



## AGE – RELATED RESPONSIVENESS OF *ANOPHELES ARABIENSIS* LARVAE (DIPTERA: CULICIDAE) TO *BACILLUS SUBTILIS* ISOLATED FROM INSECT CADAVERS IN NIGERIA

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### ABSTRACT

Anopheline mosquitoes are exclusive vectors of human malaria and a handful of these species predominate as the most notorious malaria vectors. Nigeria has been known for its malaria endemic status for more than three decades. The morbidity and mortality rates associated with the infection despite the various methods of control are the greatest cause of concern. *Bacillus subtilis* isolated from Housefly cadavers was tested *in vitro* on different larval stages of *Anopheles arabiensis* to ascertain its larvicidal potency. Second and fourth instars of *Anopheles arabiensis* were subjected to varying concentration of *Bacillus subtilis* for 48 hours. Significant differences were recorded in the susceptibility of the insect instar larvae to *Bacillus subtilis*. The  $LC_{50}$  and  $LC_{75}$  of 0.862 mg/ml and 1.245 mg/ml respectively for 2nd instars after 24 hours of post treatment were recorded, while  $LC_{50}$  and  $LC_{75}$  of 2.36 mg/ml and 4.012 mg/ml respectively were recorded for 4<sup>th</sup> instars. Values obtained in *Bacillus thurengiensis isrealensis* treatment groups were not significantly different from the tested bacterium.

**Keywords:** *Anopheles* mosquitoes, Malaria, *Bacillus subtilis*, and *Bacillus thurengiensis isrealensis*.