INTISARI

AGUSTINA, EW, 2019, UJI AKTIVITAS SITOTOKSIK EKSTRAK DAN FRAKSI TANAMAN KELADI TIKUS (*Typhonium flagelliforme* (Lodd) BI) TERHADAP SEL KANKER PAYUDARA T47D SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Keladi tikus (*Typhonium flagelliforme* (L.)) berkhasiat menghambat pertumbuhan sel kanker, menekan efek merugikan kemoterapi, antivirus dan anti bakteri. Penelitian ini bertujuan untuk mengetahui aktivitas sitotoksik ekstrak dan fraksi keladi tikus terhadap sel kanker payudara T47D dan mengetahui indeks selektivitas terhadap sel vero.

Tanaman keladi tikus diekstraksi dengan metode maserasi dengan pelarut etanol 96% dan di fraksinasi menggunakan etil asetat dan *n*-heksan. Uji aktivitas sitotoksik dilakukan dengan menggunakan metode MTT (*Microculture Tetrazolium Technique*) dengan seri konsentrasi 500; 250; 125; 62,5; 31,2; 15,6; 7,8 µg/mL, kontrol positif menggunakan seri konsentrasi 1; 0,5; 0,25; 0,125; 0,0625; 0,03125; 0,016 µg/mL. Untuk menghitung $IC_{50,}$ persamaan regresi linier dibuat antara log konsentrasi vs % viabilitas.

Ekstrak tanaman keladi tikus memiliki nilai IC_{50} sebesar 160,605 µg/mL, fraksi etil asetat sebesar 99,796 µg/mL, fraksi *n*-heksan sebesar 47,476 µg/mL menunjukkan aktivitas yang poten terhadap sel kanker payudara T47D. Fraksi air memiliki nilai IC_{50} 223,132 µg/mL sebesar dan kurang poten terhadap sel kanker payudara T47D. Nilai indeks selektivitas ekstrak etanol sebesar 5,919, fraksi etil asetat sebesar 3,172, fraksi *n*-heksan sebesar 3,715, dan fraksi air sebesar 5,052 yang menunjukkan bahwa ekstrak dan fraksi memiliki selektivitas yang baik terhadap sel normal.

Kata kunci : tanaman keladi tikus, sel T47D, sitotoksik, indeks selektivitas

ABSTRACT

AGUSTINA, EW, 2019, CYTOTOXIC ACTIVITIES OF EXTRACTS AND FRACTIONS OF RODENT TARO PLANTS (*Typhonium flagelliforme* (Lodd) BI) AGAINST BREAST CANCER CELLS T47D THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Rodent taro (Typhonium flagelliforme (L.)) has the ability to inhibit cancer cell growth, suppress the detrimental effects of chemotherapy, antiviral and anti-bacterial. This study aims to determine the cytotoxic activity of extracts and fractions of rodent tuber on T47D breast cancer cells and find out the selectivity index for vero cells.

Rodent taro plants were extracted by maceration method with 96% ethanol and fractionated using ethyl acetate and n-hexane. Cytotoxic activity tests were carried out using the MTT (Microculture Tetrazolium Technique) method with a 500 concentration series; 250; 125; 62.5; 31.2; 15.6; 7.8 µg / mL, positive control uses a concentration series 1; 0.5; 0.25; 0.125; 0.0625; 0.03125; 0.016 µg / mL. To calculate IC50, a linear regression equation was made between log concentration vs % viability.

Rodent taro extract had IC50 value of 160.605 µg / mL, ethyl acetate fraction of 99.776 µg / mL, n-hexane fraction of 47.476 µg / mL showed potent activity on T47D breast cancer cells. The water fraction has IC50 223.132 µg / mL value and is less potent for T47D breast cancer cells. The selectivity index of ethanol extract was 5.919, ethyl acetate fraction was 3.172, n-hexane fraction was 3.715, and the water fraction was 5.052 which showed that the extract and fraction had good selectivity for normal cells.

Keywords: rodent taro plants, T47D cells, cytotoxic, selectivity index