

Finding Balance When Dealing with Allegations

MONICA BRADFORD, EXECUTIVE EDITOR

Science

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Redesign fail

We lost our statements highlighting retractions when we moved to a new design and platform in January 2016.

We thought we had fixed all of the past cases. Clearly we haven't

Still appears on the PDF version but does not appear on the HTML version

RETRACTED 26 OCTOBER 2007; SEE LAST PAGE

REPORTS

lele, Vang is recruited to the boundary between wild-type and mutant cells, whereas substantially less Vang is recruited to those boundaries in cells adjoining clones of the nonautonomous fz^{232} allele (Fig. 4C, arrowheads). Thus, $Fz^{nonautonomous}$ proteins recruit Vang to the opposing cell surface, whereas nonautonomous alleles do not. The second prediction is that autonomous Fz proteins should fail to recruit Dsh. Indeed, we find that both are substantially impaired in Dsh recruitment, though somewhat less impaired than the very strong, nonautonomous fz^{232} allele (Fig. 4D). Thus, strong fz alleles, many of which fail to accumulate Fz protein (27), display no or severely impaired interaction with Dsh and Vang, whereas autonomous alleles have impaired interaction with Dsh, but retain substantial ability to recruit Vang to the adjacent membrane. Notably, simulated overexpression of Fz with impaired Dsh interaction also produced the correct polarity disruption in cells proximal to the clones [fig. 9; (17)].

The Dsh¹ protein produces nearly autonomous clones, and it carries a mutation in its DEP domain, which is required for membrane localization (16, 19); autonomous fz alleles bear point mutations in the first cytoplasmic loop (27), suggesting these mutations may affect the same interaction. A low affinity interaction between the Dsh PDZ domain and a sequence in the cytoplasmic tail of Fz has been demonstrated (31). Our data suggest that sequences in the Dsh DEP domain, and in the Fz first intracellular loop, are also important for Dsh membrane association. Thus, a regulated, bipartite, high affinity association of Dsh with Fz may be selectively disrupted in $fz^{nonautonomous}$ alleles.

The ability of our mathematical model to simultaneously reproduce all of the most characteristic PCP phenotypes (table S2) demonstrates the feasibility of the underlying biological model as a PCP signaling mechanism. Further, the mathematical model demonstrates how the overall scheme of the model—a local feedback loop between adjacent cells amplifying an initial asymmetry—can explain the autonomous and nonautonomous behavior of

plex behaviors it was hypothesized to explain and to explore the implications of variations in the model.

References and Notes

1. P. N. Adler, *Dev. Cell* 2, 525 (2002).
2. D. R. P. Tree, D. Mts, J. D. Axelrod, *Semin. Cell Dev. Biol.* 13, 217 (2002).
3. J. Taylor, N. Abramova, J. Charlton, P. N. Adler, *Genetics* 150, 199 (1998).
4. T. Wolff, G. M. Rubin, *Development* 125, 1149 (1998).
5. D. Gubb, A. Garcia-Bellido, *J. Embryol. Exp. Morphol.* 68, 37 (1982).
6. C. R. Vimon, P. N. Adler, *Nature* 329, 549 (1987).
7. G. Struhl, D. A. Barbash, P. A. Lawrence, *Development* 124, 2155 (1997).
8. M. Wehrli, A. Tomlinson, *Development* 125, 1421 (1998).
9. P. A. Lawrence, J. Casal, G. Struhl, *Development* 126, 2441 (1999).
10. P. N. Adler, J. Taylor, J. Charlton, *Mech. Dev.* 96, 197 (2000).
11. D. Strutt, R. Johnson, K. Cooper, S. Bray, *Curr. Biol.* 12, 813 (2002).
12. P. A. Lawrence, J. Casal, G. Struhl, *Development* 129, 2749 (2002).
13. M. Fanto *et al.*, *Development* 130, 763 (2003).
14. M. P. Zeidler, N. Perrimon, D. I. Strutt, *Genes Dev.* 13, 1342 (1999).
15. P. A. Lawrence, J. Casal, G. Struhl, *Development* 131, 4651 (2004).
16. J. D. Axelrod, *Genes Dev.* 15, 1182 (2001).
17. D. I. Strutt, *Mol. Cell* 7, 367 (2001).
18. D. R. P. Tree *et al.*, *Cell* 109, 371 (2002).
19. J. D. Axelrod, J. R. Miller, J. M. Sulman, R. T. Moon, N. Perrimon, *Genes Dev.* 12, 2610 (1998).
20. D. Gubb *et al.*, *Genes Dev.* 13, 2315 (1999).

