ELSEVIER

Cardiovascular Research 55 (2002) 215–219

Cardiovascular Research

www.elsevier.com/locate/cardiores

Editorial

Submissions, impact factor, reviewer's recommendations and geographical bias within the peer review system (1997–2002): Focus on Germany

Tobias Opthof*[,1], Ruben Coronel, Michiel J. Janse
On Behalf of the Editorial Team

Editorial Office of Cardiovascular Research, Academic Medical Center, Room J-127, Meibergdreef 9, 1105 AZ Amsterdam, The Netherlands

Received 29 May 2002; accepted 29 May 2002

At the occasion of the Congress of the European Society of Cardiology in Berlin in 2002 we provide our readership with data on the impact factor of *Cardiovascular Research* and on the submission of manuscripts from different parts of the world.

1. Submissions

Fig. 1 shows the increase in submissions over the last years. The average of monthly submissions is well above 90 since the year 2000. In previous editorials we commented on the steady increase of submissions from Europe during the last decade [1–4]. Although there were slightly less submissions from Europe in 2000 compared with 1999, the year 2001 showed an all time high of 651 manuscripts (Fig. 2). From North America we received more manuscripts in 2001 than in the two preceding years. European submissions keep track with the general increase in submissions, leading to percentage of 55.3% in 2001. From North America (USA and Canada) we received 22.3% of the total number of manuscripts in 2001 and 10.9% came from Japan with the remaining 11.5% from the rest of the world. There is a trend to an increase of submissions from the rest of the world since 1997. With respect to individual countries most manuscripts in 2001 still were sent from the USA (16.7%), with Germany (13.2%) and the UK (11.2%), taking the second and third positions.

2. Impact factor

Fig. 3 shows the official impact factor for *Cardiovascular Research* as communicated by the Institute for Scientific Information (solid line) and our own estimates (dashed line) since 1997. The last official impact factor was 3.783 (2000). We predict an impact factor of 4.60 for the year 2001 and based on data accumulated between 1 January and 18 May 2002 we expect an impact factor of 4.85 for the year 2002. The difference between the solid and dashed lines over the years 1997–2000 gives an impression of the accuracy of our own estimates, although it should be emphasized that this accuracy for 2002 is based on counts of citations over the period January–May 2002 with extrapolation to the end of the year. Whatever the exact values will be, we continue to invite our authors to send us their very best work, because it is obvious that *Cardiovascular Research* continues to be successful in its aim to increase its impact factor [5,6].

Fig. 4 shows the impact factors of individual issues of our journal since January 1999. The abscissa shows the consecutive issues with the dates of publication of regular issues and abbreviations for spotlight issues. The issues 'Plaque Rupture and Atherosclerosis' (ATH; February 1999), 'Molecular Biology of Ion Channels and Electrical Remodeling' (REM; May 1999), Nitric Oxide and the Cardiovascular System (NO99; August 1999) and 'Apoptosis in the Cardiovascular System' (APO; February 2000) were very successful, as was the case with spotlight issues in previous years [7].

*Corresponding author. Tel.: +31-30-253-8923; fax: +31-30-2539-036.

E-mail address: t.opthof@med.uu.nl (T. Opthof).

[1]Present address: Department of Medical Physiology, University Medical Center Utrecht, The Netherlands.

0008-6363/02/$ – see front matter
PII: S0008-6363(02)00500-X

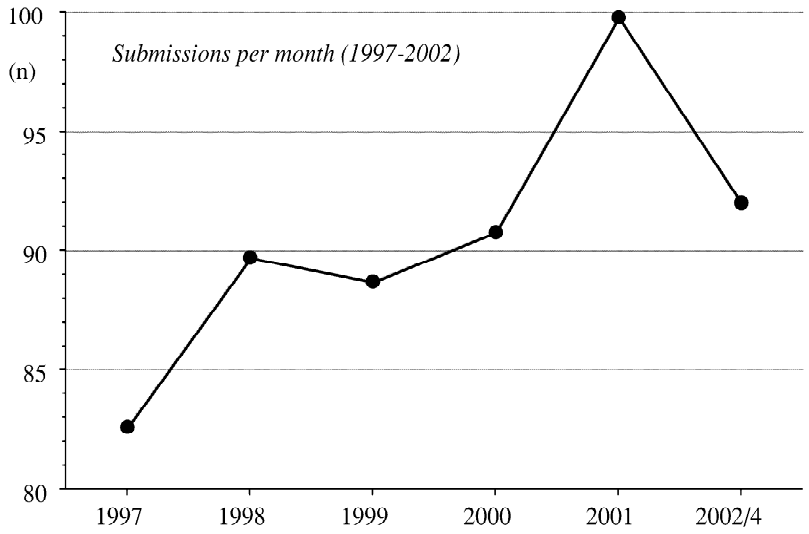

Fig. 1. Total number of submissions per month during the years 1997–2001 and over the first 4 months of 2002 (2002/4).

