

1. Peer Review

Peer Reviewer 제도

김 재 원

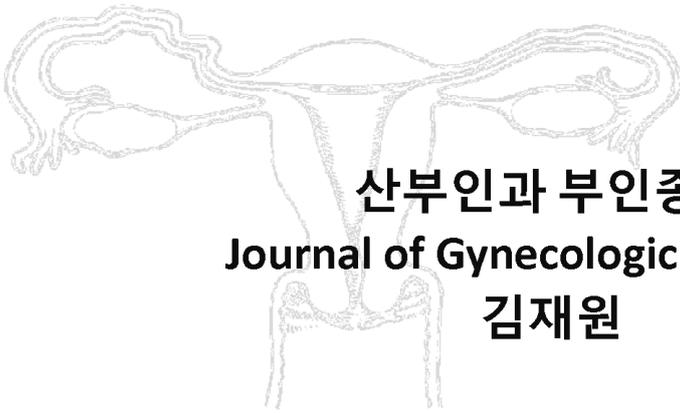
(Journal of Gynecologic Oncology, Editor-in-Chief,
의편협 기획평가위원)

2014년도 의편협 정기총회/심포지엄

3:00 ~ 3:30 PM, March 27 2014



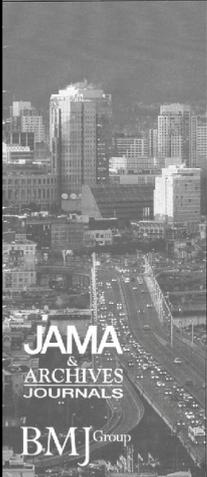
Peer Review



산부인과 부인종양
Journal of Gynecologic Oncology
김재원

Contents

- **Peer Review Congress (PRC)**
- **Peer Review Process**
 - How the peer review process works
 - Some of the limitations of peer review
 - How to improve the quality of peer review
- **Innovative Peer Review Model**

<p>Final Program and Abstracts</p> 	 <p>Jae Woon Kim, M.D. Department of Epidemiology and Gerontology College of Public Health National University 28 Yongpo-Dong, Chung-Gu, Seoul 150-748 Korea Tel: 82-2-2272-6121 Fax: 82-2-252-2099 E-mail: jwkim@nu.ac.kr</p>	<p>Final Program and Abstracts</p> 	
 <p>JAMA & ARCHIVES JOURNALS</p> <p>BMJ Group</p>	<p>INTERNATIONAL CONGRESS ON PEER REVIEW AND BIOMEDICAL PUBLICATION</p> <p>September 10-12, 2009 Westin Bayshore Hotel Vancouver, BC, Canada</p> <p>www.jama-peer.org</p>		<p>INTERNATIONAL CONGRESS ON PEER REVIEW AND BIOMEDICAL PUBLICATION</p> <p>September 8-10, 2013 Swissôtel Chicago, Illinois</p>  <p> The JAMA Network  www.peerreviewcongress.org</p>

Editorial Peer Review in Biomedical Publication

The First International Congress

In May 1989, the American Medical Association sponsored The First International Congress on Peer Review in Biomedical Publication. This issue of *JAMA* is dedicated to papers first presented at that congress, themselves greatly modified by editorial peer review.

We at *JAMA*, considering that publication lies at the heart of the scientific process and that at the heart of publication lies peer review,¹ were impressed by the evident lack of research² into a process that occupies our energies daily and on which we, as editors, are disposed to rely heavily. We recognized that the vast majority of papers written about editorial peer review had been composed in the absence of any data and were editorial effusions that expressed individual biases. Scientific investigations in this field were woefully lacking, and we set out to change this state of affairs.³

papers, and (4) the attendees came from all over the world and they came prepared to become involved. It was clear that they represented a wide spectrum of experiences, disciplines, and journals, with widely varying ideas about how peer review should function.

Though we certainly believe that we achieved our objectives, it is obvious that we have only begun to scratch the surface. Such important issues as the blinding of reviewers, or the registration of trials at inception to prevent bias, require much more research. Many people who came to the congress wanted us to come up with consensus statements and guidelines for peer review procedures. Though my own bias makes me leery of the consensus process,⁷ and I worry that we might turn off originality and dissent, it may be that we should explore this possibility.

¹From the Office of the Deputy Editor (West), *JAMA*, and the Institute for Health Policy Studies, University of California at San Francisco.
²Reprint requests to American Medical Association, 535 N Dearborn St, Chicago, IL 60610 (Dr Rennie).

Research on Peer Review and Biomedical Publication Furthering the Quest to Improve the Quality of Reporting

Drummond Rennie, MD; Annette Flanagin, RN, MA

This issue of *JAMA* includes 3 reports¹⁻³ first presented at the Seventh International Congress on Peer Review and Biomedical Publication in September 2013.⁴ At the first congress, held in 1989, the most common topic of the presented abstracts was editorial peer review.⁵ Since then, the research presented and discussed has substantially broadened to include all aspects of biomedical publication—from research proposals to sharing data after publication.⁴

In this issue of *JAMA*, Malički and colleagues¹ report their findings from an analysis of the 614 abstracts presented at the 7 congresses held from 1989 through 2013. Of these abstracts, overall, 76% were observational studies, 16% were studies of interventions aimed at improving peer review and scientific reporting, and 8% were opinion papers. At the most recent congress, 27% of the 110 presented studies were interventional, including 5 randomized trials. The authors also

Two other reports from the 2013 congress provide important information about the quality of reporting results from clinical trials. Becker and colleagues² conducted a cross-sectional analysis of clinical trials with primary results published in high-impact journals between July 2010 and June 2011 and compared trial information and results reported in ClinicalTrials.gov with that reported in peer-reviewed publications. The authors found that 93 of 96 trials had at least 1 discrepancy, with the highest rates of discordance involving completion rates (22%) and trial interventions (16%). In addition, in 91 trials that described 156 primary efficacy end points, including 132 end points described in both sources, 21 trials (16%) had discordant end points and 30 end points (23%) could not be compared. These investigators suggest that further efforts are needed to ensure the accuracy of reporting results of clinical trials.

In another report, Kasenda and colleagues³ describe a multinational study that examined 894 clinical trials involving pa-

JAMA March 12, 2014 Volume 311, Number 10 1019



Related articles pages 1045, 1063 and 1065



INTERNATIONAL CONGRESS ON
Peer Review and Biomedical Publication

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Peer Review Congress September 8-10, 2013

The Seventh International Congress on Peer Review and Biomedical Publication was held September 8-10, 2013, in Chicago, IL. 516 participants from 32 countries participated and engaged in lively discussion of 47 plenary session presentations and 63 posters. For more detail see the program below.

Final Program PDF | HTML

Plenary Session Abstracts September 8, 2013 PDF | HTML

Plenary Session Abstracts September 9, 2013 PDF | HTML

Plenary Session Abstracts September 10, 2013 PDF | HTML

Poster Session Abstracts September 9/10, 2013 PDF | HTML

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Updated January, 2014.



