ABSRACT

Centella asiatica L. urban is a reputed medicinal plant used in the treatment of various diseases, but the efficacy between ethanol extract and terpenoid fraction of Centella asiatica L. urban remain unknown. This objective of this study was to find the effective dose and compare the wound-healing potential of the ethanol extract and terpenoid fraction of the plant in fibroblast cell proliferation. The study was done on fibroblast cell culture BHK-21 (Baby Hamster Kidney-21). The ethanol extract divide into 3 concentration, which is 125 µg/mL, 250 µg/mL, and 500 µg/mL. The terpenoid fraction divide into 3 concentration, which is 160 µg/mL, 320 µg/mL, and 640 µg/mL. The ethanol extract and terpenoid fraction applied into fibroblast cell culture and incubated for 24 hours. After that, ELISA reader used to read the result of these experiment. The result were compared and examined with Kruskal-Wallis Test end then Z test. The result was the increasing of fibroblast proliferation happened when terpenoid fraction applied to the cultures. The study shows that terpenoid fraction of Centella asiatica can increase the fibroblast proliferation because of asiaticoside, asiatic acid, and madecassic acid compounds.

Keywords: Centella asiatica L. urban, ethanol extract, terpenoid fraction, fibroblast cell proliferation