

Some biological aspects of lab reared *Migonemyia migonei* (Diptera, Psychodidae, Phlebotominae), submitted with different carbohydrates and blood sources

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Sandflies colonies maintained in the laboratory are important to know about their biology, physiology, behaviour, vector competence and parasite interaction. The species *Migonemyia migonei* is an important vector of some *Leishmania* transmission in South America. So We colonized *M. migonei* from Baturité, Ceará. To improve mass production of sandflies, we designed some experiments to analyse the life cycle of this species; to verify the female fertility fed on different blood sources (human, hamster, mouse and chick); and ascertain which of the carbohydrate sources (prune, plum syrup, apple and molasses) to compare the adult life time. We used 20 three-day old sandflies females fed on different blood meal sources to verify the fertility and then the females were transferred to tubes for oviposition. To life cycle analysis, We transferred 150 eggs to jars, and observed, the development time of each stage of immatures phase and adult. To ascertain the nutritional food sources provided longer longevity, 20 sandflies put in each cage with different carbohydrates and all experiments repeated three times. The average of the phases of the life cycle of *M. migonei* was 57,5 days, the time for the eggs hatch was 4,6 days, the L1 instar with 9,3, L2 with 7,5, L3 with 10,5, L4 with 12,3 and the pupal phase with 13,3 days. The average of produced eggs by different blood source was 36 eggs by female fed in hamster blood, followed by human blood (23), mouse (20) and chick (15). The comparison of the fertility data of the *M. migonei* with different blood sources showed significant differences to egg production, except to human x mouse blood. The observed longevity of *M. migonei* fed with apple (13 days) was longer than molasses (9), prune (7), plum syrup (4). Probably different blood and sugars sources can affect fertility, fertility and longevity in *M. migonei* productivity in the laboratory. The results contribute to the improvement of conditions for sandfly colony maintenance.

Key Words: vector biology, colonization, Phlebotomine

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