

ABSTRACT

Background: lemongrass (*Cymbopogon citratus*) has a wide variety of uses and can be applied in the fields of cosmetics, traditional medicine and the pharmaceutical field. Traditional medicine derived from lemongrass often becomes an alternative to cure inflammation due to pathology. The process of healing has various parameters, namely epithelialization, number of PMN cells and increased number of fibroblast cells and collagen fibers. Lemongrass are found in Indonesia so that lemongrass can be used as an alternative in healing inflammation by conducting a preliminary study in the form of BHK-21 fibroblast cell viability test after 24 hours of extract lemongrass. **Purpose:** To determine the viability of extract lemongrass against BHK-21 fibroblast cell cultures. **Methods :** BHK-21 fibroblast cells were taken from neonatal hamsters' kidneys and planted in 96 well plates. Extracts lemongrass with concentrations of 100%, 50%, 25%, 12.5%, 6.25%, 3.13% and 1.56% were included in each well prepared and incubated for 24 hours. MTT Assay was carried out to see the viability of extract lemongrass on fibroblast cells. **Results:** extract lemongrass viable against BHK-21 fibroblast cells at a concentration of 100%. There is a decrease in viability at concentrations of 50% to 1.56%. **Conclusion:** The 100% concentration showed the highest viability of BHK-21 fibroblast cells and extract lemongrass had potential in wound healing.

Keywords: extract lemongrass, BHK-21 fibroblast cells, viability

ABSTRAK

Latar Belakang : Tanaman serih (*cymbopogon citratus*) memiliki berbagai kegunaan yang luas dan dapat diaplikasikan dalam bidang kosmetik, pengobatan tradisional dan bidang farmasi. Pengobatan tradisional yang berasal dari serih seringkali menjadi alternatif untuk menyembuhkan inflamasi akibat dari patologis. Proses dari penyembuhan memiliki berbagai parameter yaitu epitelisasi, jumlah sel PMN dan bertambah jumlah sel fibroblast maupun serabut kolagen. Tanaman serih wangi banyak ditemukan di Indonesia sehingga tanaman serih wangi bisa digunakan sebagai alternatif dalam penyembuhan inflamasi dengan dilakukan penelitian pendahuluan berupa uji viabilitas sel fibroblast BHK-21 setelah pemberian ekstrak tanaman serih selama 24 jam. **Tujuan :** Mengetahui viabilitas ekstrak tanaman serih terhadap kultur sel fibroblas BHK-21. **Metode :** Sel Fibroblast BHK-21 diambil dari ginjal hamster neonatal dan ditanam dalam 96 well plate. Ekstrak tanaman serih dengan konsentrasi 100%, 50%, 25%, 12.5%, 6.25%, 3.13% dan 1.56% dimasukkan ke dalam masing-masing well yang telah disiapkan dan diinkubasi selama 24 jam. MTT Assay dilakukan untuk melihat viabilitas ekstrak tanaman serih terhadap sel fibroblast. **Hasil :** Ekstrak tanaman serih viabel terhadap sel fibroblast BHK-21 pada konsentrasi 100%. Terdapat penurunan viabilitas pada konsentrasi 50% sampai dengan 1.56%. **Kesimpulan :** Konsentrasi 100% menunjukkan viabilitas sel fibroblast BHK-21 paling tinggi dan ekstrak tanaman serih memiliki potensi dalam *wound healing*.

Kata kunci : ekstrak tanaman serih, sel fibroblast BHK-21, viabilitas