

## PUBLISH OR PERISH: PROSPECTS FOR EUROPEAN HEMATOLOGICAL JOURNALS

The aphorism *Publish or perish* usually applies to individual investigators whose scientific careers are closely linked to their production in terms of papers in high quality journals. I will try to show that – *mutatis mutandis* – it applies equally to journals themselves.

There are many ways of calculating journal impact, most of which are based on reference counting.<sup>1</sup> The most popular ranking parameter is undoubtedly the Impact Factor (IF), which was introduced in 1963 through the publication of the 1961 Science Citation Index® (SCI). At the time of this writing, the latest available IF is that of 1994. For those not familiar with the IF, it may be useful to recall the definition provided by the Institute for Scientific Information® (ISI) through the Journal Citation Reports® (JCR). Basically, the IF is the ratio obtained by dividing the citations received in one year by the papers published in the two previous years. Thus the 1994 IF of journal X is calculated by dividing the number of all the SCI®, SSCI® and A&HCI® source journals' 1994 citations of the articles journal X published in 1992 and 1993 by the total number of source items it published in 1992 and 1993.

According to the JCR®, the IF is a measure of the frequency with which the average article in a journal has been cited in a particular year. In addition: "It tends to discount the advantage of large journals over small ones, of frequently issued journals over less frequently issued ones (weeklies vs. quarterlies or annuals); of older journals over newer journals".

I analyzed the 1994 IF of 22 hematological journals (Table 1). Figure 1 shows the relationship between the number of papers published in 1992-93 and the 1994 IF. It is clear that there is a close relationship between these two parameters; about 75% of the variation in the IF ( $p < 0.00001$ ) is explained by variations in the number of papers published (this percentage would increase by excluding those journals that publish supplements, which are less frequently cited than regular issues). Thus, although the IF tends

Table 1. 1994 Impact Factor of some hematological journals.

Journal	1994 Impact Factor
Blood	8.279
Thromb Haemost	4.125
Transfusion	4.113
Exp Hematol	3.059
Br J Haematol	2.568
Vox Sang	2.430
Leukemia	1.941
Eur J Haematol	1.836
Bone Marrow Transpl	1.765
Am J Hematol	1.744
Ann Hematol	1.496
Leuk Res	1.354
Thromb Res	1.165
Haematologica	1.090
Haemostasis	0.918
Hematol Oncol	0.839
Acta Haematol	0.729
Pediatr Hematol Oncol	0.659
Leuk Lymphoma	0.568
Int J Hematol	0.514
Nouv Rev Fr Hematol*	0.461
Clin Lab Hematol	0.444

\*Currently *Hematology and Cell Therapy*.

to discount the advantage of large journals over small ones, the larger the journal, the higher the frequency with which the average article is cited.

What can small European journals – such as this one – do to improve their IF and become more competitive? Eugene Garfield, who founded the ISI® and developed the concept of IF, has recently examined this question.<sup>2</sup> He concluded that the IF simply reflects the ability of journals and editors to attract the best papers available. Becoming more attractive is therefore a way of improving impact factor. Accomplishing this, however, is far from easy.

*Blood* is the largest hematological journal and the one with the highest IF in the hematological world. In spite of the fact that authors must pay \$500 for publishing a 9-page article, it attracts high quality papers from almost every country in the world. According to Medline®, in 1995 *Blood* published 1,016 articles (1,135 including *letters to the Editor*). As shown in Table 2, about one third of these came from Europe. Had all

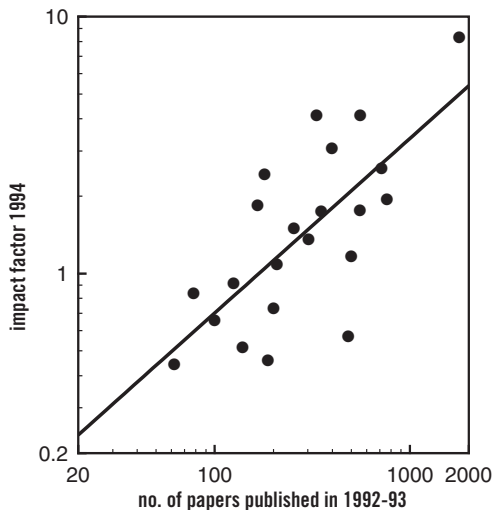


Figure 1. Relationship between the number of papers published in 1992-93 and the 1994 Impact Factor of the journals listed in Table 1.

these European contributions been sent to European journals, would the ranking in Table 1 have changed?