21. R. Bestock, H. Strutt, D. Strutt, *Development* 130, 3007 (2003).
22. C. Yang, J. D. Axelrod, M. A. Simon, *Cell* 108, 675 (2002).
23. D. Mts, C. H. Yang, H. McNeill, M. A. Simon, J. D. Axelrod, *Nature* 421, 543 (2003).
24. J. Casal, G. Struhl, P. Lawrence, *Curr. Biol.* 12, 1189 (2002).
25. M. Harms, F. Feigain, C. P. Heisenberg, S. Eaton, *Development* 129, 3493 (2002).
26. H. Strutt, D. Strutt, *Dev. Cell* 3, 851 (2002).
27. K. H. Jones, J. Liu, P. N. Adler, *Genetics* 142, 205 (1996).
28. A. M. Turing, *Philos. Trans. R. Soc. London B Biol. Sci.* 237, 37 (1952).
29. P. N. Adler, personal communication.
30. K. Amoslovskian, unpublished observations.
31. H. C. Wong *et al.*, *Mol. Cell* 12, 1251 (2003).
32. This work was supported by the Defense Advanced Research Projects Agency BioInfoMicro (C.J.T.) and BioCamp (C.J.T. and J.D.A.) Programs, Stanford's Bio-X IP (J.D.A. and C.J.T.), NIH R01-GM59823 (J.D.A.), a National Defense Science and Engineering Graduate fellowship (K.A.), a Burt and Deedee McMurtry Stanford Graduate Fellowship (K.A.) and a PHS grant awarded by the National Cancer Institute, DEHS (W.-S.C.). We thank H. McAdams for the initial suggestion of the problem and R. Ghosh for contributions to the mathematical model.

Supporting Online Material

www.sciencemag.org/cgi/content/full/307/5708/423/DC1
Materials and Methods
SOM Text
Figs. S1 to S16
Tables S1 and S2
References and Notes

21 September 2004; accepted 29 November 2004
10.1126/science.1105471

Visfatin: A Protein Secreted by Visceral Fat That Mimics the Effects of Insulin

Atsunori Fukuhara,^{1,2*} Miorihiro Matsuda,^{1*} Masako Nishizawa,^{2*} Katsumori Segawa,¹ Masaki Tanaka,¹ Kae Kishimoto,³ Yasushi Matsuki,³ Mirei Murakami,⁴ Tomoko Ichisaka,⁴ Hiroko Murakami,³ Ejjiro Watanabe,³ Toshiyuki Takagi,¹ Megumi Akiyoshi,³ Tsuguteru Ohtsubo,³ Shinji Kihara,⁵ Shizuya Yamashita,⁵ Makoto Makishima,¹ Tohru Funahashi,⁵ Shinya Yamanaka,⁴ Ryuji Hiramatsu,³ Yuji Matsuzawa,⁶ Iichiro Shimomura^{1,5,7,†}

Fat tissue produces a variety of secreted proteins (adipocytokines) with important roles in metabolism. We isolated and identified a lipocalin-

Lessons we learned in 2006 from Hwang

- Supporting online data needs thorough scrutiny. Can be the “smoking gun” that points to suspicious data.
- Are there “risk factors” that can help identify papers that should receive an even higher level of scrutiny?
 - Multi-disciplinary
 - Result that was “hoped for” or too good to be believed
 - Multiple labs and multiple countries
 - Fast turn around on additional experiments/data

Changes to Policies

- E-mail message to every co-author upon submission of paper
- New author forms signed prior to acceptance by all authors
- Senior author takes responsibility for data sets
- All revised manuscripts screened for image manipulation.
- Statement in Information for Authors about figure processing

Speed, Transparency, & Due Process?

