



Editorial

How much progress has *Blood Research* made since the change of the journal title in 2013

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Abstract

Background: *Blood Research* (formerly) was renamed 5 years ago. It aimed to identify the progress of the renamed journal at the international level based on journal metrics.

Methods: Journal metrics, including total cites, impact factor, and Hirsch index were calculated or found from Scopus, SCImago Journal & Country Rank, and Web of Science on March 27, 2018.

Results: The number of citable articles from 2013 to 2017 was 196, and that of non-citable articles was 157. The authors belonged to 25 countries. The editorial board members were from 33 countries. Total cites in Scimago Journal & Country Rank and Web of Science Core Collection in 2017 was 257 and 235, respectively. The cites per two years from Scimago Journal & Country Rank and the calculated impact factor from Web of Science Core Collection in 2016 were 1.353 and 1.382, respectively. The number of citing authors' countries in Web of Science Core Collection was 61. The number of citing journals in Web of Science Core Collection was 422. In 2016, the Hirsch index was 12 for Scimago Journal & Country Rank, and that in Web of Science Core Collection was 10.

Conclusion: Since the title change, *Blood Research* has progressed rapidly on the international scene in terms of journal metrics. In particular, the results of total cites, impact factor, and Hirsch index were outstanding. This will enable

its promotion as a high branded journal in the hematology category.

Keywords: Bibliometrics, Factual databases, Hematology, Journal impact factor, Names, Research

Introduction

Blood Research has been a co-official journal of the Korean Society of Hematology, the Korean Society of Thrombosis and Hemostasis, the Korean Society of Blood and Marrow transplantation, and the Korean Society of Pediatric Hematology-Oncology. Since 2013, it has been continuing the *Korean Journal of Hematology*, which was launched in 1966. The language of the main text was changed to English in 2010. Therefore, since 2010, it has been searchable on PubMed Central and PubMed (volume 45). Eight years have passed since the language change, and five years have passed since the title change. Its publications have been searchable in Scopus starting from 2011 (volume 46) and, as an ESCI journal, in Web of Science Core Collection from 2016 (volume 51).

It is my great pleasure to analyze the journal metrics to confirm the promotion of the journal to an international readership. The purpose of this editorial is to clarify the position of the journal in the international scholarly journal market based on the results of journal metrics. Specifically, the following considerations were analyzed: number of citable and non-citable articles per year, distribution of

authors' countries, distribution of editorial board members' countries, total cites, impact factor, citing authors' countries, citing journals, and the Hirsch index of the journal. These factors will be able to provide evidence for the progression of the journal.

Materials and Methods

Data were collected and counted from the journal homepage (<http://www.bloodresearch.or.kr>), Scopus, Scimago Journal & Country Rank, and Web of Science Core Collection on March 27, 2018. The subject journal issues had been published from 2013 to 2017. The previous title, the *Korean*

Journal of Hematology, was not considered in this analysis. Out of a variety of metrics, impact factor was chosen and, based on the Web of Science Core Collection, defined as "dividing the number of current year citations by the source items published in that journal during the previous 2 years" [1]. For example, the 2017 impact factor can be calculated as follows [2]:

A = Number of citable articles of the journal in 2015 and 2016

B = Number of cites to the journal's articles from 2015 and 2016 in the Web of Science Core Collection database in 2017

Impact factor for 2017 = B/A

The number of cites per document (2 yr) is similar to the impact factor, but the database is different. The former is analyzed based on content from Scopus, and the latter is analyzed based on content from Web of Science Core Collection.

The Hirsch index is defined as "the number of papers with citation number $\geq h$, and it has index h if h of its N_p papers have at least h citations each, and the other $(N_p - h)$ papers have $\leq h$ citations each" [3].

Results

Fig. 1 presents the number of citable and non-citable articles. The number of citable articles from 2013 to 2017 was 196, and that of non-citable articles was 157. The authors' nationalities were distributed among 25 countries. Out of these, Korea had the highest number of authors, with 222 articles (62.9%). The next major countries were India (46), Italy (21), and the USA (14) (Fig. 2). The editorial board members were from 33 countries. Out of these, 52 members were from Korea, 13 from Japan, 10 from China, and 10 from the USA (Fig. 3). The total numbers of citations

