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**Effect of blood meal source on feeding preference, fecundity and egg hatching success of
Aedes aegypti (L.)**

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Oogenesis of non-autogenous mosquitoes solely depends on the hematophagy (blood feeding behaviour) of female mosquitoes. Apart from the regular sugar meal, female mosquitoes feed on blood of vertebrate hosts to acquire nutrition required for oogenesis. Success of hematophagy depends on the host seeking behaviour of female mosquitoes, which is governed by the host preference displayed by mosquitoes and by their host seeking ability. Host preference is believed to be due to the nutritional benefits mosquitoes gain, by feeding preferentially on certain blood sources over others. The aim of the current study was to identify the feeding preference and the effect of the different blood sources on reproductive success of *Aedes aegypti*. Five different blood sources, viz., human, cattle, rabbit, sheep, and dog, were given to laboratory reared colonies of *Aedes aegypti* with the use of an artificial membrane feeding system. The feeding behaviour of mosquitoes was observed, and the eggs laid by female mosquitoes fed on each blood meal source were counted. The eggs were allowed to hatch separately. The number of female mosquitoes approaching the blood meal within the first fifteen minutes, and the successfully fed percentage after every blood meal was used to determine the feeding preference. The number of eggs laid per female mosquito during first gonotrophic cycle was taken as the fecundity. All eggs were allowed to hatch separately to determine the mean egg hatching percentage. Each trial was replicated eight times. It was observed that mosquitoes displayed significantly higher preference for human blood over other blood meal sources, and the average number of eggs laid by a female mosquito, the fecundity, fed on human blood, (104 ± 4.8 , $P < 0.05$) was significantly higher over other blood meal sources. The mean percentage of egg hatching for human blood (83.6 ± 0.3) and for cattle blood (81.8 ± 0.2) were not significantly different ($P > 0.05$) from each other, while those values were significantly different from the values resulted for other given blood meal sources: rabbit (74.8 ± 0.2), sheep (51.7 ± 1.3) and dog (27.8 ± 1.2). According to the results obtained, it can be safely concluded that *Aedes aegypti* feed preferentially on human blood, while the source of the blood meal had an effect on fecundity, whereas the egg hatching percentage remain unaffected from the source of blood meal.

Key words: *Aedes aegypti*, blood meal source, feeding preference, fecundity.

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