

Letter from Editor

Impact Factor of the *Chinese Journal of Physiology* in 2009: Meet the Readers

Marcel A.G. van der Heyden¹ and Tobias Opthof^{1, 2}

¹Department of Medical Physiology, Division Heart & Lungs, University Medical Center Utrecht and

²Experimental Cardiology Group, Heart Failure Research Center, Academic Medical Center, Amsterdam, The Netherlands

The annual publication of scientific journal impact factors (IF) by Thomson Reuters provides an elegant tool to compare a specific journal with others in the field. The 2009 impact factor is calculated by the number of 2009 citations to the total 2007 and 2008 content of the journal divided by the total number of 2007-2008 citable items (sum of reviews, articles and proceeding papers). For the *Chinese Journal of Physiology* the numbers are as follows. Number of citable publications in the 2007-2008 issues is 96. The number of citations to these in 2009 is 67. This produces a 2009 IF of 0.698, a slight increase compared to the last years number (0.655).

More interesting than IF *per se* is the development of a given journal's IF compared to its field. This will inform us on the performance of the journal compared to the developments within the field to which it belongs. A number of, currently popular, research fields is increasing its aggregate impact factor (*i.e.* total number of 2009 citations to all journals in the subject category, divided by the total number of citable issue in their 2007-2008 content). For example, the fields of *ecology*, *biodiversity conservation* and *environmental sciences* increased their aggregate IF from 2.041, 1.717 and 1.578 in 2004 to 2.738, 2.364 and 2.476 in 2009 respectively, which might be explained by the increased interest and efforts in global environmental issues such as climate change and nature conservation. On the other hand, the fields of *developmental biology* and *biochemistry & molecular biology* display a decrease from 4.781 and 4.404 in 2004 to 4.478 and 4.220 in 2009. In the field of physiology, a total of 75 journals is ranked by Thomson Reuters, of which the *Chinese Journal of Physiology* takes the 71th place in 2009. Again, taking 2004 as a

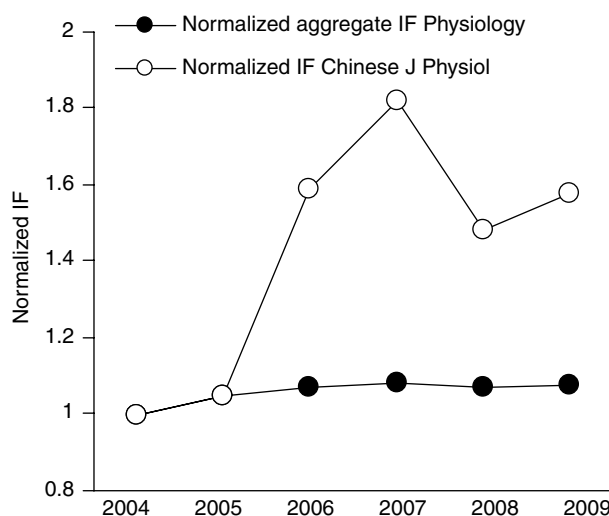


Fig. 1. Development of IF in the field of *Physiology* (closed symbols) compared to that of the *Chinese Journal of Physiology* (open symbols). IF values were normalized to the 2004 values.

starting point we see that the increase of the IF of the *Chinese Journal of Physiology* during the last five years is larger than that of the entire field of physiology on a percentage scale (Fig. 1).

In addition, Thomson Reuters provides numerous other valuable data through their *Web of Science* interface. Here we will focus on our readership. Analysis of all citations to all issues of the *Chinese Journal of Physiology* indicates that over the years most citations were obtained from the fields of *neurosciences* and *physiology* (20.2% and 16.0% respectively) (Fig. 2), a third place is reserved for the field of *pharmacology & pharmacy* (14.4%). Assuming

Corresponding author: Marcel A.G. van der Heyden, Ph.D., Department of Medical Physiology, Division Heart & Lungs, University Medical Center Utrecht, Yalelaan 50, 3584 CM Utrecht, The Netherlands. Tel: +31 30 2538900, Fax: +31 30 2539036, E-mail: m.a.g.vanderheyden@umcutrecht.nl
Received: June 29, 2010.