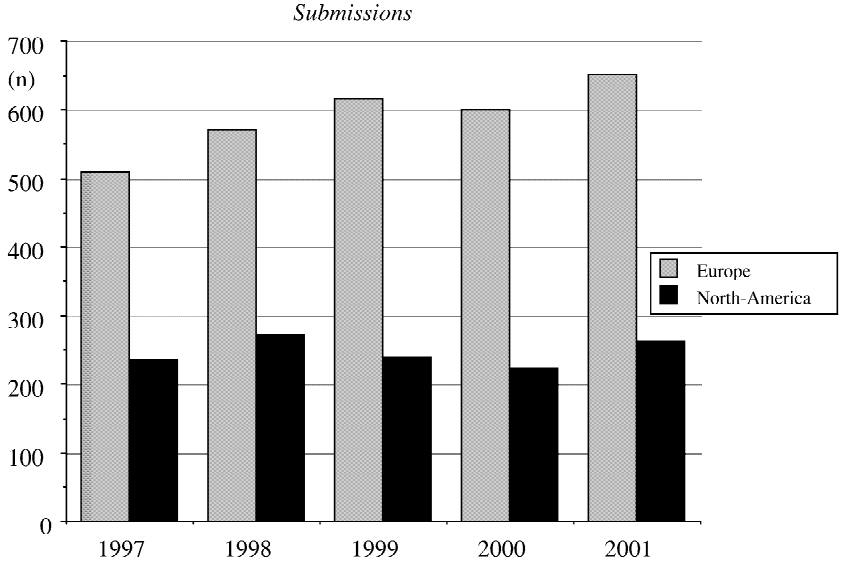

Fig. 2. Total number of submissions from Europe and North America from 1997 till 2001.

3. Reviewers and impact factor

If the editorial team would have selected other (less) papers in line with reviewers recommendations, the impact factor would also have been different. Fig. 5 shows the reviewer's priority recommendations along the abscissa against the impact factor for the years 1999, 2000 and 2001 (estimate for 2001). This was a post hoc analysis on the contents of 1997 and 1998 (impact factor 1999), on the contents of 1998 and 1999 (impact factor 2000) and on the contents of 1999 and 2000 (impact factor 2001). The number 100 indicates a high priority assigned to a manuscript by all three reviewers. 'ALL' indicates the complete contents of the journal as published (including manuscripts to which all three reviewers assigned a low priority, which occurs of course rarely). Thus, the impact factors for the 3 years can be found in the graph at 'ALL'. Next, papers were sequentially removed from the contents together with their contribution to the total number of citations during the pertinent years as a function of their reviewer's priority rating. Two things are obvious: firstly, there is a clear-cut increase in impact factor between the years 1999, 2000 and 2001, whatever the reviewer's priority recommendation (note the difference between the three curves in the direction of the ordinate); secondly, reviewer's priority recommendations are very helpful in increasing the quality of the journal in terms of its impact factor, because the highest impact factor is reached when we only would have accepted manuscripts with a 100% score. The question may arise why we do not 'listen better' to our reviewers?

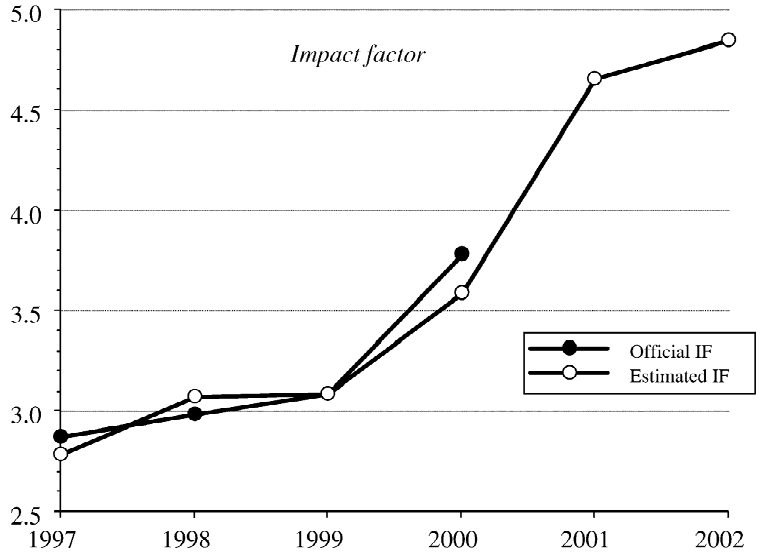

Fig. 3. Impact factor of *Cardiovascular Research* over the years 1997–2002. Filled circles and solid line: values of the Institute for Scientific Information. Open circles and dashed line: estimates of the editorial team. Impact factor for 2001 will be communicated in August/September 2002. Impact factor for 2002 will be communicated in August/September 2003.