Although any answer would be largely speculative, one point must be emphasized: compared with North America, Europe probably has too many journals, at least in the field of general hematology. One of these, the *British Journal of Haematology* has recently become the *Official Organ of the European Haematology Association*. However, neither the name nor the present composition of the board of editors of the *British Journal of Haematology* reflects a true European nature. The hematological power of European countries can be judged in different ways, but Table 2 is very instructive from this point of view. Any journal that would like to be truly representative of European hematology should use data similar to those reported in Table 2 (derived from a rigorous analysis of several hematological journals over an extended period of time) as a basis for deciding the composition of its editorial board.

European hematology is very active and productive, and I believe that some European hematological journals could improve their impact factors significantly. To achieve this objective, we need to trust in ourselves and to

Table 2. European contributions to *Blood* in 1995.\* Japan contributed 8.7% of papers.

Authors' country	No. of paper (% of total)
France	79/1016 (7.8%)
Netherlands	64/1016 (6.3%)
Italy	56/1016 (5.5%)
United Kingdom	50/1016 (4.9%)
Germany	46/1016 (4.5%)
Sweden	13/1016 (1.3%)
Switzerland	13/1016 (1.3%)
Belgium	08/1016 (0.8%)
Norway	06/1016 (0.6%)
Spain	06/1016 (0.6%)
Others	06/1016 (0.6%)
Total	347/1016 (34%)

\*Source of data: Medline®. Research was performed by using Blood as source and 1995 as publication year. Countries were recognized from the name of the country appearing in the address. It must be noted that this approach may involve inaccuracies.

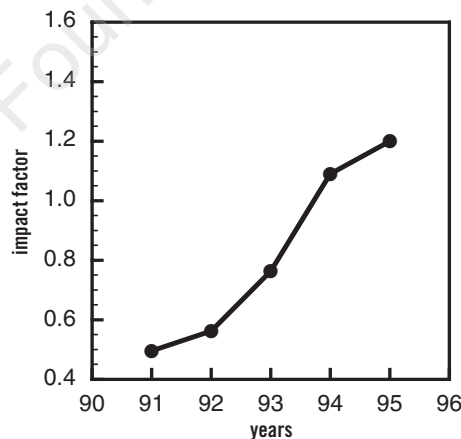


Figure 2. Time course of Haematologica's impact factor. We have been unofficially told that the 1995 IF is 1.2.

converge on a few larger (truly European) journals capable of attracting those good papers that are currently submitted elsewhere. Some of the existing journals will have to find a market niche or merge in order to survive, others will eventually operate as news letters of national societies or perhaps disappear (in hematological terms, one might say that the Impact Factor acts as a survival factor...).

What about us? Figure 2 shows the time course of our IF. We have constantly improved

in recent years, mainly because our review process has become more rapid, more accurate and more selective. We wish to thank all our advisors, reviewers and contributors for their outstanding work. *Haematologica* is owned by the Ferrata Storti Foundation, a nonprofit organization whose major objectives are to support the research in any field of hematology and to constantly improve the journal founded in 1920 by Adolfo Ferrata.

*Haematologica* is a Latin adjective, neuter and plural, used in this context as a substantive: it means *hematological subjects*. Latin has been for centuries the scientific language in Europe, i.e. what English is nowadays. By choosing this name Adolfo Ferrata likely wanted to emphasize the international nature of this journal. We will try to become more competitive and to find space for more articles starting in 1997. We are looking forward to receiving good papers in all fields of experimental and clinical hematology.

In order to be competitive, however, we will be more selective: papers containing no new obser-

vation will be unlikely to be accepted for publication. On the other hand, the best articles will be published in a new section of the Internet edition whose tentative name is *Research and Progress in Hematology*. These papers will have a long-lasting free access (several years) and hopefully this will help to improve their citation score. Finally, one section we would particularly like to expand is *Decision Making and Problem Solving*: we therefore encourage submission of these papers and invite potential authors to contact us. The guidelines and decision trees published in this section will also have long-lasting free Web access to assist any physician around the globe who ask for them.

Mario Cazzola  
*Haematologica* Executive Editor

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#### References

1. Garfield E. Citation analysis as a tool in journal evaluation. *Science* 1972; 178:471-9.
2. Garfield E. How can impact factors be improved? *Br Med J* 1996; 313:411-3.