- Our approach to Retractions has changed over time
 - Pressure from social media and mainstream press
 - More experience on our part
 - Motivated to uphold our standards and to provide transparency
- Editorial Expression of Concern used to alert the reader and research community while allowing time for the process to proceed.
- Prefer author retraction or institutional retraction. We will editorially retract when deemed necessary.

Science's experience with Retractions

- Six Editorial Retractions across 3 Editor-in-Chiefs
- 2015 Expression of Concern is related to a paper still being investigated by Imperial College after Pubpeer published a thorough critique– we originally published a correction.
- ~24 retractions involved an institutional investigation -- US, Spain, Korea, Singapore, UK institutions

	Ed Ex of Concerns	Retractions
2010 - 2016	9	19
2000- 2009	3	35
1990-1999	0	10

Quick to retract

Bruce Alberts tried to push for more once the investigation was complete. Civil service laws in Spain did not support a finding of misconduct

Reactome Array: Forging a Link Between Metabolome and Genome

E Ana Beloqui^{1,*}, María-Eugenia Guazzaroni^{1,*}, Florencio Pazos², José M. Vieites¹, Marta Godoy², Olga V. Golyshina³, Tatyana N. Chernikova³, Agnes Waliczek³, Rafael Silva-Rocha², Yamal Al-ramahi¹, Violetta I Cono⁴, Carmen Mendez⁵, José A. Salas⁵, Roberto Solano², Michail M. Yakimov⁴, Kenneth N. Timmis^{3,6}, Peter N. Golyshin^{3,7,8,††}, Manuel Ferrer^{1,††}

+ Author Affiliations

†To whom correspondence should be addressed. E-mail: mferrer@icp.csic.es (M.F.); p.golyshin@bangor.ac.uk (P.N.G.)

Science 09 Oct 2009:
Vol. 326, Issue 5950, pp. 252-257
DOI: 10.1126/science.1174094

Article

Figures & Data

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This article has been retracted. Please see:

[Is retracted by - November 12, 2010](#)

Published Online 3 March 2008

Science 7 March 2008:

Vol. 319 no. 5868 p. 1335

DOI: 10.1126/science.1157223

Editorial Expression of Concern

In the 1 July 2005 issue, Science published the Report “A magnetic nanoprobe technology for detecting molecular interactions in live cells” by J. Won et al. (1). Professor Gyun Min Lee, Chair, The Internal Investigation Committee, Department of Biological Science, Korea Advanced Institute of Science and Technology (KAIST), notified Science on 28 February 2008 that this article, published by Professor Tae-Kook Kim and his co-workers, is being investigated along with a paper published in Nature Chemical Biology (2). The correspondence from Professor Lee states that, although the formal investigation has not yet been completed, “our initial investigative results are strong enough to convince us that the two papers do not contain any scientific truth.”

Science is publishing this Editorial Expression of Concern to alert our readers to the fact that serious questions have been raised about the validity of the findings in the Won et al. paper. We are working with the authors and KAIST to determine appropriate next steps.

Don Kennedy and Bruce Alberts

RETRACTION

Retraction

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Bruce Alberts

Science 24 Apr 2009:
Vol. 324, Issue 5926, pp. 463
DOI: 10.1126/science.324.5926.463-a

Article

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Science has received the results of the Kaist Research Integrity Committee Investigation of the Report published in *Science* by J. Won *et al.* (1). According to an English translation commissioned by *Science*, the committee found that the original data underlying the experiments reported in *Science* are not available and that many of the results in the paper were fabricated. Therefore, the data, results, and conclusions in the Won *et al.* Report are clearly not reliable, and *Science* is hereby retracting the paper.

