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EDITORIAL

The good, the bad and the median

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I don't write so many editorials because, like all group leaders, I am busy trying to get my lab's research published to help my people's careers, get grants and even keep my own job. Obviously, the best way to do that is to ensure the papers appear in the best journal possible. You know, those with the highest impact factor, that simple number that says so much about the 'quality' of the science we all publish. I'm not going to go into all the nitty-gritty details on why and how the current impact factor is so misleading as a measure of scientific quality, as this has already been covered in numerous blogs and editorials. I only want to remind people that the impact factor represents the mean value of citations per article, even though the bulk of citations only come from about 15% of the papers published in any journal (see, for example, http://emboj.embopress.org/content/34/12/1601). It does not take a scientist to realise that any number calculated like this cannot possibly be considered a measure of the scientific impact of any published paper. In fact, no single number will ever encapsulate this, especially when the number of citations varies widely between fields. (As an aside, I hope the people who decide whether I keep my job realise this!) However, if we have to have a number, then it has to be more representative, hence the title of this editorial.

The median represents the middle value in a data set. In other words, there are as many papers above as below this value. I am therefore proud to announce that the median value for Journal of Cell Science is 3. What, you say, 3? Yes it's lower than the impact factor calculated by Thompson Reuters, over which journals have no control, as we do not see the data it is based on to even know if it's actually correct. Three is also a magic number according to a song from De La Soul that I used to play in the lab in 1990 during my first postdoc (www.youtube.com/watch?v=daWObuUptrQ). So why is this number magic? For me, it is not actually the number, as no number is a true measure of science, but rather the reporting of the median that is going to be an eye opener and a true leveller, even a game changer, for some journals. And why is that? First, there can be a considerable difference between the mean and median impact factor for many journals (for example, see www.quantixed.wordpress.com/2016/01/05/the-great-curve-ii-citation-distributions-and-reverse-engineering-the-jif/ or www.nature.com/npg_/company_info/journal_metrics.html). Second, the median makes it clear that journals are more similar to each other than the current impact factor pecking-order suggests. Although better, the median value is still a single number. However, when considered with other metrics, including the 5-year impact factor, cited half-life and especially distribution of citations (see biorxiv.org/content/early/2016/07/05/062109), it is possible to get an overall impression of the importance and quality of science that any journal publishes. Nevertheless, it must always be remembered that citations to any paper and the journal metrics they generate will vary between different topics and fields. The numbers are here for the foreseeable future, but attitudes are changing, and one can only hope that the perceived and overblown importance of the numbers is steadily eroded.

What is always most important at Journal of Cell Science is that we continue to publish papers that provide mechanistic insights into fundamental cellular processes, regardless of the topic, size of the field or the number of citations that a paper is likely to receive. So how do we ensure that we always achieve that? Having knowledgeable and committed academic editors, supported by feedback from our expert Editorial Advisory Board, is very important. Reviewers are, of course, also fundamental to this process, and we are grateful for the time and effort they spend on the manuscripts we send them. Nevertheless, there can be a tendency for some reviewers to ask for the next paper's worth of experiments, or to be overly critical in their assessment of whether the data justify the conclusions. As Editors, we do our best to mitigate this when writing our decision letters, but it can be difficult, especially when there are conflicting reports. Interestingly, collaborative peer review rated very highly in a recent survey of our readership, and so we have decided to implement a trial of cross-referee commenting on Journal of Cell Science. Reviewers will be invited to comment on each other's reports before the Editor makes a decision. This will increase times to decisions, potentially by up to 48 hours, but we believe that it will lead to better decisions with more constructive and balanced reports. In addition, where revisions are invited, this initiative will help our Editors to direct authors to those revisions that are the most important for ensuring acceptance. Keep in mind that over 95% of papers at Journal of Cell Science that are invited for revision are eventually accepted.

We have also been thinking about how to make it a bit easier for authors to submit to us, and so have decided to trial format-neutral submissions. You will be able to submit your paper to us with any text formatting, although I would strongly recommend using double line spacing and line numbers to make it easier for Editors and reviewers to assess the merits of the study. Finally, no one likes being rejected and having to submit to another journal, only to start the review process from square one again. Why go through the same steps a second (or third) time? We don't think it makes sense either. Consequently, at Journal of Cell Science, we are pleased to fast-track previously reviewed papers, making decisions in under a week based on previous reviews from other journals, as long as all documentation is provided, including Editors' decisions letters and all correspondence.

We hope that introduction of these new policies will make it easier to submit papers and, more importantly, allow Journal of Cell Science Editors to give authors better and more constructive feedback on their research.