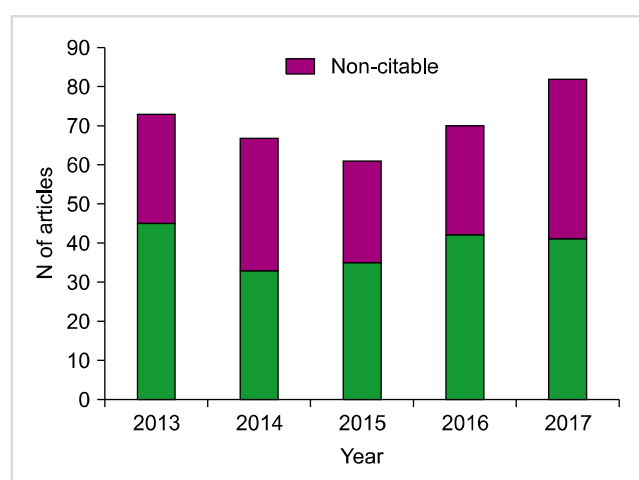


Fig. 1. The number of citable and non-citable articles published in *Blood Research* from 2013 to 2017.

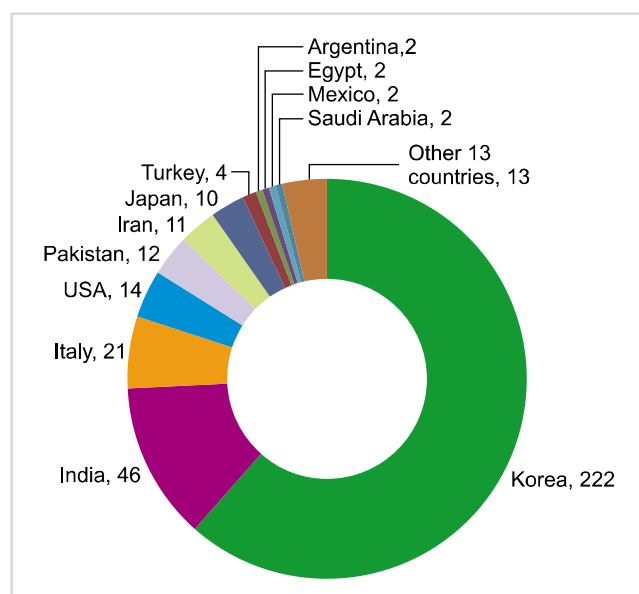


Fig. 2. The country-wise distribution of authors published in *Blood Research* from 2013 to 2017.

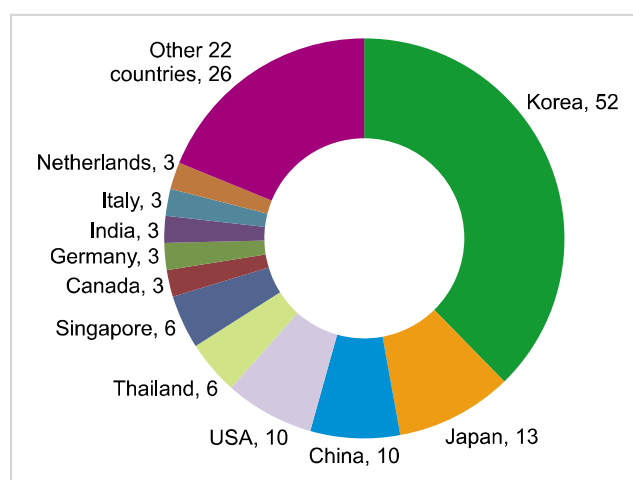


Fig. 3. The country-wise distribution of editorial board members of *Blood Research* in March 2018.

in Scopus and Web of Science Core Collection from 2013 to 2017 are presented in Fig. 4. At each database, the citations were marked as 257 and 235 in 2017, respectively.

The cites per two years in Scimago Journal & Country Rank and the calculated impact factor from Web of Science Core Collection are presented in Fig. 5. It ranked 71 out of 125 articles (43.2%) in the hematology category in Scimago Journal & Country Rank in 2016. With regard to the impact factor of journals published in 2016, 1.382 corresponded to 16.9% (58 out of 70) in the hematology category of Journal Citation Reports in 2016. Sixty-one countries of citing authors, as recorded in Web of Science Core Collection, are presented in Fig. 6. The USA, China, and Korea were the top ranking countries in terms of the number of citing authors. The number of citing journals in Web of Science Core Collection was 422. Of these, *Blood*

Research (26), *Oncotarget* (19), *Annals of Hematology* (16), *Blood* (14), *Leukemia Lymphoma* (11), *PLOS One* (11), *European Journal of Hematology* (10), *Leukemia Research* (10), and *Medicine* (9) were the top ranking citing journals (Fig. 7). Those journals are included in hematology category except a few general medical journals such as *Oncotarget*, *PLOS One* and *Medicine*.

