ABSTRACT

**Background.** Noni (Morinda citrifolia L) has been used in folk medicine for a long history and is reported to have a broad range of therapeutic effects, including antibacterial, antiviral, analgesic, antihiperglikemic, and anti-inflammatory, but there is no experiment before that shows the value of toxicity in its leaves, especially in fibroblast cell. **Purpose.** The aim of this study was to identify the effect of noni leaves extract (Morinda citrifolia L) and the effect of its toxicity in fibroblast cell with MTT assay. **Method.** The sample was fibroblast cells culture BHK-21 (Baby Hamster Kidney-21). The noni leaves extract divide into 5 concentration, 2mg/ml; 5 mg/ml; 7 mg/ml; 10 mg/ml; and 12 mg/ml. These extract applied into fibroblast cell culture and incubated in 24 hours. After incubated, ELISA reader used to read the result of this experiment. The data were compared and examined with one-way ANOVA with HSD Tukey. **Result.** The study showed that noni leaves extract is non toxic in fibroblast cell. From the study also showed that increasing of fibroblast proliferation happened when noni leaves extract applied to the culture therefore its safe to be use for medicine. **Conclusion.** Noni leaves extract is non toxic use in fibroblast cell

**Keywords :** noni leaves extract, fibroblast cell, toxicity