

## ABSTRACT

Sholichah, Z. 2014. **Antibacterial Efectivity of Ethanolic Extract from *Melaleuca leucadendra* Against *Vibrio cholerae* In Vitro**. Final Assignment, Medical Program, Faculty of Medicine. Brawijaya University. Supervisor: (1). Dra. Sri Winarsih, Apt., M.Si (2) dr. Sudiarto, MS

Cholera that cause by *Vibrio cholerae* infection was becoming a global health problem and had high mortality rate to any kind of age, especially for children. *Vibrio cholerae* reported to be a resistance case to severa antibiotics in endemic and epidemic region of cholerae, so it need to be conducted to find other alternative therapy. *Melaleuca leucadendra* is one of the plants that suspected having antibacterial effect because it has active substance like flavonoid, tannin, and volatile oil. The experiment aims to know the affectivity of giving *Melaleuca leucadendra* ethanolic extract againts *V. cholerae*. Using experimental design with agar dilution method to find Minimum inhibitory Concentration (MIC). Sample that used for experiment is *V. cholerae* isolated from Microbiology Laboratories Medical Faculty of Brawijaya. The extract ethanol of *Melaleuca leucadendra* concentration are 0%, 1%, 2%, 3%, 4%, 5%, and 6% and concentration of *V. cholerae* is  $10^4$  CFU/ml. Inhibitory growth of bacterial is observed by agar dilution method and from colony thickness. Result of statistic test shown that ethanolic extract of *Melaleuca leucadendra* significantly inhibit growth of *V. cholerae* (Kruskal Wallis  $p < 0.05$ ). and there is a relation between the increase ethanolic extract of *Melaleuca leucadendra* leaves with decrease of *V. cholerae* colony thickness ( $R = -0,982$ ). From this research can be concluded that ethanolic extract of *Melaleuca leucadendra* leaves have antibacterial effect against *V. cholerae* In Vitro with MIC 5%.

Keywords: Antibacterial, *Melaleuca leucadendra*, *Vibrio cholerae*