

- EXTRACTS  
- MYELOMA PROTEINIS

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**SKRIPSI**

**ARIE AYU MALAHAYATI**

**UJI AKTIVITAS ANTIKANKER EKSTRAK ETHER  
DAN EKSTRAK METANOL LUMUT HATI  
(*MARCHANTIA CF. PLANILOBA* STEPH.) TERHADAP  
KULTUR SEL MIELOMA MENCIT DENGAN  
METODE VIABILITAS SEL**

**MILIK  
PERPUSTAKAAN  
UNIVERSITAS AIRLANGGA  
SURABAYA**



**FAKULTAS FARMASI UNIVERSITAS AIRLANGGA  
BAGIAN ILMU BAHAN ALAM  
SURABAYA  
2004**

**Lembar Pengesahan**

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Dibuat Untuk Memenuhi Syarat Mencapai Gelar Sarjana Farmasi Pada  
Fakultas Farmasi Universitas Airlangga  
2004

Oleh :

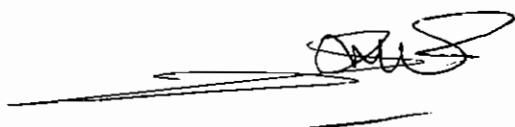
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## ABSTRACT

Some research in Japan resulted that methanol extract of livewort (*Marchantia polymorpha* L.) showed anticancer activity against KB cell. Other species of genus *Marchantia*, which are *Marchantia palacea* Bertol var *diptera* (Mont) and *Marchantia tosana* Steph. also showed the same activity. Based on similarity of the genus, this research will determine anticancer activity of livewort (*Marchantia* cf. *planiloba* Steph.).

The ether extract and methanol extract of livewort (*Marchantia* cf. *planiloba* Steph.) were tested for its anticancer activity using viability test method on cell culture of mice myeloma. The myeloma cell were incubated in RPMI media contained 10 % of Fetal Bovine Serum (FBS). The concentration of ether extract and methanol extract of livewort (*Marchantia* cf. *planiloba* Steph.) were 1000 ppm, 100 ppm, 10 ppm and 1 ppm. Etoposide was used as positive control in three different concentration (100 ppm, 10 ppm and 1 ppm) while RPMI 1640 was used as negative control. Their solution were added into myeloma cell culture in microwell plate and then incubated for 24 hours, at 37°C in CO<sub>2</sub> incubator. Determination of anticancer activity used trypan blue exclusion method, with parameter value was viability of myeloma cell.

Analysis of varian of the data showed that ether extract and methanol extract of livewort (*Marchantia* cf. *planiloba* Steph.) have anticancer activity against cell culture of mice myeloma. Probit analysis of the data indicates the LC<sub>50</sub> of ether extract of (*Marchantia* cf. *planiloba* Steph.) was 163,21 ppm and methanol extract of (*Marchantia* cf. *planiloba* Steph.) was 358,95 ppm.

Thin layer chromatography was used to identify the phytochemical content of livewort (*Marchantia* cf. *Planiloba* Steph.). The thin layer chromatogram profile suggested that ether and methanol extract of livewort (*Marchantia* cf. *Planiloba* Steph.) contains terpenoid or steroid compounds.

**Keywords :** Ether extract and methanol extract of livewort (*Marchantia* cf. *planiloba* Steph.), cell culture of mice myeloma, anticancer, viability test.