#### Pubpeer: vigilante science, journal club or alarm raiser?

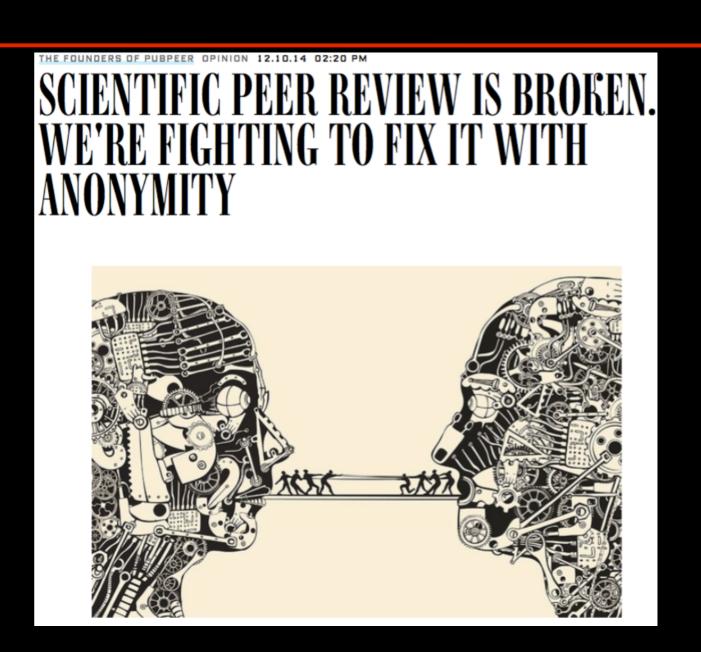
The controversies over anonymity in post-publication peer review

**Didier TORNY** 



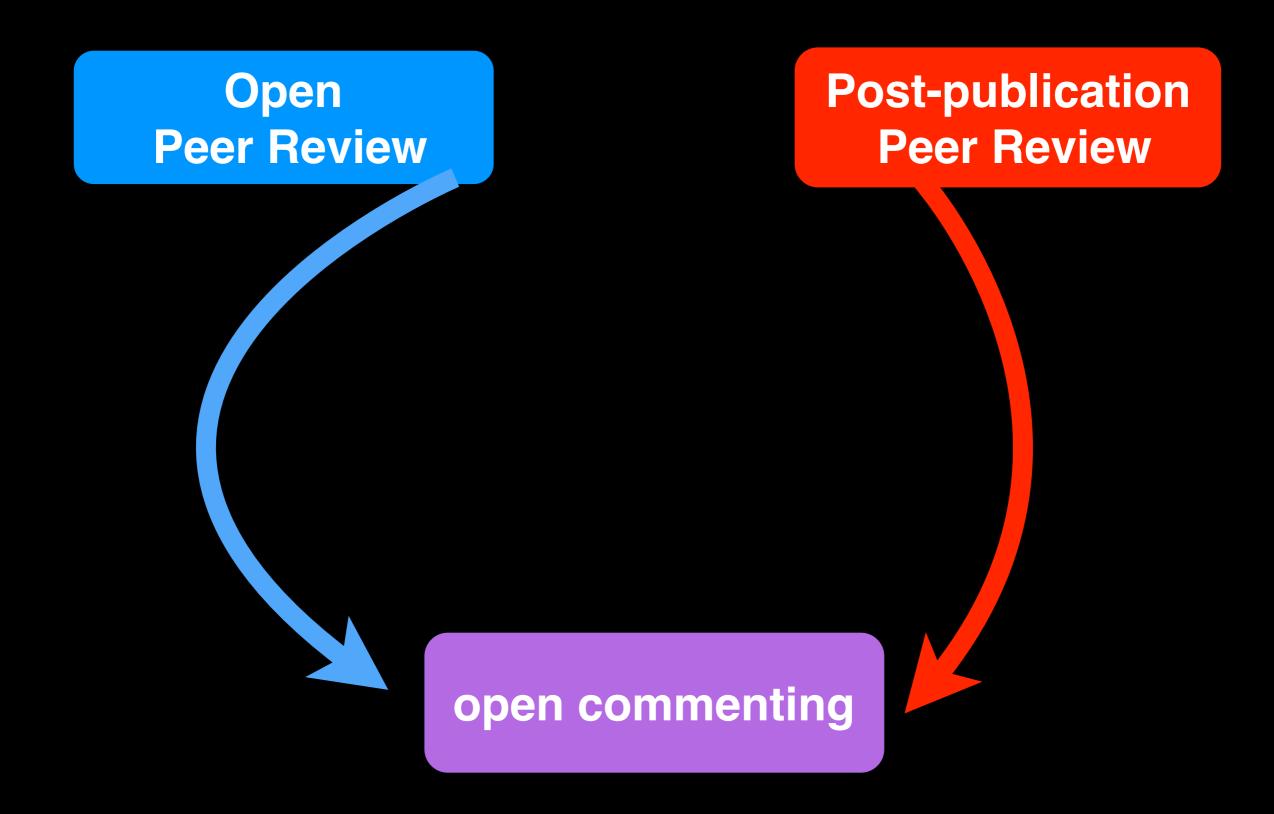
PEERE International conference

Rome, 7th May 2018



Full text: https://halshs.archives-ouvertes.fr/halshs-01700198/document

## Tinkering with peer review



### **Unwilling commenters**

#### Overview: Nature's peer review trial

Nature (2006) | doi:10.1038/nature05535

Despite enthusiasm for the concept, open peer review was not widely popular, either among authors or by scientists invited to comment.

#### **Outcomes**

We sent out a total of 1,369 papers for review during the trial period. The authors of 71 (or 5%) of these agreed to their papers being displayed for open comment. Of the displayed papers, 33 received no comments, while 38 (54%) received a total of 92 technical comments. Of these comments, 49 were to 8 papers. The remaining 30 papers had comments evenly distributed. The most commented-on paper received 10 comments (an evolution paper about postmating sexual selection). There is no obvious time bias: the papers receiving most comments were evenly spread throughout the trial, and recent papers did not show any waning of interest.

