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ECONOMICS AND FUNDING

Boyle PJ, Smith LK, Cooper NJ, *et al.* **Women are funded more fairly in social science.** *Nature* 2015;525:181-183

In the biomedical sciences, women get smaller grants than men in the United States and the United Kingdom. This pattern is evident at different rates across disciplinary domains. The data presented in the article show that there is little difference between female and male social scientists in application rate, success rate and grant size. The authors discuss some lessons that these results may hold for the biomedical sciences.

Moher D, Glasziou P, Chalmers I, *et al.* **Increasing value and reducing waste in biomedical research: who's listening?** *The Lancet*, 27 September 2015

Published online during the REWARD/EQUATOR Conference in Edinburgh (September 28-30), this review provides some initial observations on the possible effects of *The Lancet* 2014 series of five reviews showing how dividends from the investment in research might be increased from the relevance and priorities of the questions being asked, to how the research is designed, conducted, and reported. 17 recommendations were addressed to five main stakeholders—funders, regulators, journals, academic institutions, and researchers. Some examples of individual initiatives show ways to reduce waste and increase value in biomedical research. doi:10.1016/S0140-6736(15)00307-4

EDITORIAL PROCESS

Arns M. **Open access is tiring out peer reviewers.** *Nature* 2014;515:467

The migration of scholarly journals from print to digital increases the burden on reviewers. The increased pressure means that papers are assigned to reviewers who are not experts in the area. They might have the technical ability to evaluate methods and results sections but lack the expertise to evaluate a full paper, including introduction and discussion. The author suggests a two-tier system, in which some papers are not reviewed before publication at all and are instead subject to a post-publication peer review.

Bornmann L, Haunschild R. **The interest of the scientific community in expert opinions from journal peer review procedure.** *Scientometrics* 2015;102(3):2187-2188

The peer review in journals is generally regarded as a closed procedure, where the report can only be seen by the editor and the authors of the paper assessed, and the peer reviewer does not receive any credits for this input. A number of journals have changed over to publishing the expert opinions on manuscripts under the name of the expert. The authors of this article have used the F1000Prime data set to investigate the reception of expert opinions in the scientific community with the help of data from the Mendeley reference manager.

Cochran A. **The value in attending editorial board meetings.** *The Scholarly Kitchen* Apr 9 2015

The author has learned a lot from her own experience about what makes editorial board meetings successful from the publisher's perspective. They are like mini focus groups: you hear about what is going on at the universities, what hot topics are bubbling up in the field, and what the pain points are for authors, reviewers and editors. New product ideas can also come from these meetings.

ETHICAL ISSUES

Ellis LM. **The erosion of research integrity: the need for cultural**

change. *The Lancet Oncology* 2015;16:752-754

The success of drug development depends on robust and reproducible preclinical studies. Reports suggest that a high percentage of preclinical studies cannot be reliably reproduced. Causes could be sloppy research and data falsification or even fabrication. The author suggests approaches to improve data reproducibility, and fosters a complete cultural change. doi:10.1016/S1470-2045(15)00085-6

Ecklund EH, Johnson DR, Matthews KRW. **Study highlights ethical ambiguity in physics.** *Physics Today* 2015;68(6):8,10

The authors interviewed 170 physicists at US and UK universities and the results suggest that ethical issues in physics are not as black and white as many physicists may think. Some narrowly defined unethical conduct as fabrication, falsification and plagiarism while others also included such things as accepting funding for military research, misusing research funds, abusing the peer-review system, misallocating credit and authorship, practicing cronyism, overhyping research results and exploiting subordinates.

Siebert S, Machesky LM, Insall RH. **Overflow in science and its implications for trust.** *eLIFE* 2015;4:e10825

To explore the question of how the perceived decline in reproducibility and integrity in some areas of science has affected trust in the scientific enterprise, the authors interviewed a number of senior biomedical researchers. The interviews revealed a perceived decline in trust, in large part because the quantity of new data exceeds the ability to process it appropriately. Some suggestions are provided on how this overflow in science can be managed. doi:10.7554/eLife.10825

Steinbrook R, Kassirer JP, Angell M. **Justifying conflicts of interest in medical journals: a very bad idea.**

