

## EDITORIAL

### NEOTROPICAL HELMINTHOLOGY IN DEVELOPING COUNTRIES: A CHALLENGE HELMINTOLOGÍA NEOTROPICAL EN LOS PAÍSES EMERGENTES: UN DESAFÍO

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As widely known, the neotropical region is represented by Central America, south of Mexico, Baja California Peninsula, northwestern of Mexico, Caribbean Islands, south of Florida and South America. On the basis of the outstanding and peculiar biodiversity of the region, a great number of helminthological studies related to the parasites occurring in animals present in the different environments of the area, has been accounted.

However, in the last decades, surveys of helminths recovered from vertebrates living in this large territory, show that results so far obtained in developing countries, generally appear in a very few native periodicals, whereas most are issued in journals edited in North America and Europe, commonly utilized to report data obtained in countries devoid of governmental/institutional scientific research support. A recent bibliographical survey from 1845 to 2010 and related to a genus of fish nematodes (Pinto *et al.*, 2010) demonstrates that among the presented 260 references, about 17% of the papers refer to the neotropical region and of these, only 5% have been issued in native periodicals of developing countries.

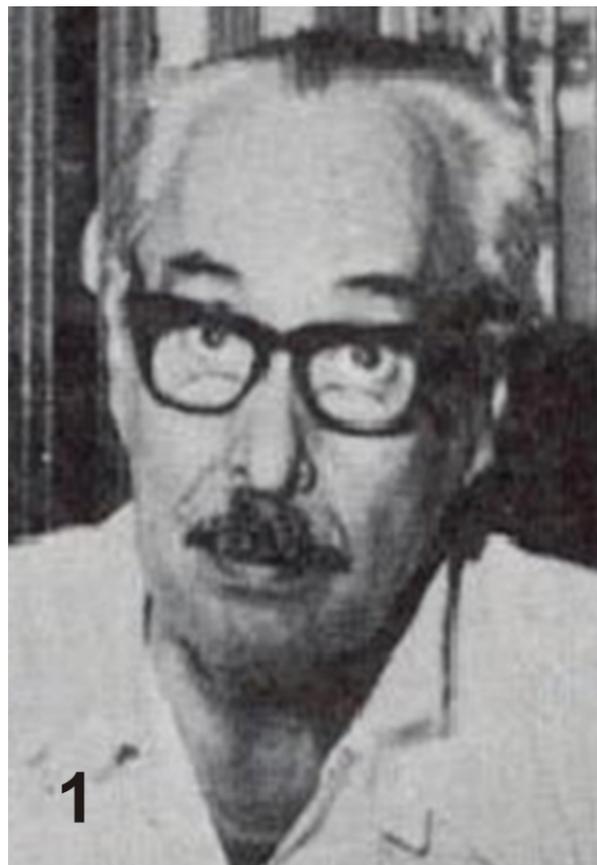
According to Costa *et al.* (2006), South American science has its origins in the recovery of informative surveys of pre-Colombian social groups, although a genuine Latin American science only emerged by the introduction of European scientific procedures

when Portuguese and Spanish settlers adopting the local traditions, forged their own scientific culture for almost 500 years. Thus, the science developed in the countries of this region has always been considered worldwide as derived or peripheral when compared to European or North American scientific approaches. In despite, this situation has been changing along the last decades, taking into consideration that Latin America, as a whole, gradually is appearing in the international scientific scenery. To support the argument, it is interesting to refer to the Brazilian experience concerned to helminthological studies since the first decade of the XX century. Lauro Pereira Travassos [1890-1970] (Fig. 1), one of the most outstanding zoologists in the world was responsible for the settlement of regular helminthological studies in Brazil, as well as for the foundation of the Helminthological Collection of the Oswaldo Cruz Institute (Fig. 2) the pioneer in Latin America since 1913, when his first paper, together with his early collaborator Gomes de Faria, was published, until he died in 1970, with an impressive production of 436 reported papers, mostly related to helminthological investigations, with the description of an incredible amount of new taxa, and also dealing with revisions and systematical arrangements. Ninety per cent of them were written in Portuguese and published in Brazilian journals, indexed or not. In despite, Travassos is, to date, certainly the most worldwide referred author when helminthological data is concerned (Gomes

*et al.*, 1992; Noronha *et al.* 2009; Knoff *et al.*, 2010).

An overall analysis has demonstrated that, generally, results of studies in which the alpha taxonomy is the main target have been neglected while other areas receive increasing attention (Pieta, 2002). This seems to occur mainly in developing countries, no matter the alleged or existing reasons for the settlement of this condition that is due to the limiting procedures adopted by several current scientific periodicals aiming to “modernize” editorial policies. Most frequently, the avoidance in publishing papers in which the occurrence of new hosts and/or geographical distribution for the species (except for occasional descriptions of new taxa) are referred, is an attempt to change the scope profile of the issued articles in order to report data of greater interest and thus reach the so called impact factor (IF), that measures the frequency which the average article has been cited in a particular year or period (Garfield, 1972; Strehl, 2005; Adler *et al.*; 2009). Yet, in accordance with Strehl & Santos (2002), the impact factor as defined by the Institute for Scientific Information (ISI) when applied, as a criterion to identify the quality of the scientific production, may take into account its relative evaluation, as well as to consider that such parameter usually undergo large changes over the years. On the contrary, it would be unfair to adopt this index when comparing the production of researchers, working in different areas in which the IF has not the same significance. Thus, one can obtain the evaluation of the scientific production by means of the notoriety the periodical presents at the time; however, there are two aspects in this approach: the former is related to how objectively the prestige of a journal can be determined and the latter refers to the fact that, if this is taken into account, there is a disregard of the real qualitative analysis of a scientific paper. Presently, by means of the electronic media, most scientific papers are promptly available on line and, consequently, widely

referred, no matter the impact factor rank of the periodical; moreover, with the appliance of the absolute factor, obtained data that are temporarily ignored do not determine their low quality. This may serve as an alert, considering that it is necessary to arise, strengthen, and preserve the national scientific identity of the neotropical region by means of accurate and reliable reports even though appearing in non-indexed or low-impact periodicals. It is certain that a publication in an international indexed journal has a greater chance of being accessed. However, nothing substitutes the quality of the work and the international reputation of the author, although it is very common to erroneously affirm that articles not published in a foreign journal are not internationally considered.



**Figure 1.** Lauro Travassos, the most outstanding Brazilian helminthologist in Latin America to date, with worldwide recognition (After Gomes *et al.*, 1992).



**Figure 2.** Steel door-sliding cabinets in where the samples of the Helminthological Collection of the Oswaldo Cruz Institute are maintained (After Noronha *et al.*, 2009).

Fortunately, there are still expanding scientific staffs working in the neotropical region and with a great interest in helminthological investigations of taxonomic and systematic applicability, in order to minimize possible harmful effects on research protocols established in the developing countries as Argentina, Brazil, Colombia, Costa Rica, Cuba, Mexico and Peru, aiming for their worldwide recognition (Lamothe-Argumedo *et al.*, 2010).

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