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Uji Aktivitas Antikanker Ekstrak Eter Dan Ekstrak Metanol Lumut Haty (Marchantia cf. Planiloba Steph.) Terhadap Kultur Sel Mieloma Mencit Dengan Metode Viabilitas Sel

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Lembar Pengesahan

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

SKRIPSI

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

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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 CO₂ 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 LC₅₀ 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.