Reference

1. ↗ J. Won *et al.*, *Science* **309**, 121 (2005). [Abstract/FREE Full Text](#)

RETRACTION

Editorial retraction

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Science 20 Feb 2015:
Vol. 347, Issue 6224, pp. 834
DOI: 10.1126/science.347.6224.834-a

Article

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On 27 June 2014, *Science* published an Editorial Expression of Concern about the Report “Unclicking the click: Mechanically facilitated 1,3-dipolar cycloreversions” by J. N. Brantley *et al.* (1). After concerns were raised in an e-mail to the editors from a reader, the corresponding author supervised a comprehensive evaluation of all data presented in the original manuscript by tracing all figures back to their raw data files. In over 50% of the figure parts, the authors deemed the data unreliable due to uncertainty regarding the origin of data or the manner in which the data were processed. The University of Texas at Austin conducted a confidential investigation and shared the conclusion that scientific misconduct had occurred, but provided no further detail of the nature of the misconduct. After the conclusion of the investigation, authors Bielawski and Brantley volunteered to withdraw the paper; it has not been possible to contact author Wiggins. *Science* is therefore retracting the paper.

Report

RNA-Mediated Metal-Metal Bond Formation in the Synthesis of Hexagonal Palladium Nanoparticles

Lina A. Gugliotti, Daniel L. Feldheim*, Bruce E. Eaton*

To whom correspondence should be addressed.

E-mail: bruce_eaton@ncsu.edu (B.E.E.),
dan_feldheim@ncsu.edu (D.L.F.)

Science 07 May 2004:

Vol. 304, Issue 5672, pp. 850-852

DOI: 10.1126/science.1095678

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Response to E-Letter Concerning Study by Gugliotti et al.

Lina A. Gugliotti



Other Contributors:

Daniel L. Feldheim, Bruce E. Eaton



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26 September 2008

The E-Letter by Leonard et al. (1) presents an incomplete view of the chemistry of $\text{Pd}_2(\text{DBA})_3$ and the role of RNA in nanocrystals grown from aqueous solutions of $\text{Pd}_2(\text{DBA})_3$. Citing a materials safety data sheet (MSDS), the authors purport that $\text{Pd}_2(\text{DBA})_3$ is "completely insoluble" in water (...)

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Conflict of Interest:

None declared.

E-Letter Concerning Study by Gugliotti et al.

Donovan N. Leonard

Other Contributors:

Gerd Duscher, Stefan Franzen

26 September 2008

The article entitled "RNA-Mediated Metal-metal Bond Formation in the Synthesis of Palladium Nanoparticles" reports the formation of crystalline Pd hexagonal particles mediated by pyridine-modified RNA cognates in an aqueous solution using $\text{Pd}_2(\text{DBA})_3$ as the precursor (1). The role of RNA in this process is unclear since $\text{Pd}_2(\text{DBA})_3$ is completely in...

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[Editorial retraction](#)**SIMILAR ARTICLES IN:**

Thank you for your valuable assistance in providing information relevant to the research misconduct allegation involving a publication in *Science*. NSF has taken final action in this matter, and we have closed the case.

You may obtain a copy of the publicly-available closeout memorandum for this matter by submitting a Freedom of Information Act (FOIA) request. You can find guidance on FOIA procedures at [nsf.gov/oig/foia.jsp](https://www.nsf.gov/oig/foia.jsp). Please do not include any personal identifiers such as names of individuals or NSF award numbers.

I can be contacted at 703-292-4569 or at kbusch@nsf.gov.

