

Status dan perkembangan resistensi *Aedes aegypti* (Linnaeus) (Diptera: Culicidae) strain Bandung, Bogor, Makassar, Palu, dan VCRU terhadap insektisida permethrin dengan seleksi lima generasi

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Abstract	<p><i>Aedes aegypti</i> (Linnaeus) (Diptera: Culicidae) is the main vector of dengue fever. In Indonesia, insecticides, especially pyrethroids, such as permethrin, have been effectively used to control <i>Ae. aegypti</i>. Notwithstanding that permethrin has been used since 1980s, information regarding the status and development of resistance of <i>Ae. aegypti</i> to permethrin is still limited and need further update. This study was conducted using the WHO standard test method. The aims was to determine the resistance status, and changes in resistance level of four field strains (Palu, Makassar, Bandung, Bogor) and susceptible strain (VCRU) of <i>Ae. aegypti</i> after the selection with permethrin for five generations. The results showed that resistance status of all field strains to permethrin were considered as high. The value of RR50 ranged between 10.5 to 25.7 fold. Bandung strain had the highest value of RR50 (22.5 fold), while Makassar strain had the lowest value of RR50 (10.5 fold). The fifth generation (F5) of five selected <i>Ae. aegypti</i> strains had the level of resistance 5 to 18 times higher than their parental. Knowledge of resistance status in a given area accompanied with the understanding about the development of resistance can be used to design a better vector management.</p>
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