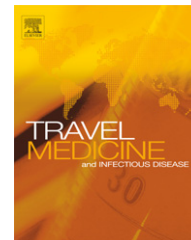


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Trends in the publication of scientific research in travel medicine from Latin America

We read with interest the recent Letter by Rodriguez-Morales and Palacios describing trends in the publication of scientific research in travel medicine from Latin America.¹ In their Letter, the authors point out that travel medicine has emerged as an important scientific discipline in many parts of the world, including very recently, in Latin America.

Aside from travel medicine, Latin American scholars have many other reasons to be proud of their scientific and scholarly achievements. Firstly, there is known to be an extensive range of literature originating from the Spanish speaking countries of Latin America.² One of the earliest journals in tropical medicine, for example, originated in Brazil.³ Similar to their Spanish language counterparts, many Portuguese journals are now *Open Access* (OA), with direct links in the major indexing databases.⁴ Perhaps one of the most important initiatives from this region is SciELO (Scientific Electronic Library Online), a World Health Organization (WHO)/Pan American Health Organization (PAHO) supported database of approximately 3.5 million citations across over 500 journals.⁵ The provision of OA initiatives is important, as OA itself occupies a major role for global scientific equity, given that the internet provides many scholars their only chance for accessing scientific literature that would otherwise be too expensive to purchase, particularly in developing countries.⁶

Secondly, Latin American authors are known to have increased their contribution to scientific publication in recent years. In a global analysis of biomedical publication trends, for example, Rahman and Fukui⁷ found that the South America and the Caribbean region were publishing an average of approximately 11 articles per million population, per year; a figure that had more than doubled between 1990 and the year 2000. Furthermore, their share of global publications increased from 1.3% to 1.8% over the same time period. In an earlier study examining the production of scientific articles about health in six Latin American countries between 1973 and 1992, Pellegrini Filho and colleagues⁸ revealed that the number of published works had increased, there was greater frequency of team

efforts and there was greater cooperation between institutions and countries.

On the other hand, as Rodriguez-Morales and Palacios have pointed out,¹ Latin American authors still face challenges when publishing their work, and scientific publications from developing countries in Latin America remain comparatively rare. Some of these challenges are bibliometric in nature. When they are published, articles by Latin American authors in prestigious journals tend to have fewer citations.⁹ Although journal impact factors are known to be increasing in specialist medical fields during recent years,¹⁰ including in travel medicine,¹¹ in a study of scientific articles from Latin American countries⁸ the average number of citations received by each paper was less than half of that received by all articles in the *Institute for Scientific Information* (ISI, now Thomson Reuters) database. As recently as 2007 however, it was noted that comparatively few Latin American journals are included in the ISI database, although for those that were; publishing in English was associated with a slightly higher impact factor.¹²

Publication of scientific results in the languages of Latin American countries is clearly important, particularly as Spanish and Portuguese are the 4th and 8th most widely spoken languages in the World.¹³ Between 300 and 400 million people speak Spanish as their mother tongue, for example.² In view of this, it is surprising that the peak WHO travel medicine guideline, *International Travel and Health*,¹⁴ is not currently published or downloadable from the WHO website in Spanish or Portuguese; although the *International Health Regulations*¹⁵ are downloadable in Spanish. Another issue for Latin American scholars is being able to obtain full-text access to the existing literature. Ospina and colleagues,¹⁶ for example, found that almost 90% of the Spanish speaking authors in Latin America whom they contacted had not included important references in their published articles because they did not have full access. Capacity building remains another important issue for travel medicine in Latin American countries. The further encouragement of scientific output from this region might also be increased if more researchers were trained in use of the most frequently used databases, such as Medline.¹⁶

As we pass through our first decade of the 21st century, travel medicine continues to grow as an important scientific discipline in many regions,¹⁷ including in Latin America. Support from the *Latin American Society for Travel*

Medicine (SLAMVI) and the *International Society for Travel Medicine* (ISTM) will no doubt help further develop this field, as Rodriguez-Morales and Palacios have emphasised.¹ A concrete example of collaboration is the fact that the 4th Regional Conference of the ISTM will be conducted jointly with SLAMVI as the II Congreso Latinoamericano de Medicina del Viajero.¹⁸ Even so, students in the health professions still need encouragement to participate in travel medicine as a discipline, in Latin America as elsewhere. Enhanced placement opportunities for travel medicine related activities also need to be provided.¹⁹

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The authors have no conflict of interests to disclose.

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References

- Rodriguez-Morales AJ, Palacios H. Trends in the publication of scientific research in travel medicine from Latin America. *Travel Med Infect Dis* 2009;7(5):323–4.
- Williams JR, Borquez A, Basanez MG. Hispanic Latin America, Spain and the Spanish-speaking Caribbean: a rich source of reference material for public health, epidemiology and tropical medicine. *Emerg Themes Epidemiol* 2008;5:17.
- Smith DR. Citation indexing and the development of academic journals in tropical medicine. *Mem Inst Oswaldo Cruz* 2008;103:310–2.
- Barreto ML, Barata RB. Public health and epidemiology journals published in Brazil and other Portuguese speaking countries. *Emerg Themes Epidemiol* 2008;5:18.
- Rodriguez-Morales AJ, Mayta TP. Preliminary bibliometric evaluation of scientific publications produced in Latin America in the field of tropical and infectious diseases using SciELO. *J Infect Dev Ctries* 2009;3:247–9.
- Khan FA. The net is many people's only chance of access. *Nature* 2001;411:522.
- Rahman M, Fukui T. Biomedical publication – global profile and trend. *Public Health* 2003;117:274–80.
- Pellegrini Filho A, Goldbaum M, Silvi J. Production of scientific articles about health in six Latin American countries, 1973–1992. *Rev Panam Salud Publica* 1997;1:23–34.
- Meneghini R, Packer AL, Nassi-Calo L. Articles by Latin American authors in prestigious journals have fewer citations. *PLoS One* 2008;3:e3804.
- Smith DR. Citation analysis and impact factor trends of 5 core journals in occupational medicine, 1985–2006. *Arch Environ Occup Health* 2008;63:114–22.
- Smith DR, Leggat PA. Impact factors and the journal of travel medicine. *J Travel Med* 2008;15:389–90.
- Tellez-Zenteno JF, Morales-Buenrostro LE, Estanol B. Impact factor of Latin American medical journals. *Rev Med Chil* 2007;135:480–7.
- United Nations Educational, Scientific and Cultural Organisation. The mother-tongue dilemma. *Educ Today*:4–7, http://www.unesco.org/education/education_today/ed_today6.pdf, 2003;6 [accessed 24.07.09].
- World Health Organization. *International travel and health*. Geneva: WHO, <http://www.who.int/ith>; 2009 [accessed 24.07.09].
- World Health Organization. *International health regulations (2005)*. 2nd ed. Geneva: WHO; 2008.
- Ospina EG, Reveiz Herault L, Cardona AF. The use of bibliographic databases by Spanish-speaking Latin American biomedical researchers: a cross-sectional study. *Rev Panam Salud Publica* 2005;17:230–6.
- Zuckerman JN. Grass roots growing into travel medicine. *Travel Med Infect Dis* 2009;7:1.
- International Society for Infectious Diseases. 14th ICID. Miami, Florida, USA, March 9–12, 2010. http://www.isid.org/14th_icid/welcome.shtml [accessed 23.07.09].
- Tissingh EK. Medical education, global health and travel medicine: a modern student's experience. *Travel Med Infect Dis* 2009;7:15–8.

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