



ENDOCRINOLOGÍA Y NUTRICIÓN

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EDITORIAL

Prestige and profitability of Spanish scientific journals depend on international use of their contents[☆]

El prestigio y la rentabilidad de las revistas científicas españolas se basan en el uso internacional de sus contenidos

The current level of scientific and technological development in Spain requires us to be at the forefront of international productivity and competitiveness. However, Spain faces significant challenges which should be addressed if we want to be among the most advanced countries. One of these challenges is to create a dense network of quality journals in the most representative scientific areas, and particularly in biomedicine. However, to succeed in this task, the main five barriers to the adequate internationalization of Spanish scientific journals should be overcome as soon as possible. This requires: 1) the definitive adoption, at least by the main publications, of the *universal scientific language of our time*, which unfortunately is not Spanish; 2) making editions of scientific journals more *professional*; 3) improving the *objective parameters of quality* of these journals; 4) trying to make them *financially viable* in order to ensure their continuation and survival; and 5) energetically confronting our important *"enemies within"* to convince them that they are in the wrong and to win their support¹⁻⁷.

We must first point out that to defend Spanish - and even less our regional languages - as a universal language in scientific journals is today a waste of time and effort. We are living in a global world where English is the leading language in science, medicine, business, diplomacy, sports, aviation, the Internet, and so on. Even Santiago Ramón y Cajal⁸ recognized back in 1923 that he and his school had

made a mistake when they published most of their work in Spanish: *"The vast majority of current biologists do not know the language of Cervantes. It is thus hardly surprising that when we consult the most recent neurology texts, we find that two thirds of modern contributions by Spanish authors are totally unknown... a more ardent than wise patriotism... was the reason for this fundamental tactical error"*. A look at the references included in the articles of any current scientific journal of prestige suffices to attest to this fact, as more than 95% of citations correspond to publications written in English⁹. Although almost 500 million people in the world have Spanish as their mother tongue, their scientific background, economic levels, and the number of outstanding researchers they have produced (many of them even working outside their own countries) are all still very limited. Only when we, Spanish speakers, provide the great majority of scientists of renown in our respective countries, possess a variety of competitive journals of quality (written in English until then, of course), enjoy a high standard of living, and are a major industrial power will we be able to make Spanish the new universal language of science. On the other hand, very few journals can allow themselves the luxury of publishing bilingual journals of quality. Thus, faced with this linguistic dilemma, English must always be chosen when fast, universal dissemination of knowledge is wanted, something which is indispensable in the Internet era. To think the opposite is today a chimera and an exercise in patriotism which is as sterile as it is well-intentioned. The main current problem of the Spanish scientific press is, however, to achieve wide international coverage and competitiveness, and we have therefore no other option than to definitively adopt English as the language of communication. However, this condition, while essential, is far from sufficient.

[☆]This article is the text of the lecture, entitled The challenges of internationalization for Spanish scientific journals, given by the author at the recent VI MEDES Workshop of the Lilly Foundation on Internationalization of biomedical journals, held on November 4, 2010 in El Escorial (Madrid).

Table 1 As shown in this table, the poor Spanish presence in the well known Journal Citation Report/ Science Edition (JCR/SE) of the Institute for Scientific Information (ISI) in Philadelphia, USA (Thompson-Reuter) has remained virtually unchanged for the past 13 years, since the apparent increase from 16 to 60 Spanish journals was accompanied by the simultaneous admission of other journals by the ISI. We have progressed very little in more than one decade, and still account for less than 1% of the worldwide volume of regular scientific publications in this selected list, which corresponds neither to the economic importance of our country nor to the respect it deserves from the international scientific community