Photos courtesy of Ted Grudzinski

www.peerreviewcongress.org accessed on Mar. 12, 2014

From: Sally Hopewell [mailto:sally.hopewell@csrn.ox.ac.uk]
Sent: Tuesday, April 09, 2013 7:35 PM
Subject: WebCONSORT Project: invitation email

Dear Editor in Chief,

We would like to invite your journal to participate in an exciting new study which aims to help improve the reporting of randomized trials in medical journal articles. We all know that the reporting of clinical trials is not always optimal, despite the impact of reporting guidelines such as the CONSORT Statement, and we recognise that it can be a difficult task for editors to try to improve it.

Our study aims to evaluate whether using authors of manuscripts to obtain a customised checklist (pragmatic trial, cluster trial) and/or type

We are seeking journals willing to collaborate on your part and yet provide a real opportunity for direct impact on patients and patient care by acknowledging all participating journals in the

We have attached a short summary proposal please can you register your interest by

With best wishes

Pr Philippe Ravaud and Dr Sally Hopewell (Paris Descartes University, France and U

On behalf of the WebCONSORT Steering Committee: Pr Philippe Ravaud (Paris Descartes University, France), Pr Victor Montori (Mayo Clinic,

This study is supported by the CONSORT Ethics Committee MSD-IDREC-C1-2012-

Dr Sally Hopewell / Senior Research Fellow /
 Tel: 01865 284416 / Fax: 01865 284424 / sally.h

WebCONSORT Impact of Using a Web-Based Tool to Improve the Reporting of Randomized Trials: A Randomized Controlled Trial

Sally Hopewell,^{1,2} Isabelle Boutron,² Douglas G. Altman,¹ David Moher,³ Victor Montori,⁴ Virginia Barbour,⁵ David Schriger,⁶ Philippe Ravaud²

Objective The CONSORT statement is an evidence-based guideline for reporting clinical trials. In addition, a number of extensions have been developed that specify additional information for more complex trials. The aim of this study is to evaluate if a simple web-based tool (WebCONSORT, which incorporates a number of these different extensions) improves the completeness of reporting of randomized trials published in biomedical publications.

Design We are conducting a multicenter randomized trial. Journals (n=435) that endorse the CONSORT statement (ie, referred to in Instruction to Authors) but do not actively implement it (ie, require authors to submit a completed CONSORT checklist) have been invited to participate. Authors of participating journals are requested, at the manuscript revision stage, to use the web-based tool to improve the reporting of their randomized trial. Authors (n=302) registering to use the tool are randomized (using centralized computer generated randomization) to intervention or control. Authors and journal editors are

Impact of Spin in the Abstract on the Interpretation of Randomized Controlled Trials in the Field of Cancer: A Randomized Controlled Trial

Isabelle Boutron,^{1,2,3,4} Douglas G. Altman,⁵ Sally Hopewell,^{1,4,5} Francisco Vera-Badillo,⁶ Ian Tannock,⁶ Philippe Ravaud^{1,2,3,4,7}

Objective Spin is defined as a specific way of reporting to convince readers that the beneficial effect of the experimental treatment is greater than is shown by the results. The aim of this study is to assess the impact of spin in abstracts of randomized controlled trials (RCTs) with non-statistically significant results in the field of cancer on readers' interpretation.

Design A 2-arm parallel-group RCT comparing the interpretation of results in abstracts with or without spin. We selected from a collection of articles identified in previous work a sample of reports describing negative (ie, statistically nonsignificant primary outcome) RCTs with 2 parallel arms evaluating treatments in the field of cancer and having spin in the abstract conclusion. Selected abstracts were rewritten by 2 researchers according to specific guidelines to remove spin. All abstracts were presented in the same format without the identifying authors or journal name. The names of treatments were masked by using generic terms (eg, experimental treatment A). Corresponding authors (n=300) of clinical trials indexed in PubMed and blinded to the objectives of our study will be randomized using a centralized computer-generated randomization

to evaluate 1 abstract with spin or 1 abstract without spin. The primary endpoint is the interpretation of abstract results by the participants. After reading each abstract participants will answer the following question: "Based on this abstract, do you think treatment A would be beneficial to patients?" (answer: numerical scale from 0-10)

Results Three hundred participants were randomized; 150 assessed an abstract with spin and 150 an abstract with no spin. From abstracts with spin, the experimental treatment was rated as being more beneficial (scale 0-10, mean [SD] = 3.6 [2.5] vs 2.9 [2.6]; $P=.02$), the trial was rated as less rigorous (scale 0-10, mean [SD] = 4.5 [2.4] vs 5.1 [2.5]; $P=.04$) and participants were more interested in reading the full-text article (scale 0-10, mean [SD] = 5.1 [3.2] vs 4.3 [3.0]; $P=.0311$). There was no statistically significant difference for the importance of the study (scale 0-10, mean [SD] = 4.6 [2.4] vs 4.9 [2.4]; $P=.17$) and the need to run another trial (scale 0-10, mean [SD] = 4.8 [2.9] vs 4.2 [2.9]; $P=.06$).

Conclusion Spin in abstracts of RCTs in the field of cancer may have an impact on the interpretation of these trials.

Editorial Triage: Potential Impact

Deborah Levine,¹ Alexander Bankier,¹ Mark Schweitzer,² Albert de Roos,³ David C. Madoff,⁴ David Kallmes,⁵ Douglas S. Katz,⁶ Elkan Halpern,⁷ Herbert Y. Kressel⁸

Objective Increasing manuscript submissions threaten to overwhelm a biomedical journal's ability to process manuscripts and overburden reviewers with manuscripts that have little chance of acceptance. Our purpose was to evaluate editorial triage.

Design In a prospective study of original research manuscripts submitted to a single biomedical journal for an 8-week period beginning July 2012, 329 articles were processed with our normal procedures as well as with a parallel "background triage mode." The editor in chief/deputy editor (EIC/DE) rated on a 5-point scale the likelihood of an article being accepted for publication (with scores of 1 "definitely reject" and 2 "almost certainly reject" considered "low priority" for publication). Editors noted reasons for low priority ratings. Manuscripts were sent for peer review in the typical fashion, with reviewers chosen by noneditor office staff. There typically were 4 to 8 weeks between initial triage and final decisions (based on standard peer review). The EIC who made the final decision was unaware of triage scores given by DEs; however, there were articles where the final and triage decisions were made by the EIC. Spearman correlation was used to correlate final decisions with triage scores and with reviewer mean scores.

Results Triage scores, reviewer scores, and final outcomes are detailed in **Table 5**. Of 124 manuscripts scored as low priority, 6 (4.8%, CI 1.8%-10.2%) were ultimately accepted for publication ($P<.0001$, correlation .26). "Limited new information" was the primary reason for a low priority score for 57/124 (46%) manuscripts, and 5 manuscripts with low priority score that were ultimately accepted had this reason given. Individual EIC/DE triage scores were weakly to moderately correlated with final decision ($r=-.1-.45$, with overall EIC/DE group correlation of .24). Reviewer scores were moderately correlated with final decision ($r=.62$).

Conclusions Editorial peer review triage identified 38% (124/329) of submitted manuscripts as low priority, with lack of new information representing the most common reason for such scoring. Of submitted papers, 1.8% (6/329) would have been "erroneously" triaged, that is, manuscripts potentially worthy of acceptance but triaged as low priority. In our journal, editorial triage represents an efficient method of diminishing reviewer burden without a substantial loss of quality papers.