The trial received a healthy volume of online traffic: an average of 5,600 html page views per week and about the same for RSS feeds. However, this reader interest did not convert into significant numbers of comments.

## **Unwilling commenters**

# PubMed Commons to be Discontinued

PubMed Commons has been a valuable experiment in supporting discussion of published scientific literature. The service was first introduced as a pilot project in the fall of 2013 and was reviewed in 2015. Despite low levels of use at that time, NIH decided to extend the effort for another year or two in hopes that participation would increase. Unfortunately, usage has remained minimal, with comments submitted on only 6,000 of the 28 million articles indexed in PubMed.

While many worthwhile comments were made through the service during its 4 years of operation, NIH has decided that the low level of participation does not warrant continued investment in the project, particularly given the availability of other commenting venues.

### Unwilling commenters

#### Should We Stop with the Commenting Already?

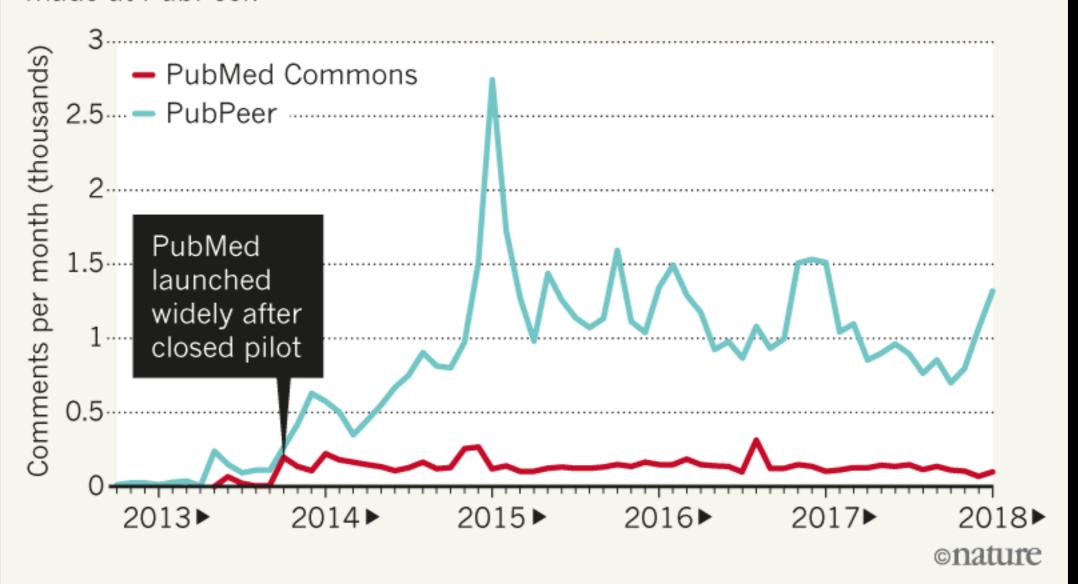
By ANGELA COCHRAN | APR 27, 2017
30 COMMENTS

What's missing from commenting sites specifically on megajournals, database sites, and third party sites is community. While journals build a community, they also protect themselves from outside comments. Discussions happen in closer settings — at conferences, at workshops, through formal journal activities, etc. Societies are building these online communities using tools like Higher Logic or AAAS' Trellis platforms. Journals could brand spaces on these platforms or look for other tools to build that community around content. Another promising new product is <a href="Remarq">Remarq</a>, which allows editors to pose discussion questions to solicit comments on a specific aspect of a paper.

### The uniqueness of PubPeer

#### A LITTLE-USED COMMONS?

Around 7,500 comments have been logged on published abstracts on PubMed Commons. By contrast, more than 54,000 comments have been made at PubPeer.



controversies

argumentative analysis

# anonymous commenting

documents

technologies

#### **Recent comments**

3 hours ago

Antivascular therapy for orthotopic human ovarian carcinoma through blockade of the vascular endothelial growth factor and epidermal growth factor receptors.

Premal H Thaker, Sertac Yazici, Monique B Nilsson, Kenji Yokoi, Rachel Z Tsan, Jungin He, Sun-Jin Kim, Isaiah J Fidler, Anil K Sood

Clin. Cancer Res. (2005)

#### Author response

○1 comment

3 hours

ago

Derivation of novel human ground state naive pluripotent stem cells.

Ohad Gafni, Leehee Weinberger, Abed AlFatah Mansour, Yair S. Manor, Elad Chomsky, Dalit Ben-Yosef, Yael Kalma, Sergey Viukov, Itay Maza, Asaf Zviran, Yoach Rais, Zohar Shipony, Zohar Mukamel, Vladislav Krupalnik, Mirie Zerbib, Shay Geula, Inbal Caspi, Dan Schneir, Tamar Shwartz, Shlomit Gilad, Daniela Amann-Zalcenstein, Sima Benjamin, Ido Amit, Amos Tanay, Rada Massarwa, Noa Novershtern, Jacob H. Hanna

148 comments

Nature (2013)

3 hours

ago

Polymorphisms of the CYP1B1 gene as risk factors for human renal cell cancer.

Masahiro Sasaki, Yuichiro Tanaka, Steven T Okino, Mitsuharu Nomoto, Suguru Yonezawa, Masayuki Nakagawa, Seiichiro Fujimoto, Noriaki Sakuragi, Rajvir Dahiya

Clin. Cancer Res. (2004)

O4 comments

4 hours

Taxonomy anarchy hampers conservation

ago Stephen T. Garnett, Les Christidis

Nature (2017)

○ 1 comment

"Systemic spread of sequence-specific transgene RNA degradation in plants is initiated by localized introduction of ectopic promoterless DNA"

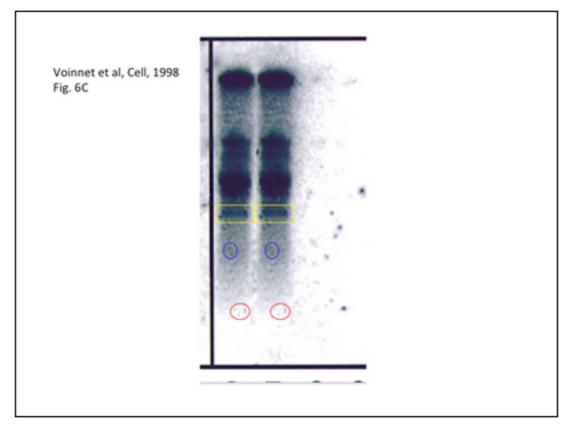
O Voinnet, P Vain, S Angell, D C Baulcombe, Cell, 95 (1998)

#### Comments (22):





Unregistered Submission: (September 4th, 2014 3:27pm UTC)



Two lanes look similar in Fig. 6C: http://imgur.com/3hZrGXC

Antiviral RNA interference in mammalian cells.