Year	No. of journals JCR/SE	No. of Spanish journals	% JCR/SE	Mean IF
1997	4,963	16	0.32	0.419
1998	5,467	22	0.40	0.489
1999	5,550	26	0.47	0.5
2000	5,686	28	0.49	0.505
2001	5,752	26	0.45	0.536
2002	5,876	26	0.44	0.507
2003	5,907	29	0.49	0.556
2004	5,969	29	0.49	0.771
2005	6,088	30	0.49	0.884
2006	6,166	30	0.49	1.136
2007	6,426	35	0.54	1.065
2008	6,620	37	0.56	1.069
2009	7,387	60	0.81	0.832
Mean (1997-2009)	5,989	30.31	0.50	0.71

It should also be noted that, as occurs with newspapers, the management of a scientific journal requires professionals of renown with good international connections and possessing dedication, energy, and experience. Strong motivation and broad-mindedness are particularly required of them if a level similar to the best foreign journals in the field is to be attained. This requires diligently searching out and fostering original work which will benefit both its readers and the country as a whole. It should not suffice to be just another average journal serving as a communication medium for a scientific society, research center, hospital, or department. However, many Spanish academic publishers or professional societies do not select precisely the persons best qualified for this important task. It is also commonly thought that the editorship of a scientific journal is a prize awarded in recognition of a professional career or as an occasional or philanthropic activity, a sort of charity or NGO in which *"colleagues may publish in order to have a longer curriculum"*. Our academic and commercial publishers' lack of trained staff and multidisciplinary teams of competent proofreaders, skilled computing experts, specialists in international marketing, bilingual clerks trained for scientific correspondence and the editing of scientific works, etc. is another significant drawback. Thus, if we want to be successful, the *editorial offices of our journals* will have to do all of this work by themselves because very few Spanish publishing companies understand these needs or are prepared to compete abroad. This is what we have been doing, with our own resources and with no help from any foreign company, for more than 20 years, and we now rub shoulders with the best journals in our field. I know it is a difficult task, but it demonstrates that it is not impossible and that it is well worth the effort.

At the same time, all international parameters of quality should also be improved, and the concentration of resources should be encouraged. Essential factors to be considered include the low number of Spanish scientific journals included in international indexes and databases of prestige (Table 1), the excessive number of journals in some areas (we have 17 pediatric journals and 33 psychiatric journals!) -when a coordinated effort would be desirable-, the elementary and broadly practical professional level of many journals (devoid of original contributions, which should be their priority), the low number of articles per year (very few Spanish journals exceed 100 or 1,000 pages per year), the low or arbitrary frequency of issue (monthly Spanish scientific journals may be counted on the fingers, maybe of a single hand), the poor digital editions, which usually consist of static websites with no supplementary functions (downloaded articles, citation alerts, RSS, DOI assignment, export of contents to databases of prestige such as PubMed LinkOut, interactive cross referencing such as CrossRef, and so on), and low bibliometric parameters, often with obvious frauds such as the high number of self-references (Fig. 1). And it should not be forgotten that *today, what is not cited does not exist*. Therefore, to bet on journals which are not cited by other important publications in the field is a both a financial waste of time and so much fruitless effort. It must also be borne in mind that not only is the number of citations important, but also the prestige of the quoting journal, the type of article where the citation appears (original, review, editorial), the chains of citations, and the use made of the publication on the Internet¹⁰. The Eigenfactor score (Fig. 2), which has become a bibliometric factor that may soon be more important than the well known impact factor for the evaluation of scientific