¹Beth Israel Deaconess Medical Center, Department of Radiology, Boston, MA, USA, dlevine@rsna.org; ²The Ottawa Hospital, Department of Radiology, Ottawa, ON, Canada; ³Leiden University Medical Center, Department of Radiology, Leiden, South-Holland, the Netherlands; ⁴New York-Presbyterian Hospital/Weill Cornell Medical Center, Division of Interventional Radiology, New York, NY, USA; ⁵Mayo Clinic, Department of Radiology, Rochester, MN, USA; ⁶Winthrop University Hospital, Department of Radiology, Mineola, NY, USA; ⁷Massachusetts

Table 5. Triage Scores and Final Decisions

	Triage Score	Reviewer Recommendations (% of Reviewers in That Triage Score Category)	FINAL DECISION				Main Reason for Low Priority Triage Score
			Accept	Reject- Resubmission Allowed	Reject	No. of Manuscripts (%)	
Low priority score – in future would not send for review	1 Definitely reject	39 (72%) reject 9 (17%) R-R 6 (11%) accept	1	4	19	24 (7)	Limited new information, n=8 ^a Outside area of reader interest, n=7 Poor description of methodology, n=4 Inadequate sample size, n=4 Other, n=1
	2 Almost certainly reject	131 (59%) reject 43 (19%) R-R 48 (22%) accept	5	10	85	100 (30)	Limited new information, n=50 ^a Outside area of reader interest, n=9 Poor description of methodology, n=16 Inadequate sample size, n=16 ^a Other, n=9
Indeterminate priority	3 Unsure	131 (40%) reject 75 (23%) R-R 124 (37%) accept	17	29	73	119 (36)	Not applicable
High priority scores	4 Good chance of being accepted	83 (50%) reject 42 (25%) R-R 40 (24%) accept	17	12	42	71 (21)	Not applicable
	5 Almost certainly accept	16 (42%) reject 9 (24%) R-R 13 (34%) accept	2	6	7	15 (5)	Not applicable

R-R indicates reject with resubmission allowed.

^a1 ultimately accepted.

^a4 ultimately accepted.

Too Much of a Good Thing? A Study of Prolific Authors

Elizabeth Wager,¹ Sanjay Singhvi,² Sabine Kleinert³

Objective Authorship of unfeasibly large numbers of publications may indicate guest authorship, plagiarism, or fabrication (eg, the discredited anesthetist Fujii published 30 trials in 1 year). However, it is difficult to accurately assess an individual's true publication history in databases such as MEDLINE using searches for author name alone. We therefore used a bespoke, semiautomated tool, which considers additional author characteristics, to identify authorship patterns for a descriptive study of prolific authors.

Design Publications from a 5-year period (2008-2012) across 4 topics were selected from MEDLINE to provide a varied sample. The bespoke tool was used to disambiguate individual authors by analyzing characteristics such as affiliation, past publication history, and coauthorships, as well as author name. Focusing on 4 discrete topics also reduced the chance of double-counting publications from authors with similar names. Type of publication and authorship position were assessed for the most prolific authors in each topic.

Table 1. Total Number of MEDLINE Publications per Individual for 2008-2012 for Selected Topics

No. of Publications, 2008-2012 (N, %)						
Topic	1-20	21-30	31-40	41-50	>50	Max
Epilepsy	63,866 (99.7)	141 (0.2)	34 (0.05)	11 (0.02)		118
Rheumatoid arthritis	33,953 (98.8)	124 (0.4)	66 (0.2)	30 (0.08)	41 (0.1)	149
Renal transplant	38,575 (99.1)	201 (0.5)	62 (0.2)	34 (0.1)	38 (0.1)	123
Liver transplant	26,350 (98.7)	174 (0.7)	69 (0.3)	36 (0.1)	56 (0.2)	128

Results The number of publications per topic are shown in **Table 1**. Distinct publication patterns could be identified (eg, individuals who were often first author [max 56%] or last author [max 89%]). The maximum number of publications per year was 43 (for any type) and 15 (for trials). Of the 10 most prolific authors for each topic, 24/40 were listed on ≥ 1 publication per 10 working days in a single year.

Conclusions Analytical software may be useful to identify prolific authors from public databases with greater accuracy than simple name searches. Although such findings always need careful interpretation, these techniques might be useful to journal editors and research institutions in cases of suspected misconduct or to screen for potential problems (eg, prolific last authors might be guest authors). When measuring productivity, institutions and funders should be alert not only to unproductive researchers but also to unfeasibly prolific ones.

Publication of Research Reports After Rejection by the *New England Journal of Medicine* in 2 Time Periods

Authors Michael Bretthauer, Pam Miller, Edward W. Campion, and Jeff Drazen

Setting Data were obtained for both 1995 and 2003.

Design PubMed searches

Results Eventual Publication by Other Journals After Initial Rejection

	1995	2003
Type of Journal	No. of Reports (%)	No. of Reports (%)
General medical	205 (16.1)	189 (18.2)
General pediatric	46 (3.6)	33 (3.2)
Basic science	39 (3.2)	21 (2.0)
Specialty	146 (11.5)	101 (9.6)
Subspecialty	837 (65.8)	696 (66.9)
Total	1273 (100)	1040 (100)

Contents

- Peer Review Congress (PRC)
- **Peer Review Process**
 - How the peer review process works
 - Some of the limitations of peer review
 - How to improve the quality of peer review
- Innovative Peer Review Model

What is Peer Review?

History of the journal **nature**

home Timeline video editors and eras best of nature

Timeline

1860s 1870s 1880s 1890s 1900s 1910s 1920s 1930s 1940s 1950s 1960s 1970s 1980s 1990s 2000s 2010s

1960 The 1960s

1961 The genetic code for proteins

1965 Editor Jack Brimble dies

1966 John Maddox is appointed new Editor

1967 A formal peer-review system

MINOR POINT:

- The paper is not of good enough quality for the illustrations that have to accompany many modern scientific papers. This means a number of people from sending their stuff in.
- Is it possible to get our price down to a point near competitive with *Nature*? Or to reduce subsidies, apart from the extra revenue from its special feature circulation and higher subscription rates?
- Would benefits from moving its editorial board and editorial staff to the American papers, give the impression of being more professionally produced than *Nature*.
- The quality of production of *Nature* is as better than *Nature*, but it looks more up to date. *Nature* retains a very Victorian air.

Maddox's first job was to tackle the backlog of 2,300 unpublished manuscripts. Some scientists complained that during Brimble's editorship the choice of printworthy pieces seemed "arbitrary" and "not up to standard" and that "valuable material was missed" (pictured are minor points from roundtable discussions with scientists. Note point 4: "*Nature* retains a very Victorian air"). The receipt date of manuscripts was not recorded. The 5,001st issue in 1965 had thirty Letters to the Editor detailing scientific discoveries, in addition to two sections of Articles. Legend has it that the system used to track papers submitted by scientists under Brimble was a particularly wide windowsill, with manuscripts piled high by month — a visible 'histogram' of how much had still to be done. The only solution was a comprehensive refereeing system, which also meant that the referees themselves had to be refereed. It was eighteen months before the backlog of manuscripts was cleared. Image from archives of Macmillan Publishers.