In 2016, the Hirsch index was 12 for Scimago Journal & Country Rank and 10 for Web of Science Core Collection (Table 1).

Discussion

The above-mentioned data show us that *Blood Research* is comparable to branded international journals. A branded international journal possesses the following characteristics:

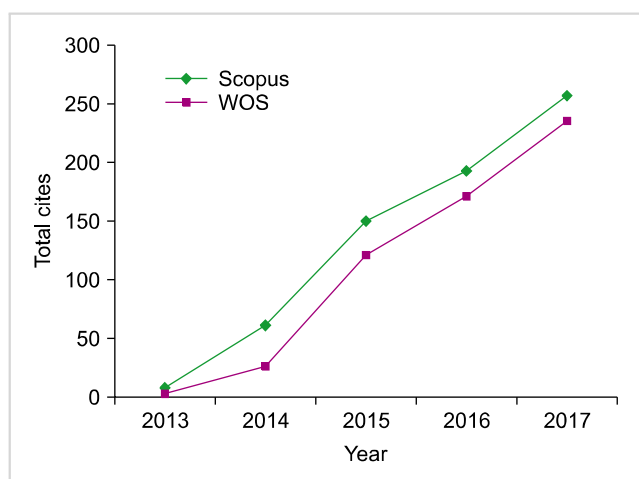


Fig. 4. Total cites of *Blood Research* in Scimago Journal & Country Rank and Web of Science (WOS) Core Collection from 2013 to 2017 (cited March 27, 2018).

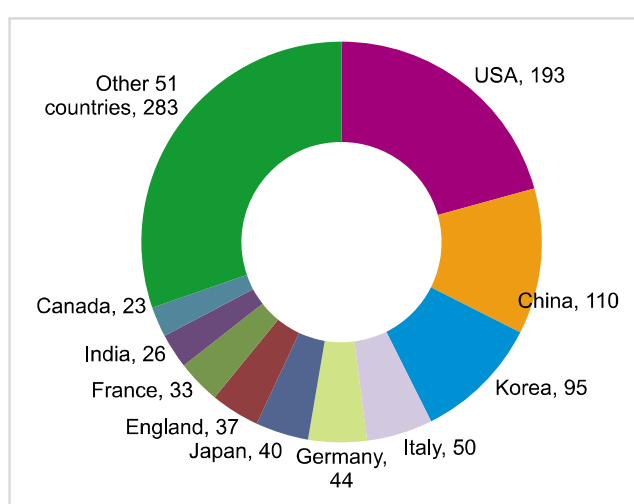


Fig. 6. The country-wise distribution of authors who cited *Blood Research* from 2013 to March 2018 (cited March 27, 2018).

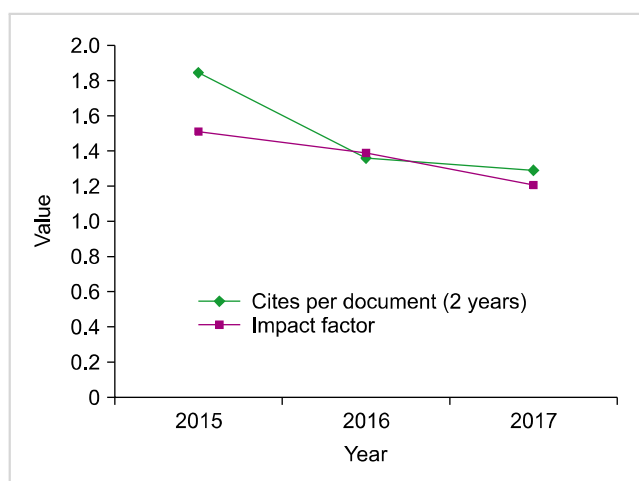


Fig. 5. Cites per document (2 years) from Scimago Journal & Country Rank and calculated impact factor based on content from Web of Science Core Collection for *Blood Research* (cited March 27, 2018).

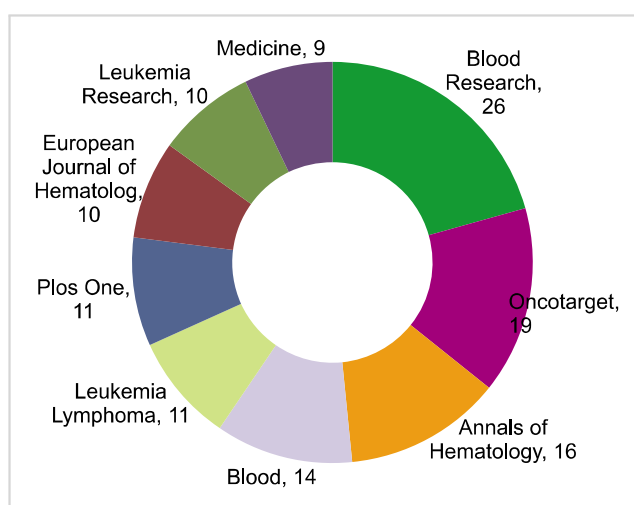


Fig. 7. The nine top-ranking journals that cited *Blood Research* (cited March 27, 2018).