 Maillard PV, Ciaudo C, Marchais A, Li Y, Jay F, Ding SW, Voinnet O. Science. 2013 Oct 11;342(6155):235-8. doi: 10.1126/science.1241930.



6 comments on PubPeer (by: Peer 1, Peer 2, Peer 3, Unregistered Submission)

PMID: 24115438 Free PMC Article

Similar articles

Reconstructing de novo silencing of an active plant retrotransposon.

 Marí-Ordóñez A, Marchais A, Etcheverry M, Martin A, Colot V, Voinnet O. Nat Genet. 2013 Sep;45(9):1029-39. doi: 10.1038/ng.2703. Epub 2013 Jul 14.



50 comments on PubPeer (by: Peer 1, Peer 2, Peer 3, Unregistered Submission, Peer 5,

Peer 8)

PMID: 23852169 Similar articles

- Extreme resistance as a host counter-counter defense against viral suppression of RNA silencing.
- 35. Sansregret R, Dufour V, Langlois M, Daayf F, Dunoyer P, Voinnet O, Bouarab K. PLoS Pathog. 2013;9(6):e1003435. doi: 10.1371/journal.ppat.1003435. Epub 2013 Jun 13. Retraction in: Sansregret R, Dufour V, Langlois M, Daayf F, Dunoyer P, Voinnet O, Bouarab K. PLoS Pathog. 2015 Sep;11(9):e1005207.

28 comments on PubPeer (by: Peer 1, Unregistered Submission, Peer 2, Peer 3, Peer 4, Peer 5, Peer 6, Peer 8, Leonid Schneider)

PMID: 23785291 Free PMC Article

Similar articles

#### **Post-publication discussions and corrections**

Journals must allow debate post publication either on their site, through letters to the editor, or on an external moderated site, such as PubPeer. They must have mechanisms for correcting, revising or retracting articles after publication



#### Cases

- Consequence for dual submission
- Pre-publication in a discussion paper series
- Unhelpful institution report

View all Post-publication discussions and corrections cases



#### Research

- Retractions research project
- No study's perfect: a cross-disciplinary analysis of published errata



#### **Seminars**

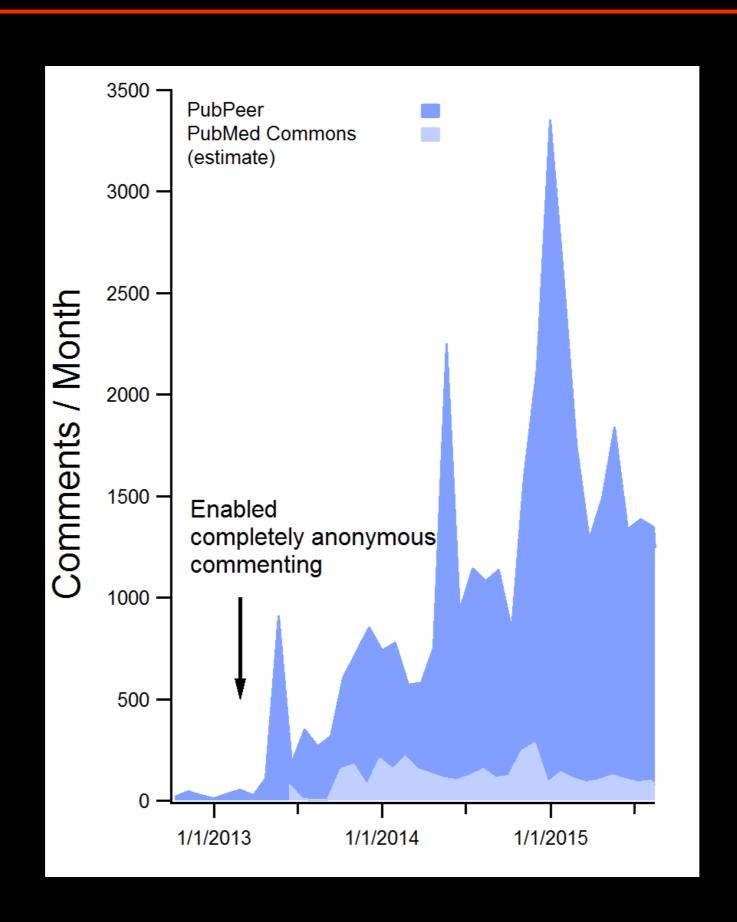
- <u>Legal issues in retractions and corrections Helen McLean</u>, legal counsel for John Wiley & Sons, Australia
- Correcting \*our\* literature is one thing. What about the rest of it? — John Loadsman, Editor, Anaesthesia & Intensive Care
- Duplicate and salami publications in science Presented by Richard O'Hair, Professor of Chemistry and Associate Dean science (Research & Industry); Associate Editor of Journal of the American Society for Mass Spectrometry