1969 100 years of Nature

http://www.nature.com/nature/history/timeline_1960s.html

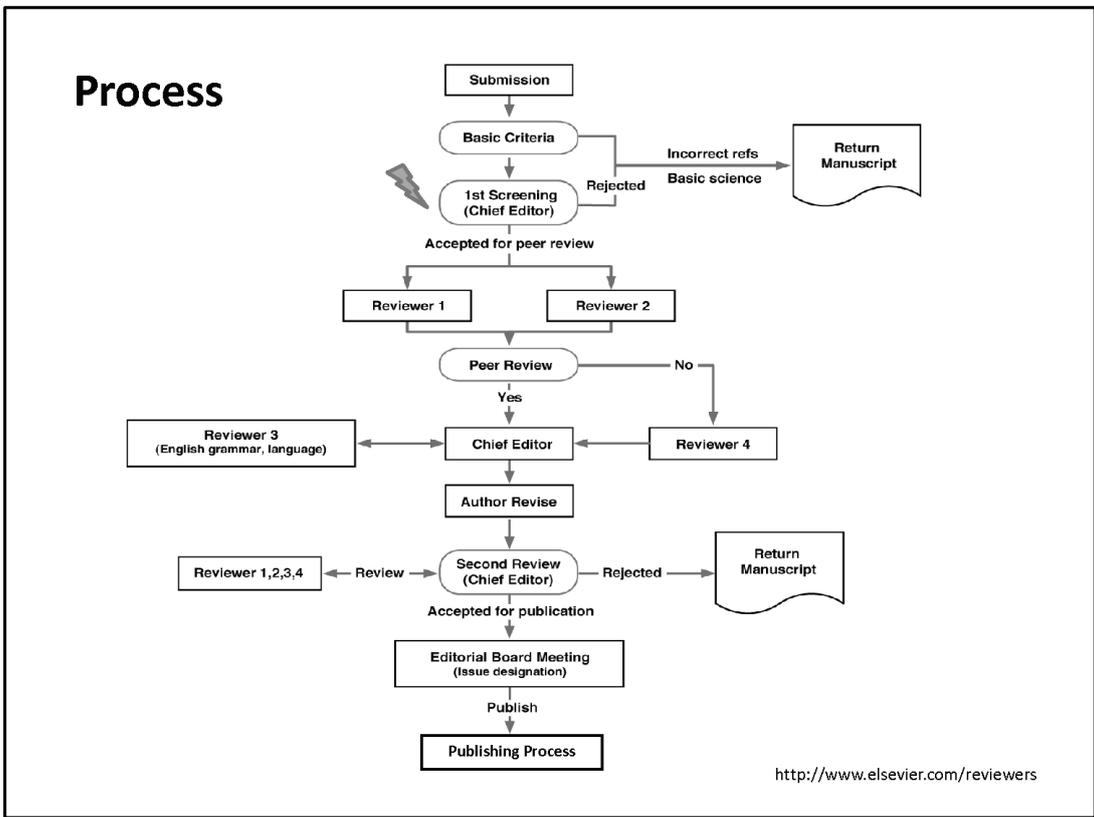
Peer Review Things

- Journal PR is just a step in the scientific process
- Popular only since 1960s
- Largely unstudied till 1990s
- Traditional PR models are single blind PR & double blind PR
- Online publishing & open access have changed the publishing landscape

*PR, peer review

Type of review	Merit	Demerit	What form of peer review do you prefer? <i>(as of 17 December 2013)</i>
Single blind	free from influence by the author	withhold submission of the review unnecessarily critical or harsh	18.9% (166 responses)
Double blind	prevents any reviewer bias content of their papers, rather than on the author's reputation	ever truly be 'blind' – especially in specialty 'niche' areas	57.5% (505 responses)
Open	prevent reviewers from drawing upon their own 'agenda' & malicious comments, & encourage open, honest reviewing	less honest process in which politeness or fear of retribution may cause a reviewer to withhold or tone down criticism	16.6% (146 responses)
			6.9% (61 responses): no preference

<http://www.elsevier.com/reviewers>



What do editors want from papers?

- Importance
- Originality
- Relevance to readers
- Usefulness to readers and, ultimately, to patients
- Truth
- Excitement/ “wow” factor
- Clear and engaging writing

<http://www.bmj.com/about-bmj/resources-reviewers/training-materials>

Editors/Peer Reviewers look for

1. Appropriateness for the journal
 - Is the topic relevant to the journal?
 - Is the topic timely, significant?
 - Is the study unique? If so, How?
2. What type of research is it? How is it structured?
 - Randomized controlled, meta-analysis?
 - Retrospective?
 - Case series or single case

<http://www.elsevier.com/reviewers>

Editors/Peer Reviewers look for

Did the author follow the instructions of the journal?

1. Correct number of authors?
2. Conflict of Interest/Disclosure statement?
3. Copyright release signed?
4. Informed consent (if applicable)/Ethics considerations
5. Is the article format correct?
 - Structured abstract?
 - Correct article format (Abstract, Introduction, Methods, Results, Discussion, Conclusion, Refs?)
 - Are References in correct format?

<http://www.elsevier.com/reviewers>

Editors/Peer Reviewers look for *tech aspects*

1. Research structure
 - Correctly described and performed?
2. Statistics
 - Correct analysis, accurate interpretation, & clear interpretation?
3. Tables & Figures
 - Accurate & clear structure, presentation, & presentation?
 - Do the numbers add up?
 - Are the data consistent with the body of the paper?
4. Abstract & Body of paper
 - Do number of patients, other data match?
 - Conclusions consistent?

<http://www.elsevier.com/reviewers>

What we know about Peer Review?

OCCASIONAL NOTES

JOURNAL PEER REVIEW

The Need for a Research Agenda

JOURNAL peer review is a remote and mysterious business for many research investigators. Four paradigms seem to capture much current opinion about peer review of scientific works submitted for journal publication: the sieve (peer review screens worthy from unworthy submissions), the switch (a persistent author can eventually get anything published, but peer review determines where), the smithy (papers are pounded into new and better shapes between the hammer of peer review and the anvil of editorial standards), and the shot in the dark (peer review is essentially unpredictable and unreproducible and hence, in effect, random). How well do these paradigms, separately or together, capture the real nature of peer review?

N Engl J Med 1985;312(10):654-7

Some problems of Peer Review

- Different things at different journals
- Slow
- Expensive
- Inconsistent, subjective
- Biased, nepotistic (族閥主義)
- Open to abuse
- Poor at detecting errors
- Almost useless at detecting fraud

Is Peer Review reliable?

Peer review in biomedical publication (Ingelfinger. Am J Med 1974)

- Rates of agreement only “moderately better than chance” ($\kappa = 0.26$)
- Agreement greater for rejection than acceptance

How reliable is peer review in grant review

- Real vs sham panel, agreed on 75% of decisions (Cole *et al.* Science 1981)
- Two real panels reviewing the same grants, 73% agreement (Hodgson. J Clin Epidemiol 1997)

Are two reviewers enough?

