INTISARI

Daun mimba (*Azadirachta indica* A. Juss) merupakan salah satu obat tradisional yang berefek sebagai antikanker. Hasil penelitian sebelumnya menunjukkan bahwa fraksi protein daun mimba FP_{30} dan FP_{60} berpotensi untuk dikembangkan sebagai senyawa antikanker terhadap sel Raji. Penelitian ini bertujuan untuk menguji sitotoksisitas protein daun mimba FP_{30}, FP_{40}, FP_{50}, dan FP_{60} terhadap sel Raji dan sel normal (sel Vero).

Penelitian ini termasuk penelitian eksperimental rancangan acak lengkap pola satu arah. Protein daun mimba diendapkan dengan amonium sulfat dengan kuantitas yang berbeda-beda sehingga didapat fraksi protein dalam berbagai tingkat kejenuhan. Uji sitotoksisitas dilakukan dengan metode MTT (3-(4,5-dimetil-tiazol-2-il)-2,5-dipheniltetrazolium bromide) terhadap sel Raji dan sel Vero. Hasil uji dianalisis secara statistik dan harga LC_{50} dihitung menggunakan analisis probit. Perbandingan sitotoksisitas fraksi protein daun mimba terhadap sel Raji dan sel Vero akan dianalisis dengan uji *t independent sample*.

Hasil penelitian menunjukkan bahwa FP_{60} menunjukkan sitotoksisitas terhadap sel Raji dengan harga LC_{50} adalah sebesar $9{,}71 \times 10^{-3}$ µg/ml. Hasil uji *t independent sample* menunjukkan adanya perbedaan bermakna dengan kelompok sel Vero yang menunjukkan bahwa FP_{60} berpotensi untuk dikembangkan sebagai senyawa antikanker.

Kata kunci: sitotoksisitas, sel Raji, sel Vero, fraksi protein, LC_{50}

ABSTRACT

Neem leaves (*Azadirachta Indica* A. Juss) represent one of traditional drugs which has an effect as anticancer. The result of previously research indicates that the protein fractions of neem leaves PF_{30} and PF_{60} have potency to be developed as an anticancer compound against Raji cell culture. This research is aimed to test the cytotoxicity of protein fraction of neem leaves PF_{30}, PF_{40}, PF_{50}, and PF_{60} against Raji cell culture and normal cell culture (Vero cell).

This Research is complete random experimental of one way design research. The protein of neem leaves is precipitated with the ammonium sulphate in different quantity to gain protein fraction in several degree of saturation. The cytotoxicity test is conducted with the MTT method (3-(4,5-dimetil-tiazol-2-il)-2,5-dipheniltetrazolium bromide) against Raji cell culture and Vero cell culture. Result of test is analyzed statistically and the price of LC_{50} is calculated with probit analysis. Comparison of cytotoxicity of protein fraction of neem leaves against Raji cell and Vero cell will be analyzed with the t independent sample test.

Result of research shows that PF_{60} show cytotoxicity against Raji cell at the price of LC_{50} equal to $9{,}71 \times 10^{-3}$ µg/ml. Result of t independent sample test shows the existence of significant difference with the group of Vero cell which indicates that PF_{60} have potency to be developed as anticancer compound.

Keyword: cytotoxicity, Raji cell, Vero cell, protein fraction, LC_{50}