

## /COMMENTARY

# Journal Publishing in the Economically Developing World

BERNARD DIXON

**Y**ou are working in a small, poor country. Over the last two years you have developed an ingenious and remarkably inexpensive test for the differentiation of arboviruses. It takes slightly longer than existing procedures, and does not require the sophisticated reagents that are available in laboratories in other parts of the world. Indeed, scarcity of resources was the trigger that made you dream up the new test. As the pioneer physicist Lord Rutherford said, "We don't have much money, so we have to think instead."

So you are pleased with your achievement—rightly so. Now comes the task of writing up the work. But where to submit your manuscript? The choice is by no means straightforward. Publication in a local journal, in your own country's language, would bring the new technique quickly to the attention of a large proportion of the clinicians and microbiologists you would expect to be interested. Their patients would benefit too.

Yet you are strongly tempted to send the manuscript instead to a major international journal in the U.S. or Europe. Publication there would be inherently credible. Better still, the attention given to that journal, plus its very high impact factor, would virtually guarantee that you would be heavily cited. (An impact factor is the total number of citations in one year to papers published in a particular journal over the previous two years, divided by the total number of papers published by that journal in those two years.)

All of this is important since your institute, in making appointments and promotions, now takes into account candidates' citations, numbers of publications, and the impact factors of the journals in which they appear. In addition, your ministry of science and technology is constantly urging the country's scientists to seek publication in the most prestigious journals in the world.

This proves to be the clinching argument. You submit your report to a high-impact journal in the U.S. It is accepted, published, and in due course accumulates citations at a splendid rate. You are delighted, and your colleagues, institute, and government share in the reflected glory.

But there have been losses too. First, your findings reach many of those who can most benefit from them much later than if your results had appeared in a local journal. Not only does the paper take longer to process, there is also a substantial delay in the

journal arriving in the libraries in your own country, some of which do not receive it at all.

Second, your country's journal has been impoverished by not carrying the excellent piece of science reported in your paper. Paradoxically, the self-same ministry of science and technology that exhorted you to approach an international journal also wants to foster the growth of your country's indigenous scholarly publishing industry. Yet in this and other cases it has created a climate in which scientists send their most important papers abroad.

This whole issue was confronted, though by no means resolved, during the Eighth International Conference of the International Federation of Science Editors, held recently in Barcelona. Akbar Mohammad, assistant chief editor of the *Bahrain Medical Bulletin*, spoke of the vicious circles that retarded the development of new journals in small countries with limited finances. They included the lack of international recognition for domestic journals (by indexing agencies, for example), and the lack of credit for locally published papers, which deprived those journals of the best-quality material.

Several other speakers reported modest successes in overcoming these restraints, often in the most uncompromising settings. Ana Marusic, editor of the *Croatian Medical Journal*, in Zagreb, described her journal's development since its inception three years ago in postcommunist, war-torn Croatia. Although its 1994 impact factor was only 0.1809, this is not massively inferior to the figures for many longstanding international titles.

One early decision to which Marusic attributed the success of the journal was the choice of publishing it in English. This is in marked contrast to at least one other European country, France, which continues to deny the obvious—that English is the language of science. Another important ingredient was the policy of concentrating on research (even when closely related to Croatia's own situation) that was clearly relevant to an international readership.

So the problem is surmountable to some degree. Yet the underlying cause remains. It is the dogged conviction among the authorities in many economically developing countries that their scientists' papers should appear not in the most appropriate journals but (irrespective of content) in those with the greatest quantifiable impact in the world's literature. But citation analysis can never validate their dogma. ///