Table 1. Highly cited articles of *Blood Research* from Web of Science Core Collection and their publication type (cited March 27, 2018).

Ranking	Article title	Year	Volume	First page	Authors' country	Publication type	Cited frequency
1	Disease modeling and cell based therapy with iPSC: future therapeutic option with fast and safe application	2014	49	7	Korea	Review	25
2	Role of hepcidin in the pathophysiology and diagnosis of anemia	2013	48	10	Italy	Review	19
3	Human bone marrow-derived mesenchymal stem cell gene expression patterns vary with culture conditions	2013	48	107	Korea	Original article	19
4	Next generation sequencing: new tools in immunology and hematology	2013	48	242	Italy	Review	16
5	The prevalence of vitamin D deficiency in iron-deficient and normal children under the age of 24 months	2013	48	40	Korea	Original article	14
6	Serum beta-2 microglobulin in malignant lymphomas: an old but powerful prognostic factor	2014	49	148	Korea	Review	14
7	Mean cell volumes of neutrophils and monocytes are promising markers of sepsis in elderly patients	2013	48	193	Korea	Original article	13
8	Pathogenesis of myelodysplastic syndromes: an overview of molecular and non-molecular aspects of the disease	2014	49	216	USA	Review	12
9	The allele burden of JAK2 V617F can aid in differential diagnosis of Philadelphia Chromosome-Negative Myeloproliferative Neoplasm	2013	48	128	Korea	Original article	12
10	Sequential chemotherapy followed by radiotherapy versus concurrent chemoradiotherapy in patients with stage I/II extranodal natural killer/T-cell lymphoma, nasal type	2013	48	274	Korea	Original article	10

international-level article quality; multi-nationality of authors, readers, and editorial board members; consistent journal style and format; and frequent citation or use of the journal's articles by researchers from a variety of countries. It is difficult to determine the quality of an article; however, article quality can be reflected by its citation frequency. There was consistency in terms of the number of articles published between 2013 and 2017 (Fig. 1), authors' multi-nationality (Fig. 2), editorial board members' multi-nationality (Fig. 3), citations from authors of 61 countries (Fig. 6), high count of total citations (Fig. 4), and impact factor (Fig. 5). The journal style and format were maintained thanks to the manuscript editor's perfect editing.

Citations by journals that are mostly included in the hematology category tell us that the relevant journal is a hematology journal (Fig. 7). The Hirsch index (12 in Scopus and 10 in Web of Science Core Collection) indicated the quality level of the articles of *Blood Research* during the 5 years after the title change. These values, along with its 196 citable articles, are an outstanding achievement for *Blood Research*, when compared to other journals. The Hirsch index was 7 with 157 articles for *Annals of Pediatric Endocrinology & Metabolism* during the 4 years after conversion to English [4]; 8 with 110 articles for *Clinical and Experimental Vaccine Research* during the 5 years after conversion [5]; 5 with 154 citable articles for *Journal of Educational Evaluation for Health Professions* during the 10 years after conversion [6]; 6 with 258 citable articles

for *Archives of Plastic Surgery* during the 2 years and 7 months after conversion [7]; 8 with 136 citable articles for *Intestinal Research* during the 3 years after conversion [2]; and 7 with 247 citable articles for *Journal of Exercise Rehabilitation* during the 4 years after conversion [8].

The most frequently cited type of published article is usually the review article [9]. In the case of *Blood Research*, out of the 10 most frequently cited articles, half of the publication type was the review article, and for the other half, it was the original article. Three of these top cited articles were from outside Korea (Table 1).

