment condition. Further treatment was then performed to these cells where both Dox and FB were combined at their IC₅₀ and ½ IC₅₀ dose and added to incubate with the cells over 12 hours period. Interestingly, the modified treatment combination showed that MCF-7 and T47-D cell cycle regulation were inhibited at G₂/M phase. Our immunocytochemical study also showed no significant inhibition suppression of Bcl-2 gene expression in both MCF-7 and T47-D cells when compared with their corresponding positive control after treatment with FB and Dox or both combined FB and Dox at IC₅₀ and ½ IC₅₀ dosage over 15 hours incubation.

Keywords: *n*-butanolic fraction, doxorubicin, T47D, MCF-7, cell cycle, flowcytometry.