INTISARI

NASHIHAH, Q., 2019, UJI AKTIVITAS SITOTOKSIK EKSTRAK ETANOL DAUN BINAHONG (*Anredera cordifolia* (Ten.) Steenis) TERHADAP KULTUR SEL KANKER HATI HepG2, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Kanker merupakan salah satu penyakit yang banyak menyebabkan kematian di dunia. Salah satu jenis kanker yang jumlahnya meningkat setiap tahunnya adalah kanker hati. Binahong (*Anredera cordifolia* (Ten.) Steenis) banyak diteliti karena secara tradisional berkhasiat menyembuhkan berbagai penyakit dan secara ilmiah menunjukkan potensi sebagai agen antikanker. Penelitian ini bertujuan untuk mengetahui aktivitas sitotoksik dengan melihat nilai IC_{50} dan indeks selektivitas ekstrak etanol daun binahong terhadap kultur sel kanker hati HepG2.

Penelitian yang dilakukan meliputi ekstraksi daun binahong menggunakan metode maserasi dengan pelarut etanol 70%. Uji sitotoksik ekstrak etanol daun binahong dilakukan dengan metode MTT (*Microculture Tetrazolium Technique)* menggunakan seri konsentrasi (1000; 500; 250; 125; 62,5; 31,2; 15,6) µg/mL dan dihitung nilai IC_{50} menggunakan regresi linear. Indeks selektivitas dilakukan untuk menentukan selektivitas sitotoksik yang didapatkan dengan membandingkan antara nilai IC_{50} sel Vero terhadap nilai IC_{50} kultur sel kanker hati HepG2.

Hasil uji sitotoksik ekstrak etanol daun binahong menunjukkan aktivitas yang moderat/sedang terhadap kultur sel kanker hati HepG2 dengan nilai IC_{50} 276,968 µg/mL, tetapi memiliki selektivitas sitotoksik yang tinggi dengan nilai indeks selektivitas 5,471.

Kata kunci : Daun binahong, sitotoksik, sel HepG2

ABSTRACT

NASHIHAH, Q., 2019, CYTOTOXIC ACTIVITY TEST OF BINAHONG LEAVES ETHANOL EXTRACT (*Anredera cordifolia* (Ten.) Steenis) ON HEART CANCER CELL CULTURE HepG2, SKRIPSI, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Cancer is one of the diseases that cause many deaths in the world. One type of cancer which increasing number every year is liver cancer. Binahong (*Anredera cordifolia* (Ten.) Steenis) is the most studied plant because it is able to cure various diseases traditionally and scientifically demonstrates its potential as an anti-cancer agent. This study aims to determine cytotoxic activity by measuring the IC_{50} score and selectivity index of ethanol extract in binahong leaves towards HepG2 liver cancer cell cultures.

The research is conducted through several process, such as extracting binahong leaves using maceration method with 70% ethanol. Whereas cytotoxic test ethanol extract of binahong leaves is conducted by using MTT (*Microculture Tetrazolium Technique*) method which use a series of concentrations (1000; 500; 250; 125; 62.5; 31.2; 15.6) µg/mL and IC_{50} score are calculated through linear regression. Selectivity index is done to determine cytotoxic selectivity obtained by comparing IC_{50} score of vero cells to IC_{50} score of HepG2 liver cancer cell cultures.

Cytotoxic test results of binahong leaves ethanol extract shows moderate activity towards HepG2 liver cancer cell culture with IC_{50} score of 276,968 µg/mL, but has high cytotoxic selectivity with selectivity index score 5,741.

Keywords: Binahong leaves, cytotoxic, HepG2 cell