BMJ 2015;350:h2942

A series of articles in the *New England Journal of Medicine* (NEJM) has questioned whether the conflict of interest movement has gone too far in its campaign to stop the drug industry influencing the medical profession. In this article three former senior NEJM editors respond with dismay.
doi:10.1136/bmj.h2942

LANGUAGE AND WRITING

Barnes C, Boutron I, Giraudeau B, *et al.* **Impact of an online writing aid tool for writing a randomized trial report: the COBWEB (Consort-based WEB tool) randomized controlled trial.** *BMC Medicine* 2015;13:221

The authors developed a writing aid tool based on the CONSORT guidelines and its extension for non-pharmacologic treatments to help authors when writing a report of a randomized controlled trial (RCT). They evaluated the impact of this tool on the completeness of reporting of two-arm parallel-group RCTs evaluating pharmacologic and non-pharmacologic interventions.
doi:10.1186/s12916-015-0460-y

Developing an effective poster presentation. *San Francisco Edit* 2015
Poster presentations provide an opportunity for researchers to present their work at scientific meetings and in preparation for publication in a peer-reviewed journal. This brief document gives some advice to help authors to develop an effective poster.
<http://www.sfedit.net/poster.pdf>

PUBLISHING

Battisti WP, Wager E, Bltzer L, *et al.* **Good Publication Practice for communicating company-sponsored medical research: GPP3.** *Annals of Internal Medicine* e-pub 11 August 2015

The updated Good Publication Practice (GPP) guideline, known as GPP3, builds on earlier versions (originally published in 2003 and updated in 2009 as GPP2) and provides recommendations for individuals and organizations

that contribute to the publication of research results sponsored or supported by pharmaceutical, medical device, diagnostics, and biotechnology companies. The recommendations are designed to help individuals and organizations maintain ethical and transparent publication practices and comply with legal and regulatory requirements.
doi:10.7326/M15-0288

Moher D, Altman DG. **Four proposals to help improve the medical research literature.** *PLoS Medicine* 2015;12(9):e1001864

The authors discuss four potential contributory actions by journals and educational institutions to help increase the value of research articles: publications officers, core competency training of medical editors, training authors to write articles “fit for purpose”, and training peer reviewers. All four ideas need to be piloted and evaluated, and if proven effective, considered for implementation. For ease of presentation and discussion, these ideas are presented separately followed by a discussion of possible ways to fund these initiatives.
doi:10.1371/journal.pmed.1001864

Teixeira da Silva JA. **Negative results: negative perceptions limit their potential for increasing reproducibility.** *Journal of Negative Results in Biomedicine* 2015;14:12
Not all negative results in science get published. Part of the problem lies with a traditional mind-set and rigid publishing framework that tends to view negative results in a negative light, or that only tends to reward scientists primarily for presenting positive findings. This opinion piece indicates that in addition to a deficient mind-set, there are also severe limitations in the availability of publishing channels where negative results could get published.
doi:10.1186/s12952-015-0033-9

SCIENCE

Baker M. **Reproducibility crisis: Blame it on the antibodies.** *Nature* 21 May 2015;521:274-276
Antibodies are among the most

commonly used tools in biological experiments, but they are littering the field with false findings. A few scientists are pushing for change and are calling for the creation of standards by which antibodies should be made, used and described. Several journals (including *Nature*) ask authors to make clear that antibodies used in their papers have been profiled for that particular application.

Vivek KS, Sumit KB, Khushboo S, *et al.* **Scientometric mapping of research on “Big Data”.** *Scientometrics* e-pub 9 Sept. 2015

This paper presents a scientometric analysis of research work done on the emerging area of “Big Data” in the years 2010-2014. The analysis maps comprehensively the parameters of total output, growth of output, authorship and country-level collaboration patterns, major contributors (countries, institutions and individuals), top publication sources, thematic trends and emerging themes in the field.
doi: 10.1007/s11192-015-1729-9

SCIENCE COMMUNICATION

Brembs B. **What should a modern scientific structure look like?** *The Winnower* 2015; 2:e143497.72726
A fully functional infrastructure could collect data from each scientist with regard to their productivity (data, code, publications, reviews), popularity (downloads, media presence, citations, recommendations), teaching (hours, topics, teaching material) or service (committees, administration, development). What is required is an integrated, federated and centralized backbone infrastructure, into which such functionalities can be incorporated as plug-ins (or ‘apps’).
doi:10.15200/winn.143497.72726

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