

Letter from Editor

Impact Factor of *The Chinese Journal of Physiology* in 2007: Building a Strong Foundation

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The impact factor (IF) constitutes the most widely used parameter to assess the quality of a scientific journal (4). The contribution of individual papers to the IF of any journal is extremely skewed (6). This means that the IF of a journal is an extremely bad predictor of the citation of its constituent individual papers (6). Such abuse of the IF for other purposes than originally meant for, by no means detracts from its validity as a determinant for journal quality (4). Editors, authors and readers all express paramount interest in the yearly published IF by Thomson Inc[®]. The recently published IF 2007 of *The Chinese Journal of Physiology* is 0.803. At first glance, Fig. 1 shows that this number is in line with the trend line since 2004. Analysis of the data from Fig. 1 shows that the IF is variable over the years with highs and lows. These fluctuations to a large extent result from the combination of the number of articles published each year and the calculation of IF. The 2007 IF reflects the citations during the year 2007 to the contents of the journal in 2005 and 2006. It is calculated by the number of citations during 2007 obtained by the papers published in 2005 and 2006 (nominator) divided by the total number of these papers (denominator). Obviously, a low number in the denominator allows for large annual fluctuations in IF. In 2006, the journal went from 4 to 6 issues each year and the number of published articles in *The Chinese Journal of Physiology* increased by approximately 37% compared to the previous year (41 in 2006 vs. 30 in 2005). In 2007, the number of published articles was 43. This increase in the denominator will soften large annual fluctuations in IF and therefore makes it more stable in the future. A drawback of a sudden increase in the number of published papers, however is that

normally it transiently represses the IF. This is due to the fact that there is a large time lag between the first online publication of an article and its citation by others. Papers in clinical medicine and the life sciences (including physiology) are in general cited most frequently during a period later than the one used for calculation of the IF (5) and *The Chinese Journal of Physiology* makes no exception to this observation. Thus, Fig. 2 shows citation of papers published by the journal in 2003. Citations of the content of 2003 during 2004 have contributed to the IF of 2004, whereas citations of the same content during 2005 have contributed to the IF of 2005. Still, we can see that citation was more frequent during 2006, which did not contribute to the IF of any year.

As stated above, increasing the number of articles in a given year will inevitably influence the IF during the next years in a negative way. And just this happened with the 2007 IF of *The Chinese Journal of Physiology*, as can be easily seen from the absolute number of

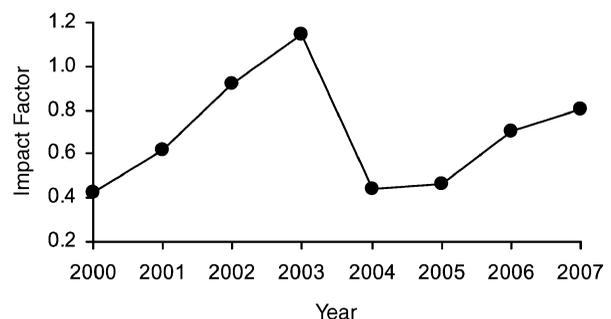


Fig. 1. Officially published impact factor (Thomson Inc[®]).

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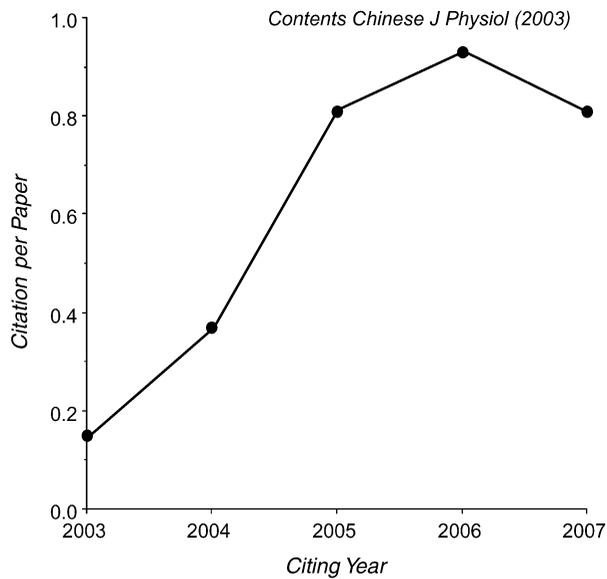


Fig. 2. Averaged citation of a 2003 paper published in *The Chinese Journal of Physiology* on an annual basis. Articles are cited maximally three years after the year of publication.

citations (nominator) during the last four years which are 23, 25, 40 and 57 citations for the years 2004 to 2007 respectively. Clearly, hadn't the journal increased its number of publications in 2006, this year's IF would be even larger than 0.803. Nevertheless, the increase in 2007 IF combined with the strengthened foundation of more publications, makes this year's number an excellent accomplishment.

Apart from these generalized numerical facts and expectations on *The Chinese Journal of Physiology*,

we made four remarkable observations concerning the contents effective for the IF of 2007. First, the 2006 review paper "Biology of Hypoxia" from Kiang and Tsen (2) received 5 citations, which is approximately 9% of the total amount of citations. Second, the 2005 paper "Implication of nNOS in the enlargement of AChR aggregates but not the initial aggregate formation in a novel coculture model" by Chen *et al.* (1), received a citation from *Nature* (3) underscoring the presence of high quality content in *The Chinese Journal of Physiology*. Third, 34% of the total number of citations came from the field of physiology, 20% from the field of pharmacology & pharmacy and 11% from the area of neurosciences. Finally, the citing papers originate mainly from the USA (32%), Peoples Republic of China (27%) and Taiwan (14%). Remarkably, the field of cardiovascular research and readers from Europe are currently relatively underrepresented in the journal.

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Announcement

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