Would a couple of monkeys do the job better? It should be realized that accepting only manuscripts with a 100% score would reduce the contents of the journal below 30%. Still, this analysis shows the potential for further growth. Interestingly, when only the material with the highest recommendations would have been accepted, the impact factor of 1999 (read graph at '100' along the abscissa) would still have been lower than the expected impact factor in 2001 (read graph at 'ALL' along the abscissa).

4. Manuscripts and reviewers from Germany (sources of bias)

Editors heavily depend on the expertise of their reviewers. Therefore it is of interest whether or not geographical issues are relevant in the review process. The most simple relationship concerns identical nationality of reviewers and authors of a manuscript. During the last years about 12% of submitted manuscripts came from Germany. Fig. 6

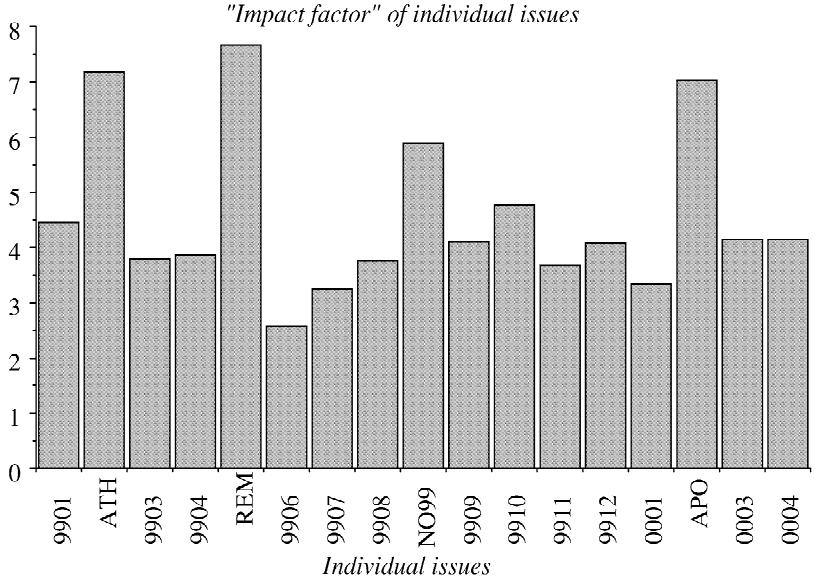

Fig. 4. Impact factor of individual issues of *Cardiovascular Research* since January 1999. Regular issues are depicted with year and month of publication. Spotlight issues are depicted with the abbreviation of their title. ATH: Plaque Rupture and Atherosclerosis (February 1999); REM: Molecular Biology of Ion Channels and Electrical Remodeling (May 1999). NO99: Nitric Oxide and the Cardiovascular System (August 1999); APO: Apoptosis in the Cardiovascular System (February 2000).

