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El factor de impacto ya no es el patrón oro; la declaración de San Francisco sobre evaluación de la investigación.

Impact factor is no longer the gold standard; the San Francisco declaration on research assessment.

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El 27 de febrero de 2017 el *Imperial College* de Londres ha decidido firmar la Declaración sobre Evaluacion de la Investigación de San Francisco (*San Francisco Declaration on Research Assessment* (DORA). El *Imperial College* es la institución número 840 que la firma. En esta declaración se tomó la decisión de no apoyarse de manera incondicional en los indicadores de impacto a la hora de evaluar los logros de investigación. Desde el punto de vista práctico significa que al firmar DORA los factores de impacto de las revistas ya no serán tenidos en cuenta, ni directa ni indirectamente en la evaluación del personal investigador. Esta decisión, dicen en su declaración, no debe en modo alguno inhibir la elección de los investigadores sobre donde publicar sus trabajos. Por el contrario lo que se pretende es que los trabajos sean evaluados por lo que son y no por el lugar donde son publicados.

Nos satisface mucho leer esta decisión tomada en *Imperial College* de Londres y en las otras 839 instituciones. Hace ocho meses habíamos publicado en *The Journal of Negative and No Positive Results*[1] nuestra opinión al respecto, que transcribimos:

> «De alguna manera habría que hacer entender a nuestras instituciones, universidades y organismos oficiales que hoy día ya no es necesario cuantificar un trabajo por el factor de impacto de la revista que lo vehiculiza a las bases de datos electrónicas. De hecho, para leer artículos ya no se acude a las revistas sino directamente a la Web. En la Web, de cada artículo se puede conocer su propia repercusión a través del número de veces que haya sido citado. Puede darse la paradoja de que un artículo de mala calidad sea publicado en una revista de gran factor de impacto y viceversa. ¿Por qué evaluarlo por la revista que lo vehiculiza y no por su valor intrínseco?»

En otro lugar decíamos:

> «Las autoridades científicas, a la hora de evaluar los trabajos publicados consideran el factor de impacto de la revista donde aparece como el "patrón oro". Se exigen revistas del primer cuartil o del primer tercil. De las 74 revistas españolas indizadas en la WOS solamente hay cuatro dentro del primer cuartil y cinco en el segundo cuartil. La consecuencia es que los científicos se ven obligados a publicar fuera de nuestras fronteras y en un idioma que no es el nuestro, a pesar de que el castellano presta servicio a más de 450 millones de personas en varios continentes. Conseguir que nuestros trabajos sean admitidos en revistas foráneas nos inclina a veces a orientar nuestras líneas de investigación a lo que a ellos les parece de mayor interés o actualidad, con lo cual este fenómeno interfiere en nuestra actividad.

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Si continúan nuestras instituciones y universidades con este papanatismo de considerar lo extranjero mejor, las revistas en castellano, que tan buen servicio prestan no solo a la comunidad científica española sino a la ibero latinoamericana, serán seriamente perjudicadas».

No esperábamos que nuestra voz fuera oída por las instituciones españolas pero, ahora que una universidad tan prestigiosa como el *Imperial College* ha dado este paso confiamos que en España, con mayor motivo, se tome alguna decisión similar.

Declaración sobre Evaluacion de la Investigación de San Francisco (*San Francisco Declaration on Research Assessment* (DORA)[2].

La Declaración sobre Evaluación de la Investigación de San Francisco (*San Francisco Declaration on Research Assessment* (DORA) fue promovida por la Sociedad Americana de Biologia Celular (ASCB) junto con algunos editores de revistas científicas que reconocieron la necesidad de mejorar la forma de evaluar la producción científica. El grupo se reunió por vez primera en diciembre 2012

Por su interés, transcribimos la Declaración sobre Evaluacion de la Investigación de San Francisco (*San Francisco Declaration on Research Assessment* (DORA). En la página http://www.ascb.org/dora/signup-complete/ hay información completa de DORA, un documento que da opción de firmar la declaración tanto a título individual como institucional, un ensayo sobre buenas prácticas y una carta a Thomson Reuters.

Hasta el dos de marzo de 2017 hay 12593 firmantes a título individual y 840 firmantes institucionales. Nosotros hemos incorporado nuestra firma.

San Francisco Declaration on Research Assessment

Putting science into the assessment of research

There is a pressing need to improve the ways in which the output of scientific research is evaluated by funding agencies, academic institutions, and other parties.

To address this issue, a group of editors and publishers of scholarly journals met during the Annual Meeting of The American Society for Cell Biology (ASCB) in San Francisco, CA, on December 16, 2012. The group developed a set of recommendations, referred to as the San Francisco Declaration on Research Assessment. We invite interested parties across all scientific disciplines to indicate their support by adding their names to this Declaration.