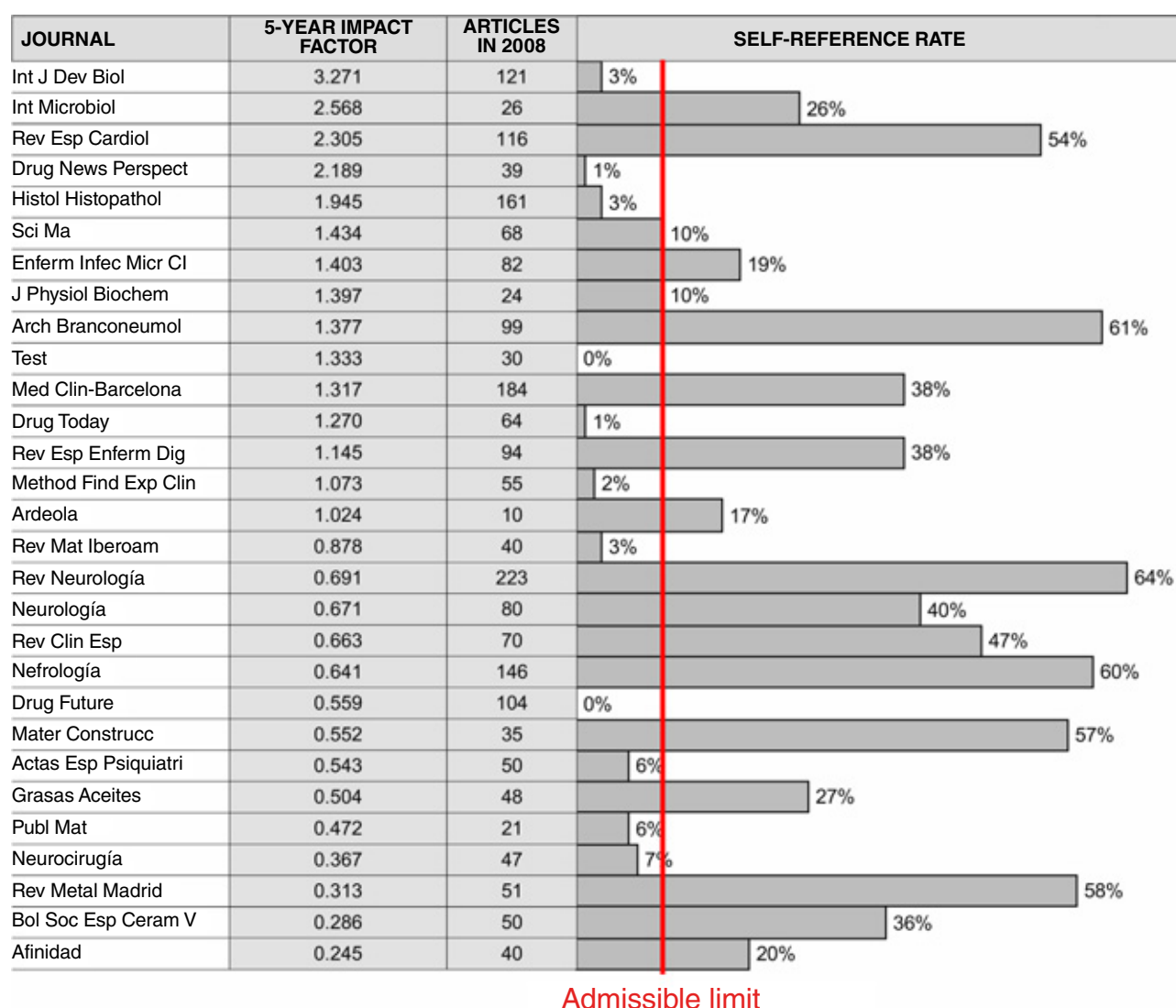


Figure 1 Study conducted on the 2008 JCR/SE showing the low 5-year impact factor of Spanish scientific journals. This is a more adequate bibliometric parameter for the biomedical area than the usual 2-year impact factor. This low index also combines with the high self-reference rate of the journals⁴.

journals, already attempts to measure all of these aspects.

It should also be noted that in a market economy such as ours, *profitability* is the only thing that can make improvements to the quality, competitiveness, and independence of scientific journals possible, thus ensuring their survival (as shown, for instance, by the examples of centenary journals such as *Nature*, *Science*, or *The New England Journal of Medicine*). A change in attitude that promotes the publishing of scientific journals as a “*research and commercial project*” in all of its aspects (hiring of staff, day-to-day expenses, purchase of computer hardware and furniture, professional travel, and so on) along with the elimination of exclusively philanthropic activities -almost *masochistic* in some cases- with no academic, professional and/or economic incentives is essential. We must learn to sell and compete with the big multinational companies in the field of scientific publishing instead of letting them

absorb and eliminate us. On the other hand, *journals with free, open access which only plan to subsist on membership fees, commercial company ads, or non-refundable subsidies have no future and are dead from the start* in the aggressively competitive world of international scientific publishing. The solution is quite simple: either subscribers or authors (or both) must pay; there are no other profitable options. To give free access to anything published on the misconception that this will increase citations is a great mistake that also compromises the future of the publication concerned, not to forget the additional loss of prestige this represents for the journal attempting to promote itself.