- Need at least six reviewers to yield a stats significant conclusion ($p < 0.05$) (Fletcher and Fletcher. Peer review in health Sciences. 1999)

Crude and understudied, but indispensable

- Peer review decisions are like diagnostic tests: false (+) & false (-) are inevitable (Kassirer and Campion. JAMA 1994)

<http://www.bmj.com/about-bmj/resources-reviewers/training-materials>

Bias

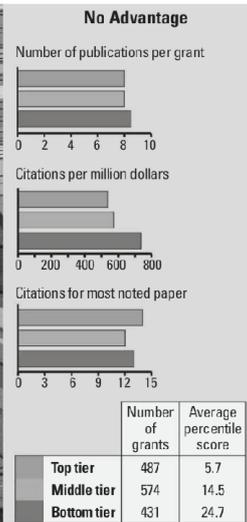
Author-related

- Prestige (author/institution)
- Gender
- Where they live and work

Paper-related

- Positive results
- English language

<http://www.bmj.com/about-bmj/resources-reviewers/training-materials>

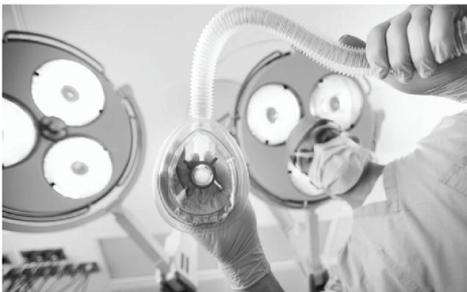


Peering Into Peer Review

Why don't proposals given better scores by the National Institutes of Health lead to more important research outcomes?

Science 2014;343(6171):596-8

NEWS IN FOCUS



Breathe deeply: anaesthetists are well placed to conduct clinical trials with relatively little oversight.

MISCONDUCT

Retraction record rocks community

Anaesthesiology tries to move on after fraud investigations.



**Dr. Fujii
Fraudster's
8 Principles
of Scientific
Fraud**

BY DAVID CYRANOSKI

One of the biggest purges of the scientific literature in history is finally getting under way. After more than a decade of suspicion about the work of anaesthesiologist Yoshitaka Fujii, formerly of Toho University in Tokyo, investigations by journals and universities have concluded that he fabricated data on an epic scale. At least half of the roughly 200 papers he authored on responses to drugs after surgery are in line for retraction in the coming months.

Like many cases of fraud, this one has raised questions about how the misconduct went undetected for so long. But the scope and duration of Fujii's deception have shaken multiple journals and the entire field of anaesthesiology, which has seen other high-profile frauds in the past few years.

Fujii, who could not be contacted for this article, was dismissed from Toho University in February because he lacked proper ethics approval for clinical studies that were detailed in eight papers. But suspicions about his entire 20-year publication record had been growing since 2000, when Peter Kranke, an anaesthesiologist at University Hospital Würzburg in Germany, first started to question Fujii's super-human publication rate.

In some years, Fujii published more than a dozen randomized clinical trials that purported to test the efficacy and side effects of drugs such as granisetron, given to reduce nausea and vomiting after surgery. "It's impossible to publish so many," says Kranke. "If you just look at mere output, everybody who has performed at least one clinical trial should have some suspicion."

Fujii's data were also "too perfect", he says. Kranke analysed 47 of Fujii's articles on granisetron, published between 1994 and 1999, and found that the frequency of headaches — a common side effect of the drug — was identical or nearly identical in a suspiciously high number of groups involved in the trials.

At the time, Fujii responded merely by saying that he stood by his data, which seemed to show that granisetron had fewer side effects than other anti-emetic drugs. "We were disappointed that the journal accepted that," says Kranke. "Editors and peer reviewers advised us to pursue more worthwhile endeavours, rather than whistle-blowing. But it wasn't just whistle-blowing — we wanted people to know that" granisetron wasn't necessarily better than alternatives.

In the following years, similar doubts emerged

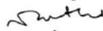
NATURE.COM
Read more about a surge in retractions:
go.nature.com/cy8atp

Nature 2012;489(7416):346-7

Joint Editors-in-Chief Request for Determination Regarding Papers Published by Dr. Yoshitaka Fujii


Lars S. Rasmussen
Editor-in-Chief, *Acta Anaesthesiologica Scandinavica*


Steven M. Yoniss
Editor-in-Chief, *Anaesthesia*

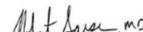

Neville Orlitz
Editor-in-Chief, *Anaesthesia & Intensive Care*


Masahito Kawamoto
Editor-in-Chief, *Anaesthesia and Resuscitation*

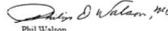

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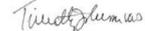

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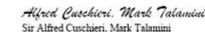

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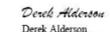

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Retraction Watch

Journal editor resigned in wake of retractions for fake email addresses that enabled self-peer review

with 16 comments

The case of Hyung-In Moon — the researcher who [faked email addresses for potential peer reviewers so he could do his own peer review](#) — has already led to one resignation.

[Emilio Jirillo](#), the editor of *Immunopharmacology and Immunotoxicology*, which [retracted 20 of Moon's papers](#), stepped down earlier this year in the wake of the case, [Retraction Watch has learned](#).

Here's a [note the publisher posted on the journal's site on June 15](#):

“ We are sorry to announce that Prof. Emilio Jirillo is stepping down as Editor in Chief of *Immunopharmacology and Immunotoxicology*, effective 15 June 2012.

The editorial office is currently looking for a new editor. In the interim, the Associate Editors and the editorial board will strive to handle the editorial process in a timely and efficient manner.

We understand that in a message to the journal's editorial board, Jirillo said that with misconduct on the rise, editors in chief were under increasing burdens. They could no longer take “noble attitudes” — trust, respect, and loyalty — for granted. Jirillo said he didn't want to spend his time preventing misconduct rather than encouraging high-quality submissions, and preferred to step down.

Moon's was not the only misconduct case that Jirillo has recently policed. There was also [this one, involving fraud and plagiarism](#).



2011 IF 1.829

retractionwatch.com/category/by-reason-for-retraction/faked-emails/, Cited Sep. 5, 2012

What makes a good reviewer?

- **Aged under 40**
- **Good institution**
- **Methodological training (statistics & epidemiology)**

<http://www.bmj.com/about-bmj/resources-reviewers/training-materials>

What might improve the quality of reviews?

- **Reward/credit/acknowledgement?**
- **Careful selection?**
- **Training?**
- **Greater accountability (open review on web)?**
- **Interaction between author and reviewer (real-time open review)?**

<http://www.bmj.com/about-bmj/resources-reviewers/training-materials>

Contents

- Peer Review Congress (PRC)
- Peer Review Process
 - How the peer review process works
 - Some of the limitations of peer review
 - How to improve the quality of peer review
- **Innovative Peer Review Model**

Innovative peer review model

- Open (non-anonymous) peer review
- Minimal re-review
- Journal cascades
- Interactive review
- Separating interest from soundness
- Separating peer review from journal

Publishing peer review documents: pre-publication history

The screenshot displays the BMC Cancer journal interface. The main article title is "Salvage cytoreductive surgery for patients a retrospective study" by Yutan Bao, Ezer Khan, Doreen Shi, and Huaying Wang. The journal's impact factor is 3.33. The article is from BMC Cancer 2014, 14:135. The pre-publication history shows the original submission, two reviewer reports (from Joyce Barlin and Pamela Suliman), and the final published version. A detailed reviewer report from Joyce Barlin is shown in an inset, dated 9 December 2013. The reviewer thanks the authors and lists major compulsory revisions, including the need for a meta-analysis of retrospective studies, clarification of survival benefits, and more detailed follow-up information.