Sincerely,

Kenneth L. Busch, Ph.D.
Senior Investigative Scientist

Editorial expression of concern

Marcia McNutt, Editor-in-Chief

Science 22 Jan 2016:
Vol. 351, Issue 6271, pp. 348
DOI: 10.1126/science.351.6271.348-a

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On 7 May 2004, Science published the Report “RNA-Mediated Metal-Metal Bond Formation in the Synthesis of Hexagonal Palladium Nanoparticles” by Lina A. Gugliotti, Daniel L. Feldheim, and Bruce E. Eaton (**1**). An investigation by the U.S. National Science Foundation’s (NSF’s) Office of Inspector General determined that the authors falsified research data published in the paper. Although the NSF did not find that the authors’ actions constituted misconduct, it nonetheless concluded that they “were a significant departure from research practices” (**2**). Science is working with the authors to understand their response to the NSF final ruling. Depending on the outcome of this discussion, Science will issue either a Retraction or a (further) correction to the paper, as allowed under the NSF ruling. In the meantime, this Editorial Expression of Concern serves to alert readers to the conclusions of the investigation.

References

1. ↗ L. A. Gugliotti, D. L. Feldheim, B. E. Eaton, *Science* **304**, 850 (2004). [Abstract/FREE Full Text](#)
2. ↗ NSF Office of Inspector General, Closeout Memorandum (www.nsf.gov/oig/case-closeout/A06110054.pdf).

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Editorial retraction

Marcia McNutt, Editor-in-Chief

Science 05 Feb 2016:
Vol. 351, Issue 6273, pp. 569
DOI: 10.1126/science.351.6273.569-a

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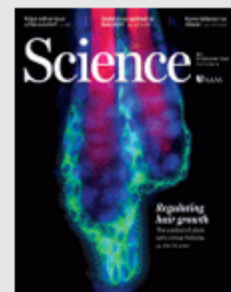
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On 7 May 2004, Science published the Report “RNA-mediated metal-metal bond formation in the synthesis of hexagonal palladium nanoparticles” by Lina A. Gugliotti, Daniel L. Feldheim, and Bruce E. Eaton (1). After an investigation by the U.S. National Science Foundation's (NSF's) Office of Inspector General, NSF did not find that the authors' actions constituted misconduct. NSF nonetheless concluded that they “were a significant departure from research practices” and “a misrepresentation of data on which a conclusion was based” (2). In response to the NSF ruling, author Feldheim sent wording for a correction to Science. However, the Editors do not think a correction is appropriate given the concerns raised by the Inspector General's report about what evidence was available to support the authors' assertions at the time the paper was published. Hence, Science is issuing this Retraction instead. Author Gugliotti could not be reached for her concurrence in this matter. Authors Feldheim and Eaton do not agree to this Retraction.

References

1. ↗ L. A. Gugliotti, D. L. Feldheim, B. E. Eaton, *Science* **304**, 850 (2004). [Abstract/FREE Full Text](#)
2. ↗ NSF Office of Inspector General, Closeout Memorandum (www.nsf.gov/oig/case-closeout/A06110054.pdf)



Science

Vol 351, Issue 6273
05 February 2016

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1. Findings of misconduct will always be difficult judgement calls when the case actually reduces to whether the researchers involved followed what the community would consider to be "accepted standards of practice" (as opposed to outright falsification of findings).
2. In this particular instance, some university officials and some agency officials (e.g., NSF IG's office) felt that the alleged negligence in the supervision of the work of the graduate student rose to the level of research misconduct.
3. The NSF Director's office ruled ultimately that while the work was sloppy, the behavior did not rise to the level of misconduct.
4. Science's decision to retract the paper was not based on issues surrounding the guilt or innocence of the senior PIs with respect to misconduct, but rather was in our opinion the best approach to ensure that the scientific record accurately reflected the state of the science. The authors' work published in Science was irreproducible, and even with the e-letter exchange, was still not reproducible. The PIs later published a paper in another journal using a different method that is reproducible. The view of the editors of Science was that the later paper should take precedent for the finding and be the cited article, not the flawed Science

What might have been different

- Franzen believed that something was wrong with the results but his initial explanation was not completely right.
- The rejection by peer reviewers of the Technical Comment and Response colored our perceptions. E-letter and E-responses seemed like a good compromise at the time.
- Eaton's belief in the potential of the result may have prevented him from correcting the record and moving on.
- Became personal – semantics at play.

What if...