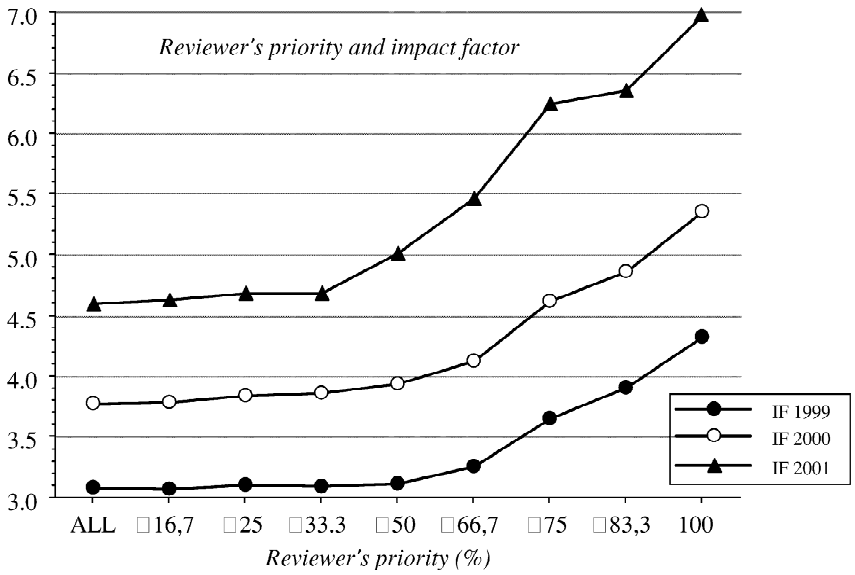

Fig. 5. The effect of an artificial reduction of the contents of *Cardiovascular Research* in 1997 and 1998 on the impact factor in 1999 (filled circles) and of the contents of *Cardiovascular Research* in 1998 and 1999 on the impact factor in 2000 (open circles) and of the contents in 1999 and 2000 on the—expected—impact factor in 2001 (triangles). If only manuscripts with 100% priority score would have been published the theoretical top impact factor would have been 4.33 in 1999 and 5.36 in 2000 and 6.98 in 2001 compared to the official values of 3.09, 3.78 and the—expected—4.60, respectively.

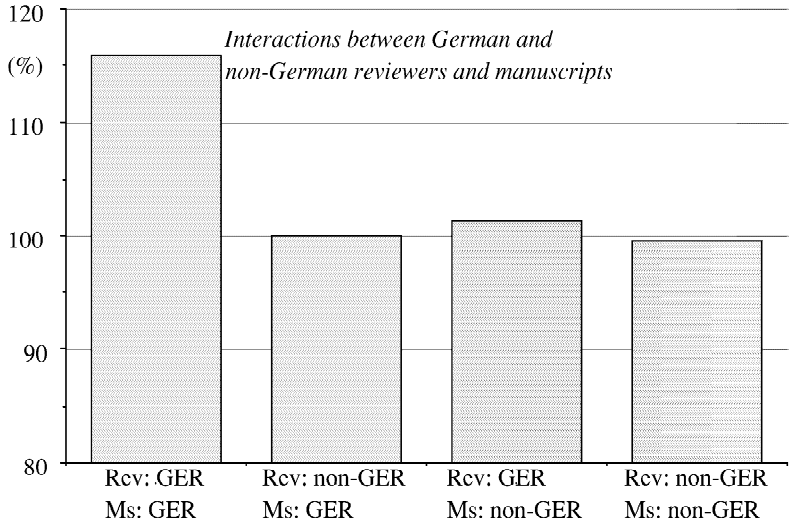

Fig. 6. Reviewer's recommendations of manuscripts. German reviewers assign a 115% priority to German manuscripts. All other three possible combinations score around 100%, which is the average priority assignment of all reviewers to all manuscripts. None of the differences is significant.

shows that German reviewers assign a 115% priority to manuscripts from their own country. All other combinations, German reviewers versus non-German manuscripts, non-German reviewers versus German manuscripts and non-German reviewers versus non-German manuscripts scored around 100%. It should be noted that this over-estimation of German manuscripts by German reviewers should be appreciated against the following background:

(i) The difference is not significant, despite a large number of cases.
(ii) The difference is relatively small compared to an international value of match versus non-match between the nationality of reviewers and authors of a manuscript of about 25%.
(iii) There are countries in which the over-estimation of manuscripts from their own country reaches significance. Details will be communicated by us during the Congress of the European Society of Cardiology in Berlin on 3 September 2002.

References

[1] Opthof T, On Behalf of the Editorial Team of Cardiovascular Research. Submissions, publications and reviewers from Europe: focus on Spain. Cardiovasc Res 1999;43:265–267.

[2] Opthof T, Coronel R, Janse MJ, On Behalf of the Editorial Team of Cardiovascular Research. Submissions, editorial process and impact factor 1992–2000: Focus on Europe. Cardiovasc Res 2000;47:203–206.
[3] Opthof T, On Behalf of the Editorial Team of Cardiovascular Research. Geographical shifts in publications. Cardiovasc Res 1999;42:1–2.
[4] Opthof T, Coronel R, Janse MJ, On Behalf of the Editorial Team of Cardiovascular Research. Submissions and impact factor; focus on Sweden. Cardiovasc Res 2001;51:202–204.
[5] Opthof T, Coronel R, Janse MJ, On Behalf of the Editorial Team of Cardiovascular Research. Reviewer's recommendations predict impact: Why you have to send us your very best work. Cardiovasc Res 2000;48:1–3.
[6] Opthof T, Coronel R, Janse MJ, On Behalf of the Editorial Team of Cardiovascular Research. Impact factor of Cardiovascular Research in 2000: all time high! Cardiovasc Res 2001;50:1–2.
[7] Opthof T, On Behalf of the Editorial Team of Cardiovascular Research. Submissions, acceptance rate, rapid review system and impact factor. Cardiovasc Res 1999;41:1–4.