Finally, as if this is not enough, we have enemies within, paradoxically unconscious, but diverse and important. Such enemies include, in the first place ourselves, Spanish *researchers and other professionals*, who disdain national journals and attempt to *publish their best work abroad, leaving the residues for Spanish journals*. The spirit of

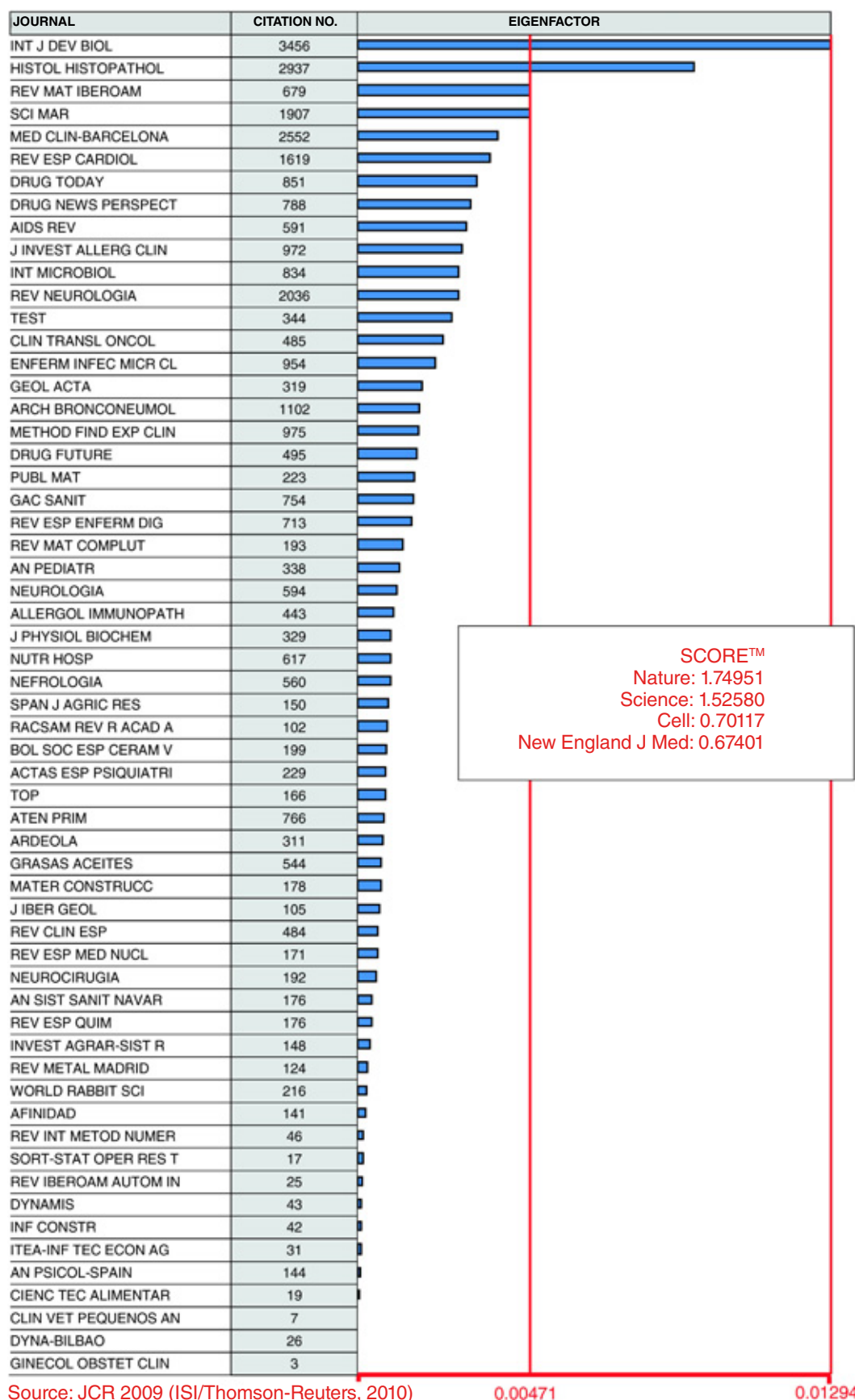


Figure 2 This chart shows the total number of citations made in 2008 of the diverse Spanish scientific journals selected by the ISI (ranging from 3,456 to only 3 citations in that year) and the corresponding Eigenfactor score that measures the quality of the citations received, according to the 2009 JCR/SE. The data corresponding to the most renowned journals are given in the box to show the great distance that still separates us⁶.

Cajal, who always published first in Spanish journals (although he wrongly did it in Spanish), faded away many years ago. Then there are many *assessors* of research projects, professional positions, and productivity prizes, who no longer study the reports or merits provided, but at the most draft an algorithm based on citations by journal, not author (the h-index, for example), which although incorrect is much easier and faster for them than careful reading of the whole documentation provided or a wide discussion with the candidates themselves, which would be desirable. The third group consists of *public fund managers* (R&D&i plans continue to ignore the “end product” of Spanish science, which should mainly be professional articles in our quality journals) and *academic and private publishers*, almost entirely dedicated to the humanities and social sciences (75% of our professional journals; a single school in Madrid publishes 11 journals), school books, novels, social subjects, or regional languages (the ultimate national folklore). The final group are our dear *librarians*, who obviously do what their researchers ask them, but also what is easier for them, such as buying subscriptions to big “packages” of journals - some of them even barely used at their institutions - from the big foreign publishing companies. Few dare to buy subscriptions to Spanish scientific journals, of course. Most librarians think that these should be obtained through donation, exchange, or free off the Internet. This promotes the existence of free access repositories (as promoted by the recent *Declaration of the Alhambra* or the *Dulcinea* project), forgetting that, in a free market, *what is without price is without value*.