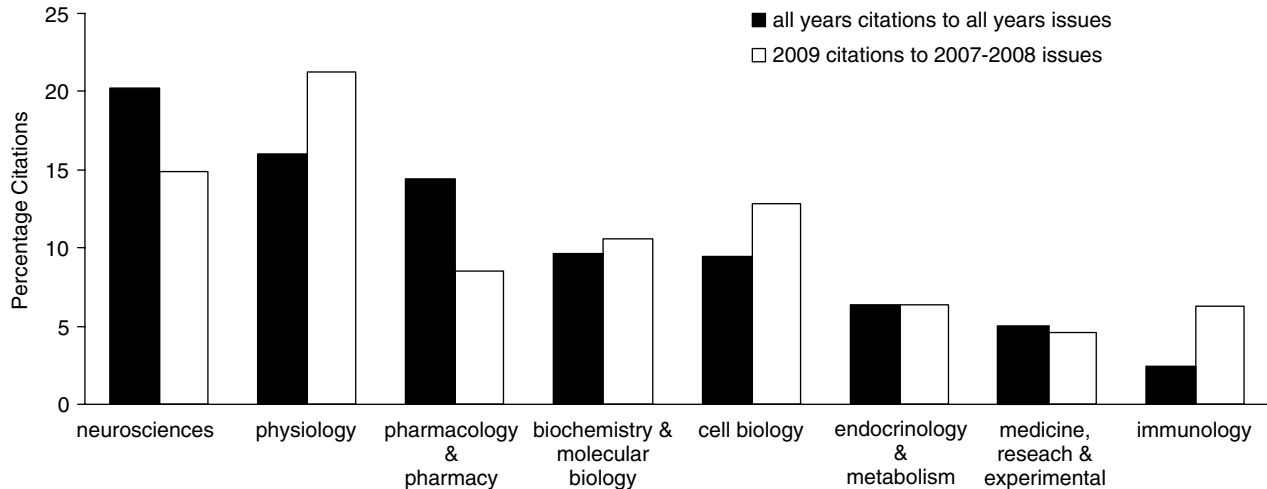


Fig. 2. Scientific fields citing to the content of the *Chinese Journal of Physiology*. Comparison between all citations to all content (black bars) with 2009 citations to the 2007-2008 content (open bars).

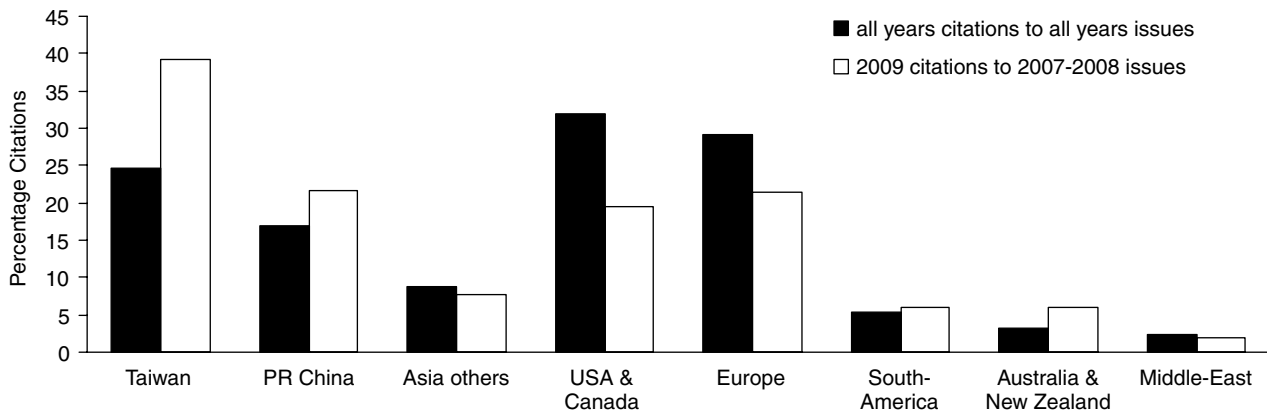


Fig. 3. Geographical regions citing to the content of the *Chinese Journal of Physiology*. Comparison between all citations to all content (black bars) with 2009 citations to the 2007-2008 content (open bars).

that our readers will also cite our papers, these data tell us that our readers are mainly concentrated in these research fields. Data for the year 2009 confirm that still a large part of the readers are concentrated in the fields of *neurosciences* and *physiology*, however less citations are obtained from the field of *pharmacology & pharmacy* (8.5%).

The *Chinese Journal of Physiology* obtains its citations mainly from 4 different territories, from Taiwan where the Editorship remains, the Peoples Republic of China, the USA and Europe (Fig. 3). The large amount of citations from Taiwan may be due to a high dissemination of the journal into its own scientific community or due to Taiwanese scientists citing their own work regularly in the journal.

Finally, looking at the 2009 citation highlights, we see that the excellent review paper of Chen *et al.*, (2007) on *nitric oxide* provides a significant contribution with a total of 9 citations. The genetically

oriented original contribution of Lin *et al.* (2008) on SNPs associated with bone mineral density received a citation from a high impact journal, namely *American Journal of Clinical Nutrition* (IF 6.307) (McCann and Ames, 2009), underscoring the increasing visibility of the contents of the *Chinese Journal of Physiology*.

References

- Chen, H.I., Chang, H.R., Wu, C.Y., Kao, S.J., Wang, D., Hsieh, N.K. and Hsu, Y.H. Nitric Oxide in the cardiovascular and pulmonary circulation – a brief review of literatures and historical landmarks. *Chinese J. Physiol.* 50: 43-50, 2007.
- Lin, G.T., Tseng, H.F., Chang, C.K., Chuang, L.Y., Liu, C.S., Yang, C.H., Tu, C.J., Wang, E.C., Tan, H.F., Chang, C.C., Wen, C.H., Chen, H.C. and Chang, H.W. SNP combinations in chromosome-wide genes are associated with bone mineral density in Taiwanese women. *Chinese J. Physiol.* 51: 32-41, 2008.
- McCann, J.C. and Ames, B.N. Vitamin K, an example of triage theory: is micronutrient inadequacy linked to diseases of aging? *Am. J. Clin. Nutr.* 90: 889-907, 2009.