



DIFFUSION

# Articles in the spotlight

With 134 journals,  
the SciELO Brazil library  
gains more visibility  
and attracts new sponsors

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The SciELO Brazil program, an electronic library created in 1997 with the function of bringing together the country's best scientific magazines, is reaching a new level of importance amongst Brazilian researchers. At a meeting held in São Paulo at the end of August, representatives of various institutions took on the commitment

to strengthen, with financial and institutional help, the operation of the collection published on line on the Internet, confirming its vocation for a project of a nationwide ambit. SciELO Brazil (standing for Scientific Electronic Library Online) arose thanks to a partnership between FAPESP and the Latin American and Caribbean Center on Health Sciences Information (Bireme), linked to the Pan American Health Organization (PAHO) and to the WHO (World Health Organization). In the last few years, it had already expanded the range of sponsors, attracting the support of the National Council for Scientific and Technological Development (CNPq). Now there is a commitment to take part from the Financier of Studies and Projects (Finep) as well, and of the research support foundations of Minas Gerais (Fapemig) and Rio de Janeiro (Faperj), of the Oswaldo Cruz Foundation (Fiocruz), of the Ministry of Health, and of the Coordination for Advanced Professional Training (Capes), a body of the Ministry of Education. The format of the support will be defined in new rounds of conversations.



To understand the interest of these institutions for SciELO Brazil, several landmarks of the program have to be enumerated. Created eight years with a collection of only ten pilot titles, which served to develop a methodology for indexation, SciELO today has reached a selection of 134 periodicals, the content of which is made available free of charge by the Internet. The collection encompasses all the fields of knowledge, including the human sciences, which boasts over 30 titles. This concept of free access, running counter to the scientific publishing market of the developed countries, has guaranteed a visibility that the Brazilian magazines have never had before. "It was notable how the supply of articles for our magazine increased after it joined SciELO. More researchers have become interested in publishing with us, attracted by the visibility that the collection confers", says Renato Prociandy, the editor of the *Journal de Pediatria* and a professor of the School of Medicine of the Federal University of Rio Grande do Sul. "We also

noticed that, as SciELO is internationally known, the magazine has started being seen much more abroad." The publication, which comes out every two months, has been published since 1934. José Renato Zanini, the publisher of the journal *Engenharia Agrícola*, says that joining the virtual library has become a question of survival for a scientific periodical. "Those who are outside SciELO are out of the international standard", explains Zanini, a professor from the Rural Engineering Department of the São Paulo State University (Unesp), in Jaboticabal. "Our inclusion served to put the house in order and gives us important tools for evaluating the impact of each work published", he says. The *Engenharia Agrícola* journal has existed since 1972 and was admitted into the collection about two years ago.

Another benefic effect was the improvement in the titles. To be admitted and afterwards kept in the collection, each periodical has to comply with a series of strict requirements in relation to the quality of the content, the origi-

nality of the research, the regularity of publication, the review and approval by peers of the contributions published, and the existence of an editorial board publicly made up and heterogeneous. It also must follow certain formalities, such as, for example, the presentation, in English, of an abstract, title and key words, when this is not the language of the article.

A consultative committee monitors compliance with these requirements and has already excluded publications that have lost quality. To honor the place that they occupy in SciELO, the periodicals had to do their homework. Some titles gained consistency thanks to the endeavor of scientific groups or societies, which started to prioritize the publication of heavyweight articles, instead of dispersing efforts in different magazines or contending for space in international magazines. The effect observed was a progressive reorganization of the periodicals. "If the country wants to have good science, it must have good magazines", says Abel Packer, a director of Bi-



reme and the operational coordinator of SciELO Brazil. “This is the essence of what happens abroad. Brazil has almost completed the cycle for doing science of a good level. Doing good magazines is missing, but we are beginning to change this.”