The screenshot shows the Biology Direct journal website. The journal's impact factor is 2.72. A section titled "Unique model of peer review" describes the journal's open peer review process. Below this, a list of articles is shown, with the most viewed article being "A survey of motif finding Web tools for detecting binding site motifs in CHIP-Seq data" by Tran NT and Huang CH. A bulleted list summarizes the journal's review process:

- The author suggests suitable reviewers from the journal's Editorial Board
- An article is rejected if three Editorial Board Members do not agree to review it
- If three EBMs formally agree (after initial skim-reading), authors can pursue publication (w/ or w/o revision), Editor-in-Chief has final word on publication.
- Reviewers' comments and authors' responses are published.

PubMed.gov PubMed A novel virus genome discovered in an extreme environment suggests recombination between unrelated groups of RNA and DNA viruses.

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See 1 citation found by title matching your search:

Biol Direct. 2012 Jun 11;7:13. doi: 10.1186/1745-6150-7-13.

A novel virus genome discovered in an extreme environment suggests recombination between unrelated groups of RNA and DNA viruses.

Diemer GS¹, Stedman KM

Author information

Abstract
BACKGROUND: Viruses are known to be the most abundant organisms on earth, yet little is known about their history. With exceptionally high rates of genetic mutation and mosaicism, it is not currently known how major virus groups. Metagenomics offers a potential means of establishing a more complete picture of new sequence data becomes available for comparative analysis.
RESULTS: Bioinformatic analysis of viral metagenomic sequences derived from a hot, acidic environment revealed a complete virus genome was confirmed by inverse PCR amplification from native DNA extract. The result of a RNA-DNA recombination event between two ostensibly unrelated virus groups, homologous genes arranged in similar configurations and three similar putative virus genome indicates the existence of a widespread but previously undetected group of viruses.
CONCLUSIONS: This unique viral genome carries implications for theories of virus emergence and recombination has yet been identified, and only scant evidence exists that genetic exchange has occurred.
REVIEWERS: This article was reviewed by EK, MK (nominated by PF) and AM. For the full text of the review, please see the reviewers' reports.

Authors' contributions
 GSD drafted the manuscript, initiated investigation of the BSL RDHV data, prepared the BSL metagenomic sample, performed experiments and analyses, and prepared figures. KMS performed separate corroborative analyses, initiated and oversaw the project, obtained all necessary grants, permits and resources, and edited the manuscript. All authors read and approved the final draft of the manuscript prior to submission.

Reviewers' reports
 Reviewer's report 1: Dr Eugene Koonin (National Center for Biotechnology Information, USA)

This is a truly exciting paper that reports the discovery of a completely unexpected entity, an apparent hybrid between a ssDNA virus related to circoviruses and an RNA virus related to tombusviruses. This finding is of great interest on two levels. First, to my knowledge, such a chimera between RNA and DNA viruses – not only of these particular families but in general – has never been observed before. Of course, there are many examples of mixing and matching in the virus world, but somehow they so far have been confined to the same type of nucleic acid. Second, this work highlights the new route to discovery in virology – the metagenomic path. This is literally a fishing expedition, with all its advantages and drawbacks. The main advantage is the capacity to discover essentially everything that is 'out there', even at low abundance, without the need for the laborious and biased procedures of virus and host growth. But, here is also the severe

Nobel winner declares boycott of top science journals

Randy Schekman says his lab will no longer send papers to Nature, Cell and Science as they distort scientific process

Jan Sample, science reporter
 The Guardian, Monday 9 December 2013 19:42 GMT



Randy Schekman, centre, at a Nobel prize ceremony in Stockholm. Photograph: Rob Schoenbaum/Zuma Press/Corbis

Leading academic journals are distorting the scientific process and represent a "tyranny" that must be broken, according to a Nobel prize winner who has declared a boycott on the publications.

Randy Schekman, a US biologist who won the Nobel prize in physiology or medicine this year and receives his prize in Stockholm on Tuesday, said his lab would no longer send research papers to the top-tier journals, Nature, Cell and Science.

<http://www.theguardian.com/science/2013/dec/09/nobel-winner-boycott-science-journals>

How journals like Nature, Cell and Science are damaging science

The incentives offered by top journals distort science, just as big bonuses distort banking