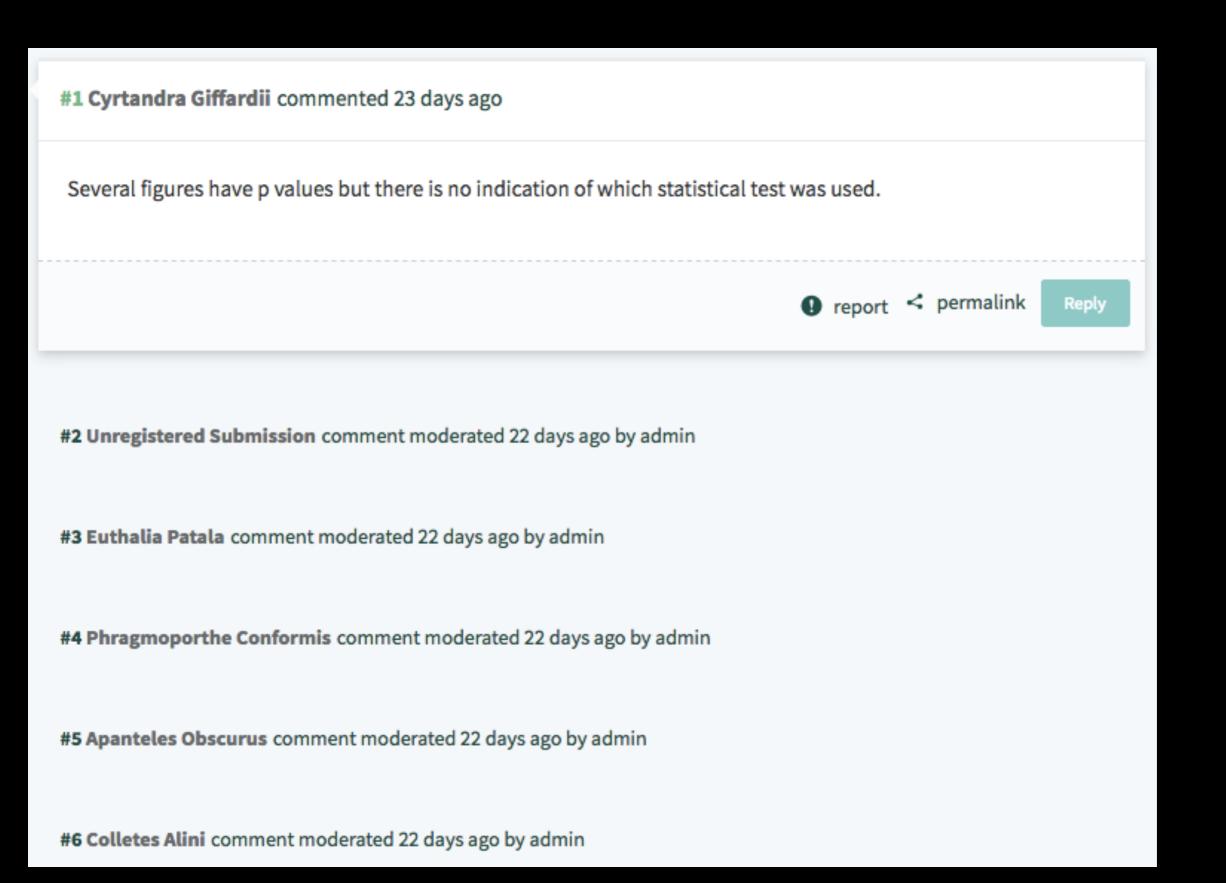
#### **Flowcharts**

- Suspected redundant publication in a submitted manuscript
- · Suspected redundant publication in a published manuscript
- Turkish: all flowcharts

View all Post-publication discussions and corrections flowcharts



A key issue that we have decided on is the importance of anonymity. One of the reasons that we have never commented on articles directly on journal websites is because the colleagues whose publications we are most qualified to comment on are likely reviewing our publications and grant proposals. Even the most wellintentioned criticism could potentially irk these potential reviewers. Since publications are so precious to everyone's future career advancement, there is a huge psychological barrier for early stage scientists to attach names to any comments that could be considered critical. Therefore, in order to encourage as much participation in this post-publication review process as possible, PubPeer allows comments to be left anonymously if someone is so inclined. Critics of this feature sometimes email us to point out that anonymity allows for baseless slander or to proclaim that a commenter's name is essential for judging the validity of a comment. We strongly disagree with this second point because good comments are good regardless of whether they come from a senior scientist or a graduate student. We can all judge for ourselves the content of comments and on PubPeer it is possible to vote the good comments up and the bad comments down into the noise so that community as a whole can decide together what is worth paying attention to. Baseless defamation, rumors, and ad hominen attacks are not tolerated at all and are immediately removed from the site. The people involved with PubPeer are all active scientists and we are trying to remain anonymous for the time being for several reasons: 1) we can imagine scenarios in which pressure could be put on us to remove/alter comments if our identities were known and 2) we would like to protect our families and private bank accounts from the more litigious among our readers.



#### The PubPeer Foundation

PubPeer Blog (2015) - 29 Comments

#### #1 Peer 0 commented 3 years ago

We are pleased to announce the creation of The PubPeer Foundation, a California-registered nonprofit public benefit corporation in the process of obtaining 501(c)(3) nonprofit status in the United States. The overarching goal of the Foundation is to help improve the quality of scientific research by enabling innovative approaches for community interaction. Our initial focus will be on maintaining and developing the PubPeer online platform for post-publication peer review.

The bylaws of the newly created Foundation aim to establish PubPeer.com as a service run for the benefit of its readers and commenters, who create all of its content. We feel that a nonprofit organization constitutes the ideal framework through which to pursue these goals. We are also taking this opportunity to formalize the responsibilities of directors, officers, agents, and subcontractors of the Foundation. First and foremost, they should always act to preserve and defend the anonymity of users of Foundation sites. In addition, they must not comment on Foundation sites except through official channels (such as the blog, the twitter account or as moderators), and they must avoid real and apparent conflicts of interest.

The inaugural Board of the Foundation consists of the three founders of PubPeer.com and two associates, respectively: Brandon Stell (President), George Smith, Richard Smith, Boris Barbour (Treasurer) and Gabor Brasnjo (Secretary).