The outputs from scientific research are many and varied, including: research articles reporting new knowledge, data, reagents, and software; intellectual property; and highly trained young scientists. Funding agencies, institutions that employ scientists, and scientists themselves, all have a desire, and need, to assess the quality and impact of scientific outputs. It is thus imperative that scientific output is measured accurately and evaluated wisely.

The Journal Impact Factor is frequently used as the primary parameter with which to compare the scientific output of individuals and institutions. The Journal Impact Factor, as calculated by Thomson Reuters, was originally created as a tool to help librarians identify journals to purchase, not as a measure of the scientific quality of research in an article. With that in mind, it is critical to understand that the Journal Impact Factor has a number of well-documented deficiencies as a tool for research assessment. These limitations include: A) citation distributions within journals are highly skewed [1–3]*; B) the properties of the Journal Impact Factor are field-specific: it is a composite of multiple, highly diverse article types, including primary research papers and reviews* [1,4]*; C) Journal Impact Factors can be manipulated (or "gamed") by editorial policy* [5]*; and D) data used to calculate the Journal Impact Factors are neither transparent nor openly available to the public* [4,6,7].

Below we make a number of recommendations for improving the way in which the quality of research output is evaluated. Outputs other than research articles will grow in importance in assessing research effectiveness in the future, but the peer-reviewed research paper will remain a central research output that informs research assessment. Our recommendations therefore focus primarily on practices relating to research articles published in peer-reviewed journals but can and should be extended by recognizing additional products, such as datasets, as important research outputs. These recommendations are aimed at funding agencies, academic institutions, journals, organizations that supply metrics, and individual researchers.

A number of themes run through these recommendations:

- *--- the need to eliminate the use of journal-based metrics, such as Journal Impact Factors, in funding, appointment, and promotion considerations;*
- *--- the need to assess research on its own merits rather than on the basis of the journal in which the research is published; and*

- *--- the need to capitalize on the opportunities provided by online publication (such as relaxing unnecessary limits on the number of words, figures, and references in articles, and exploring new indicators of significance and impact).*

We recognize that many funding agencies, institutions, publishers, and researchers are already encouraging improved practices in research assessment. Such steps are beginning to increase the momentum toward more sophisticated and meaningful approaches to research evaluation that can now be built upon and adopted by all of the key constituencies involved.

The signatories of the San Francisco Declaration on Research Assessment support the adoption of the following practices in research assessment.

General Recommendation

1. Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions.

For funding agencies

2. Be explicit about the criteria used in evaluating the scientific productivity of grant applicants and clearly highlight, especially for early-stage investigators, that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.
3. For the purposes of research assessment, consider the value and impact of all research outputs (including datasets and software) in addition to research publications, and consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

For institutions

4. Be explicit about the criteria used to reach hiring, tenure, and promotion decisions, clearly highlighting, especially for early-stage investigators, that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.
5. For the purposes of research assessment, consider the value and impact of all research outputs (including datasets and software) in addition to research publications, and consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

For publishers

6. Greatly reduce emphasis on the journal impact factor as a promotional tool, ideally by ceasing to promote the impact factor or by presenting the metric in the context of a variety of journal-based metrics (e.g., 5-year impact factor, EigenFactor [8], *SCImago* [9], *h-index, editorial and publication times, etc.) that provide a richer view of journal performance.*
7. Make available a range of article-level metrics to encourage a shift toward assessment based on the scientific content of an article rather than publication metrics of the journal in which it was published.
8. Encourage responsible authorship practices and the provision of information about the specific contributions of each author.
9. Whether a journal is open-access or subscription-based, remove all reuse limitations on reference lists in research articles and make them available under the Creative Commons Public Domain Dedication [10].
10. Remove or reduce the constraints on the number of references in research articles, and, where appropriate, mandate the citation of primary literature in favor of reviews in order to give credit to the group(s) who first reported a finding.

For organizations that supply metrics

11. Be open and transparent by providing data and methods used to calculate all metrics.
12. Provide the data under a licence that allows unrestricted reuse, and provide computational access to data, where possible.
13. Be clear that inappropriate manipulation of metrics will not be tolerated; be explicit about what constitutes inappropriate manipulation and what measures will be taken to combat this.
14. Account for the variation in article types (e.g., reviews versus research articles), and in different subject areas when metrics are used, aggregated, or compared.

For researchers

15. When involved in committees making decisions about funding, hiring, tenure, or promotion, make assessments based on scientific content rather than publication metrics.
16. Wherever appropriate, cite primary literature in which observations are first reported rather than reviews in order to give credit where credit is due.

17. Use a range of article metrics and indicators on personal/supporting statements, as evidence of the impact of individual published articles and other research outputs [11].
18. Challenge research assessment practices that rely inappropriately on Journal Impact Factors and promote and teach best practice that focuses on the value and influence of specific research outputs.

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