What is the driving force behind the journal's progress? The editors' and board members' devotion to and sacrifices made for the journal may be the most important background. Based on the promotion of the research competency of the societies' members and submitters from all over the world, we can conclude that the quality of the journal has increased year by year. Besides the quality of each article, another very important environmental factor is exposure to researchers worldwide. Without rapid and broad dissemination of information through the internet, it is impossible for a journal to be used or cited by other researchers. As for the dissemination of the journal's content to the world, inclusion in PMC (PubMed Central) and PubMed was an event to be promoted to international journal. In order to be deposited in PMC, Journal Article Tag Suite (JATS) XML production is mandatory [10, 11]. There is evidence that citations increased after the journal became a PMC journal [12]. Furthermore, being indexed

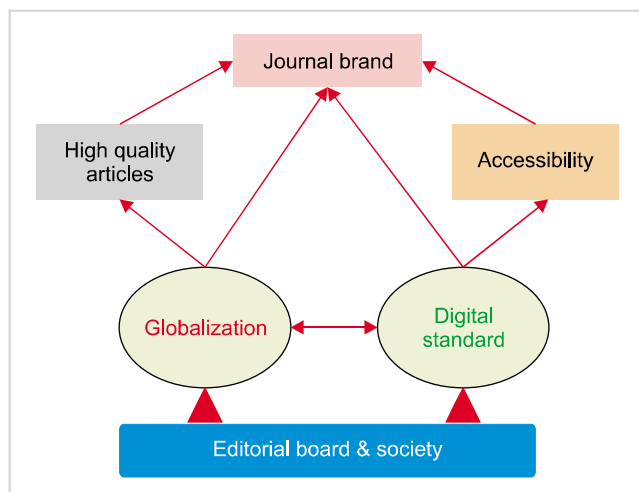


Fig. 8. Diagram of the three aspects of scholarly journal publishing that are true today and are not going to change much in the near future [19].

in Scopus also might have contributed to the citation and brand improvement of the journal.

What should be the next step to help readers and researchers who may use the articles and data of the journal? First, adopt “Check for updates” (formerly “Crossmark”), Funder registry (Fundref), and “text and data mining,” which have been provided by Crossref. “Check for updates” is a clarification of the recent status of the article because there may be errata, corrigenda, addenda, retractions, or other changes in the publication history. It provides recent information on the article’s status [13]. The funder registry is intended for funder identification. It will help funders trace the results of their support [14]. Embedding “text and data mining” helps “facilitate access to the relevant corpus of content for researchers who are interested in mining academic publications produced by CrossRef members” [15]. Second, I recommend the adoption of an author taxonomy policy to clarify each author’s role in the study. It may reduce the number of gifted authors or ghost authors in the study. Readers are also able to contact the appropriate author from among all the co-authors for specific inquiries. Third, adoption of an open data policy is recommended for increasing the reproducibility of data analysis. Opening up data to readers and researchers will help to prevent falsification or sloppy science. “Sloppy science is the publishing of a scientifically flawed article although it is not categorized as research misconduct.” It is known to be a waste of journal space. Furthermore, it may cause bias in meta-analyses [16]. Even if data were falsified, it would still be difficult to detect it. However, we, as editors, should trust researchers to provide the correct data. If data are analyzed inappropriately, raw data can be used to attempt to rectify the error during the review period or editorial process. One journal has already adopted an open data policy [17]. Fourth, introduction of ORCID (Open Researchers and Contributors ID) [18] or the

International Standard Name Identifier (<http://www.isni.org/>) is recommended for author verification. It can provide information on authors so that readers can contact the author with previous knowledge of his or her field. Fifth, registration of the journal in the DOAJ (Directory of Open Access Journals) is recommended [19] along with indexing in Medline.

Mr. Youngsuk Chi, President of Elsevier, spoke at the 3rd Asian Science Editors Conference and Workshop, Seoul, Korea, on July 20–22, 2016 as follows: “There are a lot of serious challenges on the horizon for our industry. However, three aspects that are true today are not going to change much in the near future: first, setting high standards for published content; second, developing a strong reputation over time; and third, maintaining a high level of accessibility to readers in the scientific community. These three points will not change because they are the fundamental reasons why journal editors have jobs in the first place” [20]. Based on his suggestion, I drew a diagram to plot this international perspective (Fig. 8). Out of the three components, high standards and strong reputation may take some years to achieve; however, accessibility can be achieved immediately by providing various types of information on the journal homepage and by depositing to, registering in, or being indexed in a variety of scholarly literature databases including DOAJ and Medline.

In conclusion, *Blood Research* has progressed greatly since the journal’s title change in 2013, rapidly becoming an international-level journal, which is evidenced by the above-mentioned journal metrics data. In particular, the results in terms of total citations, impact factor, and Hirsch index were outstanding. The multi-nationality of the authors’ community can be achieved by an international network of editorial board members. Owing to the high quality of the research performance of 4 society members and the international editorial board’s network, there would not be any problem for being promoted to high branded journal in the category of hematology.

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