Randy Schekman
 The Guardian, Monday 9 December 2013 19:30 GMT

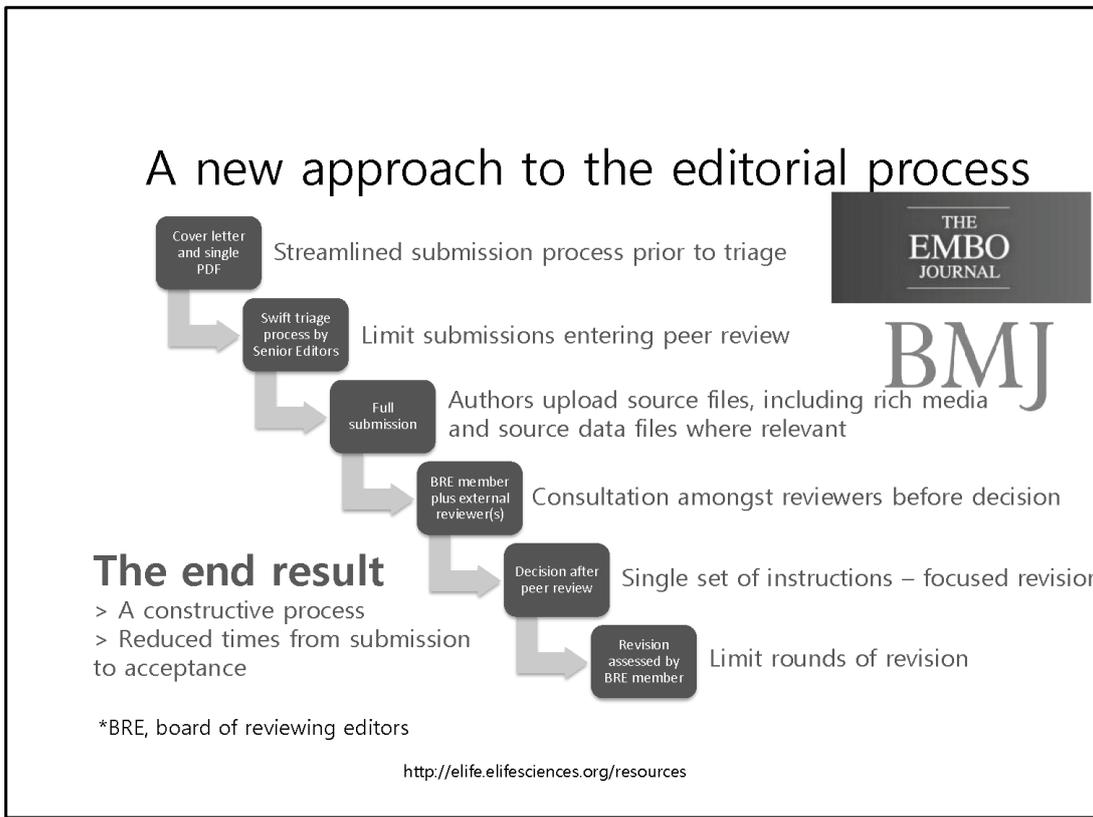
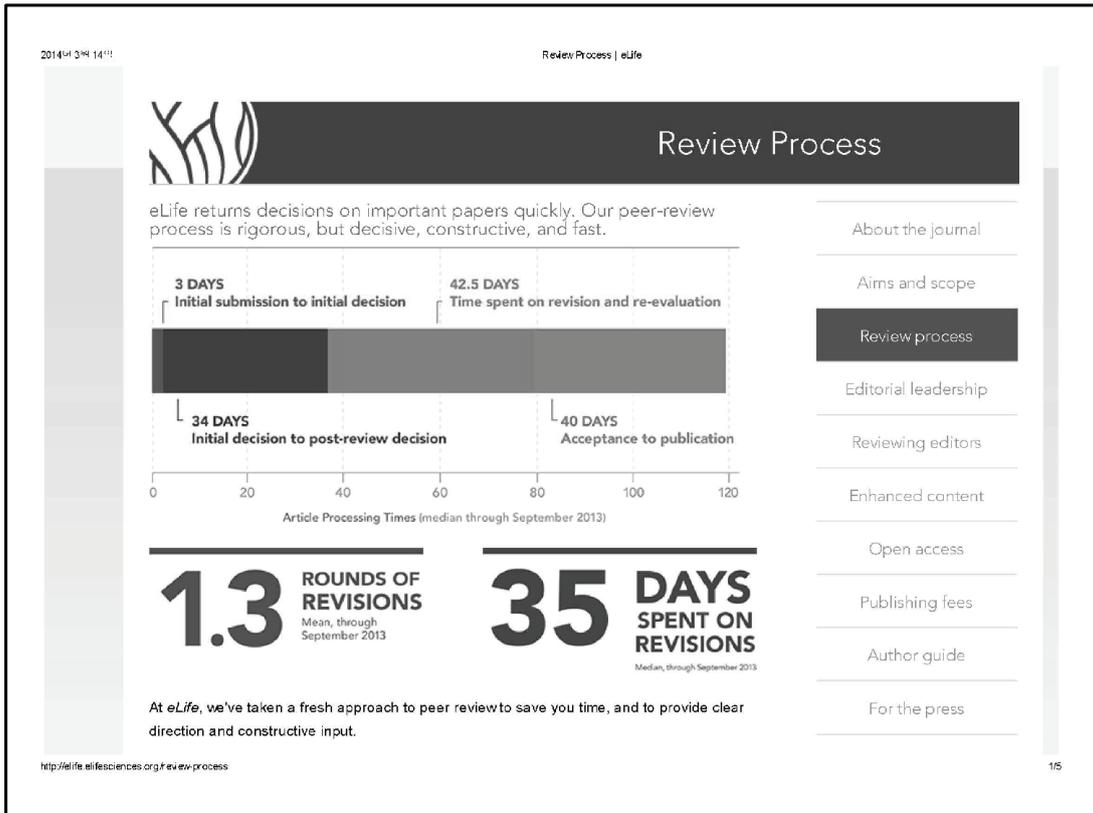


The journal Science has recently retracted a high-profile paper reporting links between littering and violence. Photograph: Alamy/Janine Wiedel

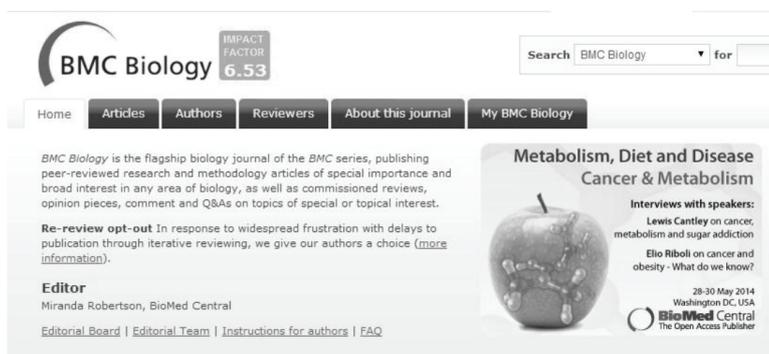
I am a scientist. Mine is a professional world that achieves great things for humanity. But it is disfigured by inappropriate incentives. The prevailing structures of personal reputation and career advancement mean the biggest rewards often follow the flashiest work, not the best. Those of us who follow these incentives are being entirely rational – I have followed them myself – but we do not always best serve our profession's interests, let alone those of humanity and society.

We all know what distorting incentives have done to finance and banking. The incentives my colleagues face are not huge bonuses, but the professional rewards that accompany publication in prestigious journals – chiefly Nature, Cell and Science.

<http://www.theguardian.com/commentisfree/2013/dec/09/how-journals-nature-science-cell-damage-science>



Re-review opt-out



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BMC Biology 2013;11:18

Published April 30, 2012

JCB: Editorial

Minimizing the "Re" in Review

Elizabeth H. Williams,¹ Pamela A. Carpentier,² and Tom Misteli³

¹Executive Editor, ²Associate Editor, and ³Editor-in-Chief, *The Journal of Cell Biology*

There is a troubling trend in scientific publishing for manuscripts to undergo multiple, often lengthy, rounds of review, resulting in significant delays to publication. JCB is announcing new procedures to streamline its editorial process and eliminate unnecessary delays.



JCB 2012;197:345-346

Neruoscience Peer Review consortium



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Welcome to the Neuroscience Peer Review Consortium – an innovation in science publishing.

The Neuroscience Peer Review Consortium is an alliance of neuroscience journals that have agreed to accept manuscript reviews from other members of the Consortium. Its goals are to support efficient and thorough peer review of original research in neuroscience, speed the publication of research reports, and reduce the burden on peer reviewers.

The Consortium was initiated in January, 2008. The participating journals, in cooperation with the INCF, agreed in November, 2008 to extend the NPRC through 2009, and then to evaluate its effectiveness annually and consider extending it on a year-to-year basis. This model was followed until 2011, when it was agreed among the journal representatives at the annual meeting that NPRC would continue indefinitely and that INCF will continue to support NPRC on an ongoing basis. Journals may join or leave the NPRC at any time.

The Consortium extends an invitation to all MEDLINE-indexed journals that publish peer-reviewed original research in the broad field of neuroscience to join.

The Consortium extends an invitation to all MEDLINE-indexed journals that publish peer-reviewed original research in the broad field of neuroscience to join.