#### The PubPeer Foundation

PubPeer Blog (2015) - 29 Comments

**#1 Peer 0** commented 3 years ago

We are pleased to announce the creation of The PubPeer Foundation, a Califo benefit corporation in the process of obtaining 501(c)(3) nonprofit status in the goal of the Foundation is to help improve the quality of scientific research by enabling innovative approaches to community interaction. Our initial focus will be on maintaining and developing the PubPeer online platform for post-publication peer review.

The bylaws of the newly created Foundation aim to establish PubPeer.com as a service run for the benefit of its readers and commenters, who create all of its content. We feel that a nonprofit organization constitutes the ideal framework through which to pursue these goals. We are also taking this opportunity to formalize the responsibilities of directors, officers, agents, and subcontractors of the Foundation. First and foremost, they should always act to preserve and defend the anonymity of users of Foundation sites. In addition, they must not comment on Foundation sites except through official channels (such as the blog, the twitter account or as moderators), and they must avoid real and apparent conflicts of interest.

The inaugural Board of the Foundation consists of the three founders of PubPeer.com and two associates, respectively: Brandon Stell (President), George Smith, Richard Smith, Boris Barbour (Treasurer) and Gabor Brasnjo (Secretary).

# Anonymity in practice

#### Non-Thyroidal Illness Syndrome in Patients Exposed to Indoor Air Dampness Microbiota Treated Successfully with Triiodothyronine.

Frontiers in immunology - 10 Comments doi: 10.3389/fimmu.2017.00919 issn: 1664-3224 pmc: PMC5545575 pubmed: 28824644

Taija Liisa Somppi

#### #1 Ehrendorferia Chrysantha commented 24 days ago

This article describes treatment of nine patients supposedly suffering from hypothyroidism and Non-Thyroidal Illness Syndrome caused by long-term exposure to molds and other microbiota in water-damaged buildings. Treatment consisted of Triiodothyronine + thyroxine, strict gluten-free diet, regular use of nutritional supplements, low-dose hydrocortisone, and/or dehydroepiandrosterone (DHEA) to subset of patients and in some cases hydrocortisone and DHEA as a adrenal supportive therapy.

Author claims that this treatment was successful to cure or significantly improve symptoms in all patients. Author concludes that hypothyroidism and Non-Thyroidal Illness Syndrome are diseased caused by long-term exposure to mold and toxins and subsequent oxidative stress and implies that proper treatment includes that used in the study.

In my view this publication has many flaws and the study as a whole is questionable. Most of the introduction and background information from where hypothesis are drawn are questionable and controversial at best. It seems that anecdotal evidence are picked from literature to support the authors view.

# Anonymity in practice

#### #2 Taija Liisa Somppi commented 17 days ago

**Author Response** 

#1

Comments from the author

Thank you, Ehrendorferia chrysantha for reading my article and taking your time to comment on it. However, I am eager to know what makes you to be ashamed of your real name, of your profession, your specialty and your affiliation? Why do you want to hide your real name under the plant name of Ehrendorferia chrysantha?

A kind attention to you: My article is up to now has reached more than 2300 views. That speaks for the big importance of the problem I have raised.

You criticize me because this study is not a controlled study. Please do the controlled study, and I will look how well you can perform of it. A controlled study should be done to the patients who will be given therapy that maybe does not work or the effect of therapy is unsure. I wonder, how ethical would be your study where another group of your patients (If you're even a doctor) are treated only by T4 therapy which is not working properly. Now, when patients can read scientific articles and are educated enough to interpret results, I wonder who will volunteer to participate in your controlled study.

#### #3 Ammophila Urnaria commented 13 days ago

#### Hello Taija Somppi,

I'm not the previous poster but I believe you should address some of the issues that the first user pointed out. To me, and perhaps others reading this, they are very relevant. Especially the symptoms and diagnosis characterization. Perhaps you could provide the general public with a description of the thought process, in light of resolving all doubts. Please do not take the criticism personally, we are all scientists trying to improve the world and making sure that the experiments are true and valid!

### **Anonymity in practice**

#4 Eutropis Quadricarinata commented 13 days ago

#2

I thank the author for the response for my post. Instead of answering to my critique there seems to be many comments and questions regarding me as a person, so I will try to reply and explain my point better.

Unfortunately I lost my previous login key, so I am posting from a new account.

Thank you, Ehrendorferia chrysantha for reading my article and taking your time to comment on it. However, I am eager to know what makes you to be ashamed of your real name, of your profession, your specialty and your affiliation? Why do you want to hide your real name under the plant name of Ehrendorferia chrysantha?

I am not ashamed of my name or profession but I don't see how that makes a difference so I am using anonymous login and the names is automatically generated by Pubpeer. I admit that I also made a comment about the author's identity when I pointed out that the study has been done by single author in a private clinic but I think it's a noteworthy in this case.

#6 Taija Liisa Somppi commented 10 days ago

**Author Response** 

Editor's response

As an invited editor who finally approved Dr. Taija Somppi's article I would like to make a few comments. For the second time the comment giver did not disclose his/her identity. So, I will address you as a representative of fauna and flora.

First, in my opinion it is a disrespect to the author to contact her anonymously. If you pretend that you are a scientist, you should not use an anonymous way to debate scientific issues.

Secondly, your motivation to raise criticism is not clear. Your critics are neither fair nor constructive. Frontiers in immunology is an open access journal where the names of the reviewers are public. You may easily check the expertise of the reviewers. Both are experienced researchers. Your critics concern also professionalism of the invited editor and editor-in-chief. You can check scientific merits of all the persons involved in the evaluation process.

