

## **CHECK FOR *KDR* MUTATIONS (1016 AND 1534) IN DIFFERENT FIELD MOSQUITO POPULATIONS OF *Aedes aegypti* IN BRAZIL**

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**Abstract** Several mutations in voltage gated sodium channel ( $NA_v$ ) have been identified in *Aedes aegypti* populations worldwide. The variations in the V1016I and F1534C are the most related to knockdown resistance to pyrethroids. A study was carried out to determine the frequency of V1016I and F1534C  $NA_v$  by real-time PCR in four natural populations of *Ae. aegypti* of different region of Brazil during 2021 and compared with susceptible population (Rockefeller strain) of *Ae. aegypti*. In natural populations, average frequencies of V1016I varied between to 30.5 and 55% were found and frequencies of F1534C between 53.8 and 100% comparing with the susceptible strain that presented no frequencies to V1016I and F1534C. The results showed that F1534C frequencies are higher than V1016I frequencies in natural populations of *Ae. aegypti* in Brazil providing useful information for future control.

**Key words** *Aedes aegypti*, resistance, kdr mutation, V1016I, F1534C