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Short Communication

Mayaro Virus: An Agent Capable to Cause Major Epidemics

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Mayaro Virus (MAYV) is an Alphavirus Closely Related to Chikungunya Virus (CHKV). MAYV is the causative agent of Mayaro Fever, an acute, flu-like febrile syndrome characterized by headache, myalgia, artharlgias, vomiting, diarrhea, retro-orbital pain and rash [1]. Arthralgia are often severe and prostrating, lasting for up to a year, being recurrent relapses possible [2,3].

From its original isolation in Trinidad in 1954, MAYV spread causing sporadic cases or small epidemics in Brazil, Bolivia, Columbia, Guyana and French Guiana, Peru, Venezuela, Haiti and Surinam (3). Additionally, serological evidence reveals the presence of MAYV in Costa Rica, Guatemala, and Panama, México and Northern Argentina [4]. MAYV is actually prevalent in most tropical countries from South and Central America and in the Caribbean region [5].

Recently pandemic of CHIKV [6] raises the question if MAYV possess a similar potential to emerge in an urban cycle [7].

MAYV is mainly transmitted by *Haemagogus janthinomys* [8], and less frequently by *Aedes serratus*, *Psorophora ferox*, *Sabethes* spp [9]. and *Culex* spp. More recently, *Aedes aegypti* has been also found capable to transmit MAYV, although its potential as a vector seems to be limited because short viremia and low titers of MAYV into blood [10,11]. However, any triggering event capable to increase the spatial and temporal interaction between viremic humans and mosquitoes [12] as it can be the case for mass-tourism-or any genetic mutation conducting to greater titers of viremia may improve the capability *of A. aegypti* to transmit MAYV [13,14].

This virus has spread to many countries of south and Central America, introduced by sick travelers or migratory birds. Therefore, it is possible to imagine a future scenario in which MAYV, after adaptation to an urban cycle, causes major epidemics. Moreover, Mayaro fever cases in Iquitos demonstrate the opportunity for viremic people to contact urban vectors. Furthermore, reports in 2010 of travelers returning to France and the Netherlands with serological evidence of recent MAYV infection illustrate opportunities for export the virus beyond its endemic range [15].

Then, MAYV is potentially capable to trigger urban outbreaks and to spread beyond their natural reservoirs, even causing mayor epidemics. Regarding the recent history of Zika and CHKV, MAYV must be considered as a potential threat of pandemic scale.

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