# Pros and cons arguments on anonymity

efficiency	VS.	non-constructive
focusing on content	VS.	image fetish
protecting commentators	VS.	protecting authors
science as agon	VS.	« civil » science

## Anonymity cons: lack of civility

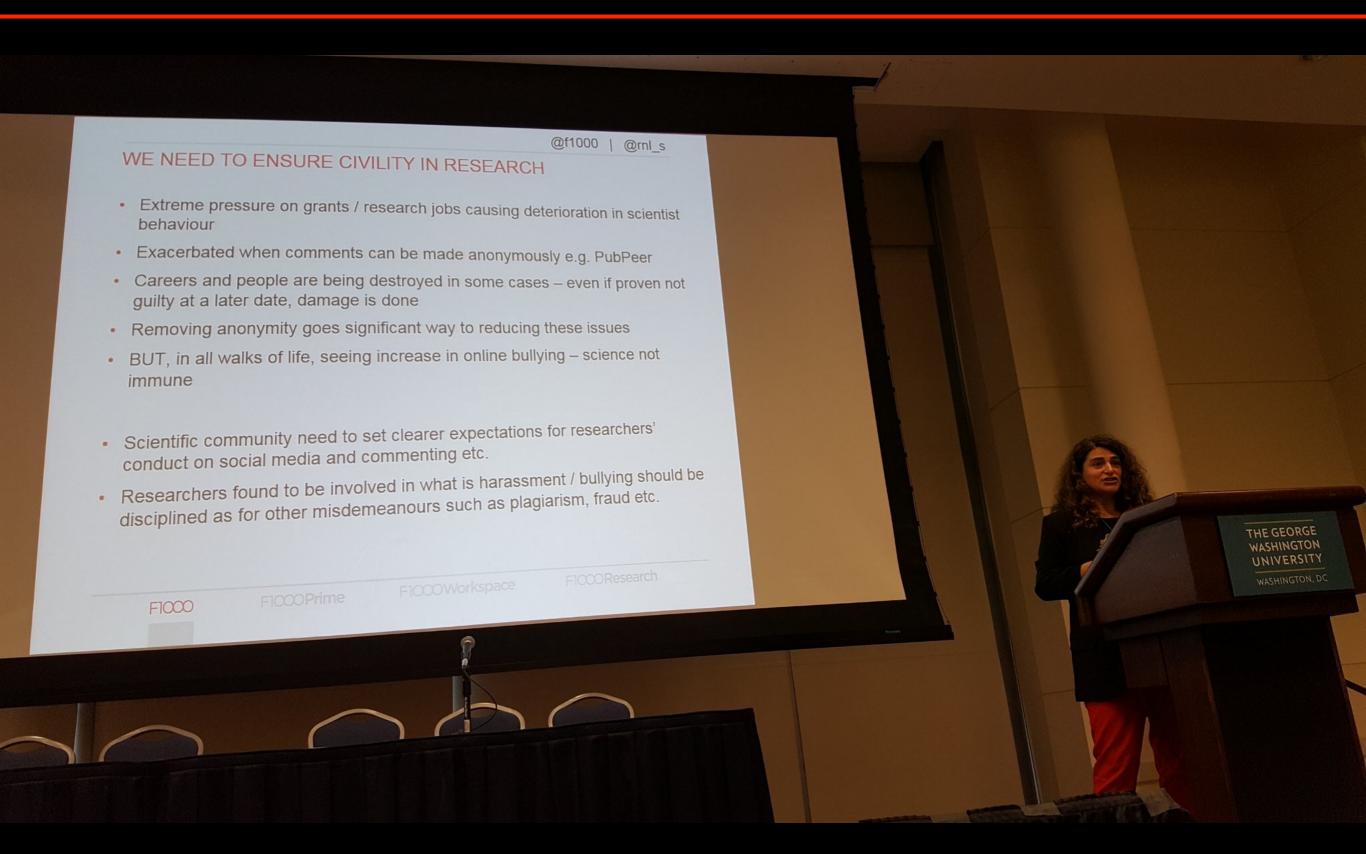
**NATURE | EDITORIAL** 

# Post-publication criticism is crucial, but should be constructive

In an era of online discussion, debate must remain nuanced and courteous.

30 November 2016

# Anonymity cons: lack of civility



## Pubpeer expected outcomes

When we created PubPeer, we expected to facilitate public, on-the-record discussions about the finer points of experimental design and interpretation, similar to the conversations we all have in our journal clubs. As PubPeer developed, and especially once we enabled anonymous posting, we were shocked at the number of comments pointing out much more fundamental problems in papers, involving very questionable research practices and rather obvious misconduct. We link to a few examples of comments raising apparently serious issues and where the articles were subsequently withdrawn or retracted (for which the reasons were not always given):

https://pubpeer.com/publications/C55070469007978707693AA374BF21
https://pubpeer.com/publications/890E1E22DAFD6926D577FE461A66F6
https://pubpeer.com/publications/058CFA77EAF6D5E019D9902C6B3553
https://pubpeer.com/publications/FF771F6D16ADB90D7F8C11E5361A1F
https://pubpeer.com/publications/0C40189FE3F10DF9B4B0166DE1FA4E
https://pubpeer.com/publications/8B755710BADFE6FB0A848A44B70F7D
https://pubpeer.com/publications/1F3D9CBBB6A8F1953284B66EEA7887

The choice of retracted/withdrawn articles was made for legal reasons, but that is all that makes them special. There are many, many similar comments regarding other papers.

### Pubpeer outcomes : alarm raising

#### PLOS ONE appears to ignore comments for over a year: Paper has serious flaws.

Topic (11/15/2) - 6 Comments

#### #1 Peer 1 commented 10 months ago

I posted comments on the following paper over a year ago and cannot seem to get a response from PLOS ONE: The following paper is seriously flawed in its design. Figure 2 is incorrect, and therefore the conclusions are likewise incorrect. Figure 2 is a simple DNA alignment that is incorrect. The link to the paper is:

http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0133127

DNA Sequence Variants in the Five Prime Untranslated Region of the Cyclooxygenase-2 Gene Are Commonly Found in Healthy Dogs and Gray Wolves

Published: August 5, 2015

http://dx.doi.org/10.1371/journal.pone.0133127

The link to my comments and analysis is:

http://journals.plos.org/plosone/article/comment?id=10.1371/annotation/43157479-373a-47cb-9478-fba31dd2eb5e

I would like to know why nothing is being done about this, but I can't seem to get a response from the managing editor Iratxe Puebla.

It is my opinion that this paper needs to be retracted. Please help by putting appropriate pressure on this Journal.