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Cited Mar 14, 2014

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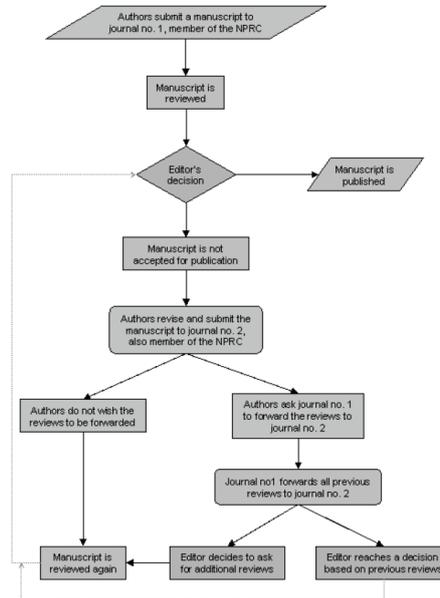
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Journals in the process of joining

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Ask only whether the data are adequate to support the conclusions

www.slideshare.net/Maria_Kowalczyk/future-of-peer-review

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Human Papillomavirus Infection and Cervical Neoplasia among Migrant Women Living in Italy.
 Tornesello ML¹, Giorni Rossi P², Buonaquoro L¹, Buonaquoro FM¹, HPV Prevalence Italian Working Group.

Author information

Abstract
 Human papillomavirus (HPV) infection is highly prevalent in women migrating from countries where cervical screening is not implemented. The variety of HPV genotypes, their prevalence and the association with cervical abnormalities has been investigated by several groups in women moving mainly from Eastern Europe, Africa, and Southern Asia to Italy. All studies are concordant on the elevated rate of HPV infection among immigrants, which is four times higher than that observed among age-matched Italian women. The HPV prevalence among short-term migrants and characterization of viral variants showed that the high prevalence of HPV reflects either individual lifestyle or high prevalence of HPV in the country of origin. The high burden of HPV infection correlates very well with the high incidence of cervical cancer in migrant women. In fact, during the years 2000-2004 the cervical cancer incidence in women from Central and Eastern Europe and living in Central Italy was 38.3 per 100,000, which is statistically significant higher than that of native Italian women (6 per 100,000). In this study, we pooled together the results of three independent studies originally designed to assess the distribution and the prevalence of HPV genotypes among 499 immigrant women living in Southern Italy. A total of 39 mucosal HPV genotypes were identified. The 12 genotypes (HPV16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, and 59) classified as carcinogenic to humans (group 1) accounted for >80% of all infections. HPV16 was the most common viral type in all groups with frequency rates ranging from 15.4% in Africa to 51.1% in Eastern and Southern European HPV-positive women. The high prevalence of oncogenic HPVs and cervical cancer risk among migrant women, together with the lower participation in screening programs, demands for an urgent implementation of preventive strategies to increase screening and vaccine coverage and viral monitoring of uncommon HPV genotypes potential spreading in settled population.

KEYWORDS: Italy; cervical cancer; cervical cancer screening; human papillomaviruses; migrants

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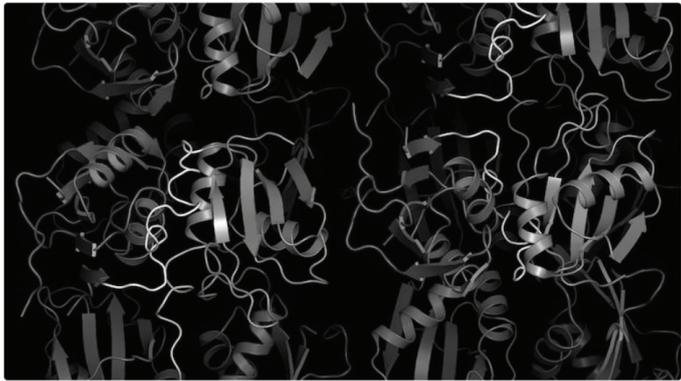
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FEATURED ARTICLE
Solution & crystal structures of the neuronal isoform of the polypyrimidine tract binding protein

MARCH 13, 2014 - The eukaryotic polypyrimidine tract binding protein (PTB) serves primarily as a regulator of alternative splicing of messenger RNA and the neuronal paralogue of PTB (nPTB) is 75% identical in amino acid sequence with PTB. RNA binding by PTB and nPTB is mediated by four RNA recognition motifs (RRMs) and in this article, the authors present the crystal and solution structures of the C-terminal domain of nPTB (nPTB34) which contains RRM3 and 4. [Image: Stephen Curry, CC-BY 4.0. Crystal structure of the C-terminal domain of nPTB, which contains RNA recognition motifs 3 and 4 (coloured red and blue respectively).]

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Scientific Reports	\$1,360	\$1,360	\$1,360	\$1,360	\$5,400
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How long is a piece of loop?

Yoonjoo Choi¹, Sumeet Agarwal^{2,3,4}, Charlotte M. Deane⁵

PubMed ID: 23638343

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Abstract

Loops are irregular structures in proteins. They often play a role in ligand binding. Despite their irregular protein loop structure, a particular protein loop local properties of loop (span). We find that the number of residues in a loop does not increase with the span, and is also unaffected by the properties of the protein we suggest that its distribution can be described by a random fluctuation model based on the Maxwell-Boltzmann distribution. It is believed that the primary difficulty in protein loop structure prediction comes from the number of residues in the loop. Following the idea that loop span is an independent local property, we investigate its effect on protein loop structure prediction and show how normalised span (loop stretch) is related to the structural complexity of loops. Highly contracted loops are more difficult to predict than stretched loops.

Cite this as

Choi Y, Agarwal S, Deane CM. (2013) How long is a piece of loop? *PeerJ* 1:e11111. <http://dx.doi.org/10.7717/peerj.11111>

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Capuano, Kate Campbell et al.

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Separating peer review from journal

- Peerage of Science
- Rubriq

The screenshot shows the homepage of Peerage of Science. At the top, the title "Peerage of Science" is displayed in a large, serif font. Below the title is a navigation menu with links for Home, Solutions, How it works, Peers, Journals, and FAQ. A "LOG IN" button is located in the top right corner. The main content area features a large background image of a globe with a grid. On the left, the text reads "A new service for scientific peer review and publishing" followed by "your science, your call". Below this are three buttons: "Submit", "Review examples", and "Sign up". On the right, there are several statistics: "161 Manuscripts", "355 Peer reviews", and "888 Peer review evaluations". Below these are three more statistics: "1609 Scientists", "from 597 institutions", and "in 60 countries". The bottom section of the page is divided into three columns: "Solutions" (with links for Authors, Reviewers, Editors, and Publishers), "News and Views" (with a "WINNER!" announcement for the 2012 ALPSP Award for Publishing Innovation, dated 23 JAN 2014, and an "ALPSP seminar" dated 21 NOV 2013), and "Recent Publications" (featuring a paper on "Retention forestry and biodiversity conservation" in *Nature Conservation*, dated 21 NOV 2013, with 6 reviews, a PEQ score of 3.7, and a PAQ score of 3.7).

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How it works
As an independent, for-benefit organization, Rubriq can provide rigorous reviews by the same qualified

Summary

- Traditional PR is widely used & also widely criticized.
- Innovative models have been proposed to
 - Increase transparency of PR process,
 - Reduce the publication cost & burden on reviewers,
 - Increase speed of PR and publication
 - Involve the scientific community in the process.
- Successful innovation: open PR, PR consortium.
- New initiatives that need to be tested further:
 - Post publication PR,
 - PR manuscript outside journals.

www.slideshare.net/Maria_Kowalczyk/future-of-peer-review