

## Documents

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**Strain-specific differences in mating, oviposition, and host-seeking behavior between Wolbachia-infected and uninfected *Aedes albopictus***

(2010) *Journal of the American Mosquito Control Association*, 26 (3), pp. 265-273. Cited 5 times.

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### Abstract

Wolbachia are maternally inherited bacteria that cause various reproductive alterations in their arthropod hosts, including cytoplasmic incompatibility. In this study, we compared mating, oviposition, and host-seeking behavior of Wolbachia-infected (Houston HOU, Gainesville GNV) and Houston uninfected (HT1) *Aedes albopictus*. In mating assays with virgin mosquitoes, mating success of Wolbachia-infected males was significantly higher than uninfected strains. Mating success was highest with HOU males exposed to infected (95) and uninfected females (100), and lowest with HT1 males exposed to infected (20) and uninfected (25) females. Results suggested that Wolbachia infection may influence the reproductive behavior of this mosquito. There were no clear differences in oviposition responses between strains, with all strains ovipositing significantly more often on hay infusion and larval rearing water than on water controls and least frequently on 4-methylphenol. Strains of *Ae. albopictus* females were host-seeking a human when given a choice. Responses to a human arm, acetone, CO<sub>2</sub>, and dichloromethane were generally higher from the Houston strains than from the GNV strain. Responses of HOU and HT1 females differed from GNV with greater responses to the arm and CO<sub>2</sub>. © 2010 by The American Mosquito Control Association, Inc.

### Author Keywords

*Aedes albopictus*; host-seeking; mating; oviposition; Wolbachia

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