An analysis made by Rogério Meneghini, a retired professor from the Chemistry Institute of the University of São Paulo and SciELO’s coordinator-general, gives the dimension of the leap in quality. He analyzed the trajectory of seven titles that participate both in SciELO and in the American database Thomson ISI (Institute for Scientific Information), the most important in the scientific world, which gathers together about 8,000 publications. Meneghini observed that, between 1998 and 2004, the impact factors of these magazines, which are equivalent to the number of citations that their articles have had in other periodicals, grew on average 2.15 times. “This leap, I have no doubt, was caused by SciELO’s visibility”, explains Meneghini. “Now, a virtuous circle is being cons-

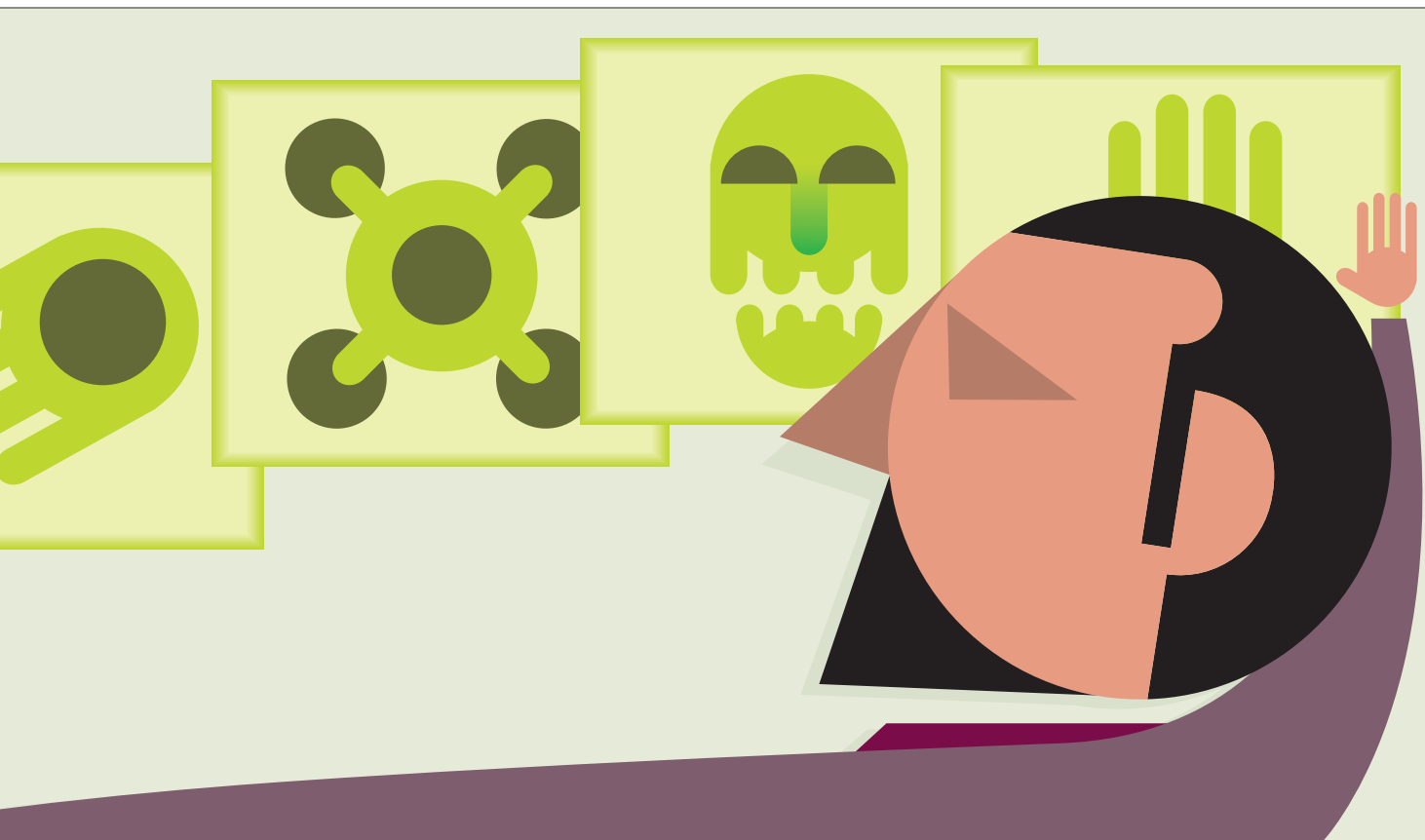
tructed. The magazines are recognized more and take more care of their quality”, he says.