Thank you in advance for anyone who takes the time to review this.

### Pubpeer outcomes : alarm raising

#### #2 Peer 2 commented 9 months ago

#1

I am not sure if it helps, but in my communications with COPE I got a mail from Iratxe Puebla, which informed me that COPE was an advisory not an investigatve organ etc. So, she either left PLOS One, or is the go-to person when going gets tough. BTW, I had a similar experience with PLOS One in that my comment was not answered in over a year.

#3 Unregistered Submission commented 9 months ago

#1

Please note that Peer-1 herself has an expression of concern in a PLOS manuscript...

### Pubpeer outcomes: alarm raising

#5 Peer 2 commented 9 months ago

#1

Unlike other similar situations I am familar with, the field does not use the term "susceptibility" to RD, which would be a way to reflect variable penetrance of a dominant allele. Variable penetrance also means that genetic background and/or epigenetic factors may influence the RD severity, so much depends on the actual degree of penetrance and its scope of variation. This is essentially the basis of EOC to Whiteley et al paper (which PLOS issued) that, however, does not mean that Safra et al paper is correct. I agree with the analysis presented by Peer 1 in the part where it discusses the alignment of the promoter sequences from distant species which has flawed sources and methodology, so the Safra et al paper deserves at the very least an expression of concern by PLOS as well. On the bottom line, however, it is not clear how reliable is the DNA diagnostics in this case for detecting overt RD, but it can be used to eliminate a particular allele in a breeding program. Unfortunately, I do not see how one can pressure PLOS in this situation.

### Pubpeer outcomes: alarm raising



RESEARCH ARTICLE

# DNA Sequence Variants in the Five Prime Untranslated Region of the Cyclooxygenase-2 Gene Are Commonly Found in Healthy Dogs and Gray Wolves

5	1
Save	Citation
2,673	18
View	Share

Noa Safra ☑, Louisa J. Hayward, Miriam Aguilar, Benjamin N. Sacks, Jodi L. Westropp, F. Charles Mohr, Cathryn S. Mellersh, Danika L. Bannasch

Published: August 5, 2015 • https://doi.org/10.1371/journal.pone.0133127

### Pubpeer outcomes: fraud detection

#### Protein kinase D activity controls endothelial nitric oxide synthesis.

Journal of cell science (2014) - 1 Comment

doi: 10.1242/jcs.148601 pubmed: 24928905 issn: 0021-9533 issn: 1477-9137 pii: jcs.148601

Clara Aicart-Ramos, Lucía Sánchez-Ruiloba, Mónica Gómez-Parrizas, Carlos Zaragoza, Teresa Iglesias, Ignacio Rodriguez-Crespo

#### #1 Peer 1 commented a year ago PKD1wt PKD1ca PKD1acao PKD1acao - PKD1 PKD2 - PKD1 PKD2 NOS-pSer<sup>1979</sup> \_\_\_\_\_ Total 444 144 14 NOS-pSer<sup>1179</sup> \_\_\_ -----Figure 4 J Cell Sci 127:3360.

### Pubpeer outcomes: fraud detection

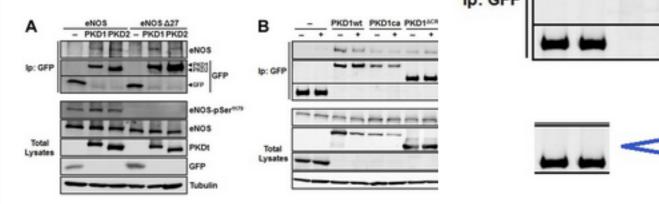
#### Protein kinase D activity controls endothelial nitric oxide synthesis.

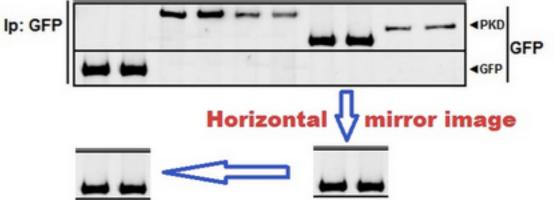
Journal of cell science (2014) - 1 Comment

doi: 10.1242/jcs.148601 pubmed: 24928905 issn: 0021-9533 issn: 1477-9137 pii: jcs.148601

Clara Aicart-Ramos, Lucía Sánchez-Ruiloba, Mónica Gómez-Parrizas, Carlos Zaragoza, Teresa Iglesias, Ignacio Rodriguez-Crespo

#### #1 Peer 1 commented a year ago





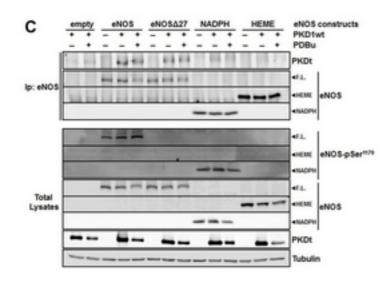


Figure 4 J Cell Sci 127:3360.

### Pubpeer outcomes: fraud detection

#### **Retraction Watch**

Tracking retractions as

### Journal flags four papers by researcher in Spain over figure issues noted on PubPeer

without comments

A journal has issued expression of concerns (EOCs) for four papers after a concerned reader notified the editors of issues in several figures.

According to the EOCs, the *Journal of Cell Science (JCS*) discussed the concerns with the corresponding author, <u>José Ignacio Rodriguez-Crespo</u>, and subsequently notified his institution, Complutense University of Madrid. Last year, all four papers were questioned on PubPeer (1, 2, 3, 4).

The journal's executive editor, Sharon Ahmad, told us:



We were made aware of the issues by a reader, and the concerns are the same as those highlighted on the PubPeer website. The university is conducting an investigation, and we are waiting for its conclusion.



The rector of the university, <u>Carlos Andradas Heranz</u>, confirmed that the university is aware of the issues and investigating. <u>Jesus Perez Gil</u>, director of the department where Rodriguez-Crespo works at Complutense University, told us:



A report will be delivered in due time. Until then, there is no other information available.

