

## INTISARI

### **SETYARA, M., 2016, UJI SITOTOKSIK EKSTRAK ETANOL DAN FRAKSI *n*-HEKSANA UMBI BIDARA UPAS (*Merremia mammosa* (Lour.) Haller.f.) TERHADAP SEL KANKER PAYUDARA T47D.**

Kanker payudara pada wanita merupakan peringkat pertama dibandingkan kasus kanker lainnya. Umbi bidara upas (*Merremia mammosa* (Lour.) Haller f.) secara empiris umbi digunakan untuk mengobati tumor. Penelitian ini bertujuan untuk mengetahui aktivitas sitotoksik ekstrak etanol dan fraksi *n*-heksana umbi bidara upas terhadap sel kanker payudara T47D dan untuk mengetahui indeks selektivitas ekstrak etanol terhadap sel vero.

Umbi bidara upas diekstrak menggunakan metode maserasi dengan pelarut etanol 96 % dan difraksinasi dengan pelarut *n*-heksana. Uji aktivitas sitotoksik ekstrak etanol dan fraksi *n*-heksana umbi bidara upas dilakukan dengan metode *Microculture Tetrazolium Technique* (MTT) dengan seri konsentrasi pada ekstrak 1000; 500; 250; 125; 62,5; 31,2; 15,6 µg/ml dan pada fraksi *n*-heksana 500; 250; 125; 62,5; 31,2; 15,6; 7,8 µg/ml. Persamaan regresi linier dibuat antara log konsentrasi dengan % viabilitas, kemudian digunakan untuk menghitung IC<sub>50</sub>. Selektivitas aktivitas sitotoksik diketahui dengan persamaan indeks selektivitas, yaitu nilai IC<sub>50</sub> sel vero berbanding IC<sub>50</sub> sel T47D.

Hasil uji aktivitas sitotoksik ekstrak etanol umbi bidara upas memiliki nilai IC<sub>50</sub> sebesar 165,163 µg/ml (> 100 µg/ml) dimana tidak menunjukkan aktivitas sitotoksik dan IC<sub>50</sub> fraksi *n*-heksana sebesar 28,567 µg/ml (< 100 µg/ml) menunjukkan aktivitas sitotoksik yang poten terhadap sel kanker payudara T47D. Indeks selektivitas ekstrak etanol terhadap sel vero didapatkan nilai sebesar 4,473.

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Kata kunci : umbi bidara upas, sel T47D, sitotoksik, indeks selektivitas

## ABSTRACT

### **SETYARA, M., 2016, CYTOTOXIC ASSAY of BIDARA UPAS TUBER (*Merremia mammosa* (Lour.) Haller f.) ETANOL EXTRACT AND *n*-HEKSANA FRACTION AGAINST BREAST CANCER T47D CELLS.**

Breast cancer in women is the first rank compared to other cancer cases. Bidara upas tuber (*Merremia mammosa* (Lour.) Haller f.) was empirically used to treat tumors. This study aimed to determine the cytotoxic activity of ethanol extract and *n*-hexane fraction bidara upas tuber against breast cancer T47D cells and determine the selectivity index of ethanol extract against vero cells.

Bidara upas tuber was macerated by 96% ethanol and was fractionated by *n*-hexane. The cytotoxic activity test of ethanol extract and *n*-hexane fraction of bidara upas tuber was done using Microculture Tetrazolium Technique (MTT) method with a series for extract concentration 1000; 500; 250; 125; 62.5; 31.2; 15.6 µg/ml and for fraction of *n*-hexane of 500; 250; 125; 62.5; 31.2; 15.6; 7.8 µg/ml. Cell death was calculated determine used linear regression equation between log concentration cell with % viability. The selectivity of cytotoxic activity was known by selectivity index equation, which was IC<sub>50</sub> of vero cells proportionate with IC<sub>50</sub> of T47D cells.

The results of cytotoxic activity of ethanol extract of bidara upas tuber have IC<sub>50</sub> value of 165,163 µg/ml (> 100 µg/ml), it was not showed potent activities and IC<sub>50</sub> value was showed fraction of *n*-hexane bidara upas of 28.567 µg/ml(< 100 µg/ml), it was showed potent active against breast cancer cells T47D. Selectivity index of ethanol extract in against vero cells was gotten value of 4.473.

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Key words : bidara upas tuber, T47D cells, cytotoxic, selectivity index