SciELO’s interface provides access to over 60,000 articles in its collection of periodicals. “We make a great and ongoing effort to tune SciELO to the international state of the art and to avoid any kind of isolation”, says Abel Packer. “If you go into any database and find an article or magazine from SciELO, you will get a link to the complete text. It’s the philosophy of putting Brazilian production in contact with the international flows”, he explains. The organizers believe that the collection is reaching its limit, bringing together the core of publications with excellence for being part of the collection. “We have indicators that the collection is representative of the quality publications”, says Packer. In scientometrics, an area of research that seeks to generate information to stimulate the overcoming of the challenges of

science, this principle is known as Bradford’s Law, according to which there is a core of journals that encompasses the bulk of the articles with a repercussion. Other publications may even add something, but not in a significant way. “You have to be careful to maintain the quality and avoid unnecessary spending”, Meneghini says.

One great utility of the SciELO database is that it brings together empirical data of the performance of the indexed magazines. The methodology adopted gives the editor of each publication, and also the scholars of scientometrics, tools to see how much each article is accessed, who cites it, and what the repercussion is. These instruments, vital for orientating the editorial policy of the publications, have made it possible to evidence the existence of two kinds of title. One of them, more centered on the field of basic science, is more recognized in citations of international journals. Some examples are the *Journal of the Brazilian Chemical Society*, the *Brazilian Journal of Medical and Biological Research*, the *Brazilian Journal of Physics, Genetics and Molecular Biology*



or *Anais da Academia Brasileira de Ciências*, which are frequently cited on the ISI Thomson database. And there is a second category of publications, in the field of agronomy, veterinary science, tropical medicine and public health, which are little cited abroad, but have a notable impact in Brazil and in developing countries. Examples are *Pesquisa Veterinária Brasileira*, *Memórias do Instituto Oswaldo Cruz* and *Pesquisa Agropecuária Brasileira*. This finding coincides with the thesis of W. Wayt Gibbs, who in 1995, in an article in the *Scientific American* magazine, pontificated about the existence of a “lost science of the Third World”, not indexed in international databases, but of interest to the poor countries. With the advent of SciELO, this lost science is no longer so invisible.

SciELO’s paradigm has now yielded fruit in other countries, which took inspiration from the Brazilian experience. They adopted the same methodology, supplied by Bireme with support from local development agencies, and have now come to make up an international network with over 300 scientific maga-

zines with free access to the public. Cuba and Chile were those that invested most in the idea, to the point of having collections certified. Other countries have come in more recently and have collections that are still developing, which is the case of Argentina, Colombia, Venezuela, Mexico, Portugal and Peru. Spain, for the time being, is taking part with one collection in the area of public health, but promises to enter the system in other fields of knowledge, which should confer a new scale to the library. The Spaniards publish twice as many scientific articles as Brazil, the current leader of the network and responsible for half the production of the whole of Latin America.

The SciELO model has three components. One of them is the developing methodology for editing, storing, creating hyperlinks on the Internet, publishing, divulging and evaluating scientific magazines. The second is the application of the methodology for operationalizing the collections of electronic magazines. The third is the development of the network of sites by promoting partnerships and scientific communicati-

ons — authors, scientific and technical editors and financing institutions and agencies, with the consequent improvement of scientific communication.

Although it was not born with this hallmark, the virtual library has become an example for a movement that is gaining shape in the scientific community: open access, which proposes access free and without charge to scientific information. The movement contrasts with the rules of the editorial market of the developed countries, which charge both the researcher who manages to get his article published and the user, to have access to it. “It isn’t just an economic movement, it’s an ethical one”, says Rogério Meneghini. “Science is an asset of humanity and its findings must be shared for the good of all.” Brazil pays US\$ 30 million a year for its researchers and universities to have access to the 8,000 journals of the ISI Thomson database — the steep bill is met by Capes. “SciELO Brazil is open access from birth, since FAPESP and Bireme would evidently not invest funds in the project if it were to charge the users”, Meneghini says. •