Rodriguez-Crespo, the corresponding author on all four papers, also told us:



An Ethics Commission at Complutense University was appointed last week and they met with me in order to analyze the questions raised by PubPeer. All the laboratory notebooks were provided and they inspected them carefully in order to analyze the experiments in question.

### Pubpeer outcomes: trial(s)

The Scientist » The Nutshell

# PubPeer's Appeal for Anonymity Continues

The site's lawyers, along with renowned scientists, filed briefs to an appeals court asking to protect a commenter's identification.

By Kerry Grens | January 21, 2016



PIXABAY, BYKST

In briefs submitted this week (January 19), lawyers for the post-publication peer review website PubPeer were joined by scientists Harold Varmus and Bruce Alberts, consumer advocate group Public Citizen, Google, and Twitter in asking an appeals court to protect the anonymity of a commenter on the website. A judge in Michigan had earlier asked PubPeer to reveal the identity of someone who made what Wayne State University pathologist Fazlul Sarkar considers defamatory claims against him.

"Together, these briefs make crystal clear what's at stake in the plaintiff's quest to unmask PubPeer's users: the bedrock constitutional right to speak anonymously; the integrity of scientific discourse; and the vitality of the Internet as the digital marketplace of ideas," Benjamin Good, an attorney with the American Civil Liberties Union (ACLU) who is representing PubPeer, wrote yesterday on ACLU's website.

## Pubpeer outcomes: trial(s)



Published on American Civil Liberties Union (https://www.aclu.org)

# ACLU Wins Case Protecting Identity Of Anonymous Online Critics

#### Author(s):

Vera Eidelman

With President-elect Donald Trump <u>denigrating public protests</u> [2] and <u>threatening to jail flag burners</u> [3], we must never forget that the Constitution protects dissent. Last week an appellate court in Michigan issued an <u>important reminder</u> [4] that the First Amendment protects even those who wish to dissent anonymously. The court, in our case <u>Sarkar v. Doe</u> [5], held that anonymous speakers cannot be unmasked—much less held liable—simply for expressing critical opinions based on public data. The decision is a victory for the website PubPeer, our client, and also for anyone who wants to speak out against a powerful majority without having to fear personal or professional repercussions.

In 2012, PubPeer's founders <u>created a website</u> [6] dedicated to anonymous post-publication peer review of scientific scholarship. They built anonymity into the website to allow scientists to discover the flaws in their peers' research without having to fear that those same peers would retaliate. In its short lifespan, PubPeer has already been a tremendous success; its users have discovered flaws in high-profile research, leading to <u>many</u> <u>corrections</u> [7] and <u>even retractions</u> [8].

#### Vigilante Science

The founders of PubPeer (Brandon Stell, Richard Smith, and George Smith) came out this past month. Some Plant Physiology readers will be familiar with the PubPeer Web site, but for others, this editorial may be the first you will have heard of this by-product of the social media age. Since its launch in October 2012, PubPeer has sought to facilitate community-wide, postpublication critique of scientific articles. The Web site has also attracted much controversy around its policies and, until recently, the secrecy shrouding its founders.

PubPeer operates as a blog on which anyone can post comments, either to a published article or to comments posted by other participants, and authors may respond. It is a bit like an extended journal club; not a bad idea to promote communication among scientists, you might think, so why the controversy?

#### Vigilante Science

The founders of PubPeer (Brandon Stell Richard The problems arising are twofold, and their roots are self-evident on a quick trawl through the PubPeer site. First, most individuals posting on PubPeer—let's use the euphemism commenters for now—take advantage of the anonymity afforded by the site in full knowledge that their posts will be available to the public at large. Second, the vast majority of comments that are posted focus on image data (gels, blots, and micrographs) that contribute to the development of scientific ideas but are not ideas in themselves. With few exceptions, commenters on PubPeer do no more than flag perceived faults and query the associated content. Of course, such detail generally informs discussion, but no journal club I ever organized or contributed to was so obsessed with the minutiae of data presentation. scientists, you might think, so why the controversy?

#### Vigilante Science

From the perspective of an author (and, I suspect, many readers), missing all too often are courtesy and common sense. In any other setting, the majority of comments on PubPeer would be reserved for quiet discussion, perhaps by e-mail or after a seminar when the commenter might draw an author aside for questioning. This discussion would benefit both the commenter and the author. It would avoid any possible awkwardness on either side, and if the discussion were constructive, then both author and commenter would profit from the outcome. The majority of posts on PubPeer are mounted anonymously. So, while there is no danger of public embarrassment for the commenter, likewise there is no opportunity to gain from a personal exchange with the author. What is the rationale? Given that the majority of comments show the most petty kind of scientific criticism, can there be any doubt that the intent often is to pillory, to do so publicly and without accountability?

#### Vigilante Science

From the perspective of an author (and, I suspect, many readers), missing all too often are courtesy and common sense. In any other setting, the majority of comments on PubPeer would be reserved for quiet discussion, perhaps by e-mail or after a seminar when the commenter might draw an author aside for questioning. This discussion would benefit both the commenter and the author. It would avoid any possible awkwardness on either side, and if the discussion were constructive, then both author and commenter would profit from the outcome. The majority of posts on PubPeer are mounted anonymously. So, while there is no danger of public embarrassment for the commenter, likewise there is no opportunity to gain from a personal exchange with the author. What is the rationale? Given that the majority of comments show the most petty kind of scientific criticism, can there be any doubt that the intent often is to pillory, to do so publicly and without accountability?

#### **Vigilant Scientists**

PubPeer Blog (2015) - 16 Comments

#1 Peer 0 commented 2 years ago

In an editorial entitled "Vigilante science", the editor-in-chief of Plant Physiology, Michael Blatt, makes the hyperbolic claim that anonymous post-publication peer review by the PubPeer community represents the most serious threat to the scientific process today.

We obviously disagree. We believe a greater problem, which PubPeer can help to address, is the flood of low-quality, overinterpreted and ultimately unreliable research being experienced in many scientific fields, but especially in life sciences. In a famous paper (1), John Joannidis explained how a

