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## ESTIMATING MOSQUITO/HOST CONTACT FROM OVITRAP DATA: A CASE STUDY FOR *AEDES ALBOPICTUS* IN ROME

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*Aedes albopictus* is an invasive mosquito species now well established in Southern Europe, whose public health relevance is associated not only to the aggressive daytime biting behaviour, but also to the capacity to transmit arboviruses, such as Dengue, Chikungunya and Zika. In non-endemic European countries, the potential risk of autochthonous transmission of these exotic arboviruses is directly linked to the likelihood of importation of human cases (which itself is associated to their incidence worldwide) along with the potential vector abundance. The Zika epidemics occurring in 2016 in South America, in addition to the large number of yearly Dengue cases worldwide, increases the possibility of virus importation to Italy, where areas (mostly urban) with high density of *Ae. albopictus* are at risk for autochthonous transmissions. The actual potential risk should be addressed by an effective, and at the same time economically sustainable, surveillance system pertaining to stratify risk areas.

A common method to evaluate the likelihood of vector-borne disease transmission and spread is by assessing  $R_0$ , i.e. the number of secondary infections arising from a primary case. Although several models have been developed, the accuracy of estimates of relevant parameters for *Ae. albopictus* is often inadequate. We here present a linear regression model built to analyse the relationship between commonly used surveillance data obtained by ovitrap collections and the mean number of host-seeking *Ae. albopictus* estimated by Human Landing Collection (HLC), based on data collected every three days in Rome from July to October 2014. The model shows a positive relationship between ovitraps and HLC data and allows estimation of the number of expected daily mosquito bites per host based on eggs counts in ovitraps, opening the possibility of using ovitrap data to estimate actual entomological parameters of key epidemiological interest, such as human/vector contact, for *Ae. Albopictus*.