# ABSTRAK

Kanker payudara adalah sebuah tumor yang tumbuh dalam jaringan payudara dan merupakan jenis kanker yang paling banyak di Indonesia. Pengobatan untuk pasien kanker payudara dilakukan dengan terapi lokal seperti operasi dan terapi sistemik meliputi kemoterapi, terapi hormon dan imunoterapi. Namun penggunaan metode tersebut belum memberikan hasil yang memuaskan karena penggunaan terapi tersebut menyerang sel normal dan dapat menimbulkan efek samping. Oleh karena itu, diperlukan penemuan obat antikanker yang selektif dan tidak menimbulkan efek samping. Obat baru antikanker ini memanfaatkan salah satu bagian tanaman di Indonesia. Salah satu bagian tanaman yang digunakan adalah daun belimbing wuluh. Pada penelitian ini dilakukan uji aktivitas antikanker ekstrak etil asetat daun belimbing wuluh (averrhoa bilimbi L) terhadap cell line T47D. Hasil pengujian berupa viabilitas cell line T47D yang kemudian dihitung nilai IC50. Hasil pengujian kualitatif menunjukkan bahwa ekstrak etil asetat daun belimbing wuluh mengandung kuersetin dengan nilai rf sebesar 0,79. Pengujian antikanker ekstrak etil asetat daun belimbing wuluh dilakukan dengan metode MTT assay. Hasil nilai IC50 ekstrak etil asetat daun belimbing wuluh adalah 154,231 µg/mL yang menunjukkan bahwa ekstrak ini memiliki aktivitas antikanker yang lemah terhadap sel T47D.

**Keywords** : Kanker payudara, averrhoa bilimbi L, cell line T47D.

## *ABSTRACT*

Breast cancer is a tumor that grows in breast tissue and is the most common type of cancer in Indonesia. Treatment for breast cancer patients is carried out with local therapy such as surgery and systemic therapy including chemotherapy, hormone therapy and immunotherapy. However, the use of this method has not provided results because the use of this therapy attacks normal cells, causing side effects. Therefore, it is necessary to find anticancer drugs that are selective and do not cause side effects. This new anticancer drug uses one part of a plant in Indonesia. One part of the plant used is starfruit leaves. In this study, the anticancer activity of ethyl acetate extract of starfruit leaves (*averrhoa bilimbi* L) was tested against the T47D cell line. The test results are the viability of the T47D cell line, which then calculates the IC50 value. Qualitative test results show that the ethyl acetate extract of starfruit leaves contains quercetin with a comparative RF value of 0.72 and an extract RF value of 0.79. Anticancer testing of ethyl acetate extract of starfruit leaves was carried out using the MTT assay method. The test groups consisted of media control, cell control, solvent control and treatment groups with six different concentrations (1,000; 500; 250; 125; 62.5 and 31.25). The IC50 value is calculated based on the linear regression equation between log concentration and percent cell viability. The IC50 value of the ethyl acetate extract of starfruit leaves is 154.231 µg/mL, which indicates that the ethyl acetate extract of starfruit leaves is weak against T47D cells.


Keywords: Breast cancer, averrhoa bilimbi L, cell line T47D