

## ABSTRACT

**Background:** *Culex quinquefasciatus* is one of the main vector that responsible for transmitting *Wuchereria bancrofti* which causing lymphatic filariasis. Mosquito control is needed to prevent the transmission, and the most effective method is the one that directed against the larvae stage rather than fight against adult mosquito. Hence, an environmental friendly and more economic larvicide made up of *Eurycoma longifolia* jack barks extract will be tested. With the extraction method that using ethanol as the solvent, active substances of this extract is expected to kill the larvae.

**Methods:** The *E. longifolia* bark extract were made using ethanol as the solvent. Then, the extract were placed in mini cup with different concentration with one cup for control without it. Each mini cup will introduced with 10 third-fourth instar larvae of *Cx. quinquefasciatus*. The numbers of dead larvae were counted after 24 hours of exposure and the percentage of mortality was reported.

**Results:** The obtained  $LC_{50}$  is 611.954 ppm and the  $LC_{90}$  is 3081.132 ppm.

**Conclusion:** Ethanol extract of *E. longifolia* bark has a low larvicidal activity against *Cx. quinquefasciatus*.

**Keywords:** *Culex quinquefasciatus*, *Eurycoma longifolia*, Larvicide, Ethanol extract.