All of the abovementioned obstacles should be overcome as soon as possible and our unconscious “enemies within” must leave their prejudices at the door and support the good and profitable work done, or that may be done here, to arouse our publishing market from its slumbers and put an end to our subservience to competing foreign publishers. We must keep in mind that we can and should publish the same or better things than the Americans, the British, the Dutch, the Swiss, or the Germans, and thus obtain a significant share of the large market for quality scientific journals. The facts speak for themselves: a single provincial, medium-sized university, such as the Basque Country University, spent in 2008 the outstanding amount of 3,355,121 euros on subscriptions to foreign journals. Multiply this amount by the several hundreds of libraries in Spanish research centers and hospitals and also add the individual subscriptions, not to mention the millions spent on subscriptions to journal databases (Web of knowledge, Scopus, Science direct, etc.), and what our authors pay as “edition expenses” for publishing in foreign journals results obtained by the previous investment of a lot of Spanish

money. By contrast, our journal attempts to do just the opposite: more than 95% of our authors and most of our subscriptions are foreign. There is no alternative: we need to gather support and give up archaic and ineffective structures, disregarding scruples which are absurd in the 21st century and excluding universal bonhomie - called here *free access in the Internet* - while the foreign multinational publishing companies continue to exploit us at their leisure.

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Juan Aréchaga*

Director, The International Journal of Developmental Biology, Facultad de Medicina y Odontología, Universidad del País Vasco, Leioa, Spain

*Corresponding author.

E-mail address: juan.arechaga@ehu.es.

URL: <http://www.intjdevbiol.com/>

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