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Letter to the Editor

When has it been studied about La Crosse Virus?: Bibliometric analysis of world scientific production

Dear Editor

La Crosse encephalitis is an encephalitis caused by La Crosse virus (LACV) of the *Bunyaviridae* family and of the genus *Orthobunyavirus* and has a mosquito as vector (*Aedes triseriatus*) [1]. It is widely distributed in Latin America, the Caribbean and in the USA, especially in the Appalachian and Midwestern regions [2].

Recently there has been an increase in cases in the southeastern United States, an explanation for this may be that the mosquito *Aedes albopictus*, which is also an effective vector of the La Crosse virus, has spread through the SE of the EE, Replacing *Aedes aegypti* in most areas (which is not an efficient virus vector) [3].

Based on the above, an observational, descriptive, bibliometric study was carried out on the world scientific production of LACV. They were searched in three important regional and international: Science Citation Index (SCI), Scopus (English), Medline/Pubmed (via GoPubMed®), LILACS (Spanish), SciELO (Spanish) and IMBIOMED (Spanish). This search strategy used the following keywords: "La Crosse Encephalitis" AND "Paraguay"; and in the same way with the rest of the countries; in both English and Spanish. In addition; "LACV" was used instead of La Crosse Encephalitis to include searches. No time restriction was applied.

A total of 32 related records were retrieved in our search; 17 articles (11 from the United States, 1 from Brazil, Canada and Germany) from Medline/Pubmed were retrieved 5 articles (3 from Brazil and 1 from Italy and Japan), and from SCI 5 items were recovered (3 from United States, 1 from Germany, India, and South Africa), no articles were recorded in the SciELO, LILACS and IMBIOMED databases.

All the articles found were in English, while the institution with more research was the Centers for Disease Control and Prevention, and at the same time the author with the largest number of publications was DeFoliart (4 articles in SCOPUS). The h index in SCI was 4 (Average of citations 17) and in SCOPUS the index h was 9.

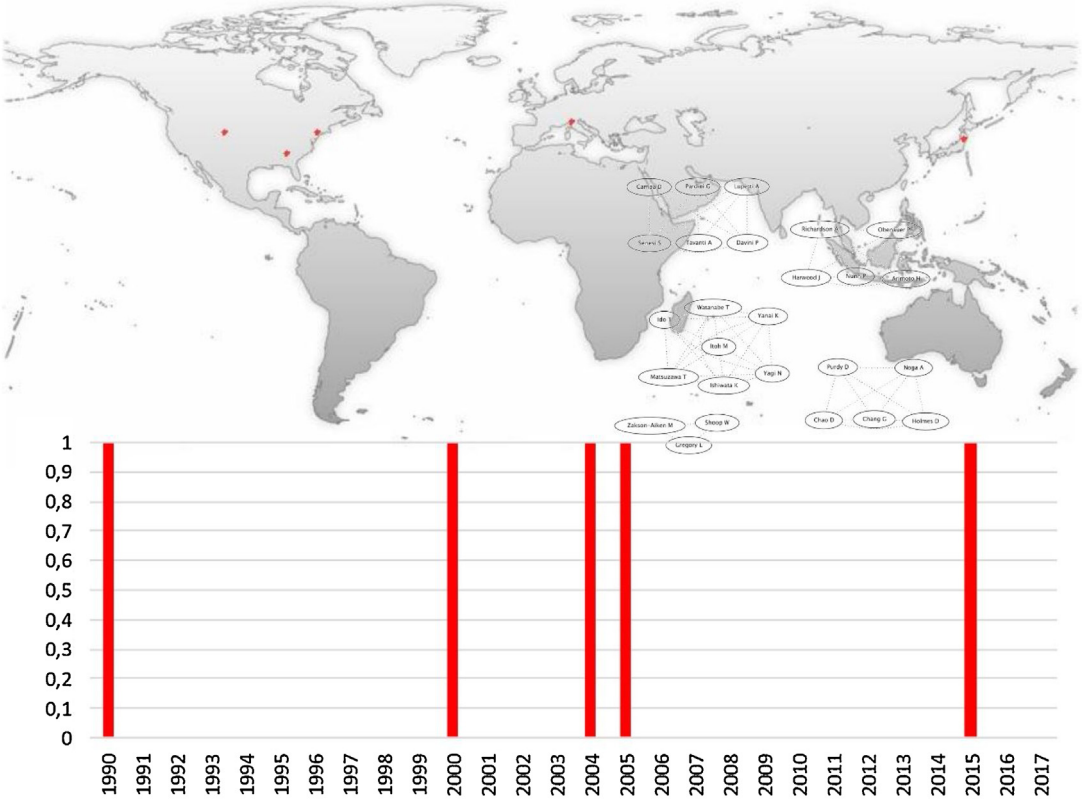

Fig. 1. Major international research cooperation networks on LACV (from GoPubMed®), including also trends in time for scientific production (1990–2017).

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The bibliometric analysis of viruses in recent years has been increasing exponentially (Fig. 1), with this analysis it can be seen that there are still viruses with little study as LACV in comparison to the research in Zika [4], Mayaro [5], Chikungunya [6], O'nyong'nyong [7] and the Toscana Virus [8], among others.

The country that leads the research in this virus is USA and Brazil, as it is in the case of other viruses [4–8]. Although most cases recover without any complications, and very low mortality, there is a group of patients who presented neurological sequelae (recurrent crisis, hemiparesis or neurocognitive alterations), this is important to note since other circulating viruses in the Region currently also present neurological sequelae, which could confuse the diagnosis, another important point to highlight is that while *A. aegypti* is not a good vector for this virus, it can promote the spread of this virus throughout America and another Region of the world, which can be facilitated by air traffic [9].

As a conclusion, it can be seen that research on this virus is very low compared to research on other viruses, so it is important to form cooperation and research groups on this virus, since due to the Wide mobilization of people in these places makes it a subject of study for travelers' medicine, while it does not present a specific treatment, there is also no vaccine available or preventive chemoprophylaxis, so it is imperative to promote research and preventive measures.

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Competing interests

None declared.

Ethical approval

Not required.

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