SITOTOKSISITAS EKSTRAK DAUN CIPLUKAN (*Physalis angulata*) PADA SEL KANKER OVARIUM (SKOV3 *CELL-LINES*)

ABSTRAK

Ciplukan (*Physalis angulata*) terbukti bermanfaat dalam pengobatan seperti antibakteri, antivirus, antioksidan, bahkan antikanker atau sitotoksik. Ciplukan mengandung senyawa aktif seperti physalin dan quercetin yang terbukti memiliki sifat sitotoksik yang kuat. Penelitian ini bertujuan untuk menganalisis sitotoksisitas ekstrak pasta maupun bubuk dari daun Ciplukan pada sel Kanker Ovarium (SKOV3 *Cell-lines*) serta menganalisis ekstrak dan konsentrasinya yang paling berpengaruh dalam sitotoksisitas pada SKOV3 *cell-lines*. SKOV3 *cell-lines* diberi perlakuan dengan konsentrasi ekstrak 23,4; 46,8; 93,7; 187,5; 375; 750 dan 1500 μg/ml. Kemudian dilakukan uji MTS untuk menganalisis viabilitas sel setelah diberi perlakuan dan selanjutnya diukur nilai absorbansinya dengan spektrofotometer. Viabilitas dan inhibisi sel dianalisis dengan Microsoft Excel dan nilai IC_{50} dianalisis dengan uji probit pada SPPS 16 *for windows*. Hasil penelitian menunjukkan bahwa persentase viabilitas sel setelah diberi perlakuan dengan ekstrak pasta maupun bubuk daun menurun seiiring dengan kenaikan konsentrasi. Sedangkan persentase inhibisi sel setelah diberi perlakuan menunjukkan kenaikan seiiring dengan kenaikan konsentrasi. Nilai IC_{50} pada perlakuan dengan ekstrak pasta maupun bubuk adalah 134,4 dan 235,3 μg/ml. Berdasarkan analisis data tersebut dapat disimpulkan bahwa ekstrak daun Ciplukan, baik ekstrak pasta maupun bubuk daun bersifat sitotoksik dan memiliki aktivitas inhibisi proliferasi terhadap sel kanker ovarium (SKOV3 *cell-lines*).

Kata Kunci : Ciplukan, *Physalis angulata*, Kanker, SKOV3 *cell-lines*, MTS, IC_{50}

CYTOTOXICITY OF CIPLUKAN LEAF EXTRACT (*Physalis angulata*) ON OVARIAN CANCER CELL (SKOV3 *CELL-LINES*)

ABSTRACT

Ciplukan (*Physalis angulata*) is proved to be useful in many treatments such as antibacterial, antiviral, antioxidant, anticancer or even cytotoxic. Ciplukan contains active compounds like quercetin and physalin which evidently have potent cytotoxic. This research aims to analyze the cytotoxicity from Ciplukan's leaves (paste extract and powder) on Ovarian cancer cells (SKOV3 *cell-lines*) as well as analyze the most influential extract and concentration of cytotoxicity on SKOV3 *cell-lines*. SKOV3 *cell-lines* was given preferential treatment with concentration of extract 23,4; 46,8; 93,7; 187,5; 375; 750 and 1500 µg/ml. Then performed MTS test to analyze the cell viability after being treated and then measured the absorbance value by spectrophotometer. Cell viability and cell inhibition were analyzed with Microsoft Excel and IC_{50} values were analyzed with the probit tests on the SPPS 16 for windows. The results showed that the percentage of cell viability after being treated with Ciplukan's leaves (paste extract and powder) showed decrease as concentration increases. While the percentage of cell inhibition after being treated showed increase and concentration increases as well. IC_{50} values on treatment with paste extract or powder is 134,4 and 235,3 µg/ml. Based on the analysis of data can be concluded that Ciplukan leaf extract, both paste extract and powder is cytotoxic and has activity of inhibition proliferation on ovarian cancer cell (SKOV3 *cell-lines*).

Kata Kunci : Ciplukan, *Physalis angulata*, Cancer, SKOV3 *cell-lines*, MTS, IC_{50}