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The Influence of Mating on the Male Accessory Gland Protein in *Aedes albopictus*(Diptera: Culicidae)

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In this study, we examined that the nutritional state and age of the males affect the growth and the production of protein of MAG and transfer of MAG protein and the effects on female mating behavior. There is a significant difference between the MAG sizes of *Aedes albopictus* from the starved male with a mean gland width of 4.85um and the fed male of 5.21um.

The total protein content of MAGs from starved males maintained on water was significantly lower than those from sugar-fed males. Male nutrition therefore affects the production of male accessory proteins. The difference between the amount of protein between unmated and mated MAGs represents the amount of protein transferred to the female during mating. A significantly greater amount of protein was transferred from the MAGs after mating.

These results showed that during the process of mating, more MAG substances are transferred in the fed group than in the starved group because in the fed group, there are more substances synthesized; thus, there are more MAG proteins transferred to females during mating.

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The Male Accessory Gland Substances Modulate Mating Behavior of *Aedes togoi*(Diptera: Culicidae)

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In some insects, the male accessory gland secretions inhibit remating by the female. This effect is initiated by chemical means and mediated through the central nervous system and is often characterized by an active display of resistance by the female to further copulatory attempts.

In this study, we examined that the nutritional state of *Aedes togoi* males affects the production of male accessory gland substances and the effects on female mating behavior.

There is a significant difference between the females injected the different equivalent of male accessory gland substances of *Aedes togoi* from control with 85% of the mating rate, 0.5 gland equivalent with 54%, 1.0 gland equivalent with 48%, and 2.0 gland equivalent with 43%, respectively. The results obtained represent that the male accessory gland substances of *Aedes togoi* modulated the female mating behavior.