- We had published a formal correction instead of the E-letter exchange. Most likely would do that today.
- We had received the first NC-State letter instead of the milder version.
- Had heard more from the institutions along the way. Often heard from Franzen or the press first.









“It’s a very delicate situation when a senior scholar makes a move to look at a junior scholar’s data set,” Dr. Green said. “This is his career, and if I reach in and grab it, it may seem like I’m boxing him out.”

But Dr. Ivan Oransky, A co-founder of “Retraction Watch,” which [first published news](#) of the allegations and Dr. Green’s retraction request, said, “At the end of the day he decided to trust LaCour, which was, in his own words, a mistake.”

Critics said the intense competition by graduate students to be published in prestigious journals, weak oversight by academic advisers and the rush by journals to publish studies that will attract attention too often led to sloppy and even unethical research methods.

Our policy should have helped Green

The senior author from each lab or group must answer this question:

I have personally checked all the original data that was generated by my lab or group:

Yes Not applicable; I am not the senior author or lab head.

If yes, these data are presented in these figures and tables (including the Supporting Online Material):

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LETTERS

Editorial expression of concern

Marcia McNutt

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Science 05 Jun 2015:
Vol. 348, Issue 6239, pp. 1100
DOI: 10.1126/science.aac6184

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In the 12 December 2014 issue, Science published the Report “When contact changes minds: An experiment on transmission of support for gay equality” by Michael J. LaCour and Donald P. Green (1). On 19 May 2015, author Green requested that Science retract the paper because of the unavailability of raw data and other irregularities that have emerged in the published paper. Science is urgently working toward the appropriate resolution, while ensuring that a fair process is followed. In the meantime, Science is publishing this Editorial Expression of Concern to alert our readers to the fact that serious questions have been raised about the validity of findings in the LaCour and Green paper.

Reference

1. LaCour, M. J. & Green, D. P. Science **346**, 1366 (2014). [Abstract/FREE Full Text](#)

Editor's note

Marcia McNutt

+ Author Affiliations

Science 05 Jun 2015:
Vol. 348, Issue 6239, pp. 1100
DOI: 10.1126/science.348.6239.1100-a

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Article

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This article has been retracted. Please see:

[Related - June 05, 2015](#)

On 20 May, in response to questions about the validity of the methods and data in the 2014 Report by M. J. LaCour and D. P. Green, Science published online an Editorial Expression of Concern on the Report. On 28 May, Science released online an Editorial Retraction of the paper. Articles first published online are typically published in print a few weeks after online posting. Because of the rapid chain of events in this case, both the Editorial Retraction and the Editorial Expression of Concern are printed here. The Editorial Retraction is Science's final decision on this paper and supersedes the earlier Editorial Expression of Concern.

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Science, with the concurrence of author Donald P. Green, is retracting the 12 December 2014 Report “When contact changes minds: An experiment on transmission of support for gay equality” by LaCour and Green (1).

The reasons for retracting the paper are as follows: (i) Survey incentives were misrepresented. To encourage participation in the survey, respondents were claimed to have been given cash payments to enroll, to refer family and friends, and to complete multiple surveys. In correspondence received from Michael J. LaCour's attorney, he confirmed that no such payments were made. (ii) The statement on sponsorship was false. In the Report, LaCour acknowledged funding from the Williams Institute, the Ford Foundation, and the Evelyn and Walter Haas Jr. Fund. Per correspondence from LaCour's attorney, this statement was not true.

In addition to these known problems, independent researchers have noted certain statistical irregularities in the responses (2). LaCour has not produced the original survey data from which someone else could independently confirm the validity of the reported findings. Michael J. LaCour does not agree to this Retraction.

References

1. ↗ M. J. LaCour, D. P. Green, *Science* **346**, 1366 (2014). [Abstract/FREE Full Text](#)
2. ↗ D. Broockman, J. Kalla, P. Aronow, Irregularities in LaCour (2014) (2015); http://stanford.edu/~dbroock/broockman_kalla_aronow_lg_irregularities.pdf.

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Nov 2015	344	68
Dec 2015	580	40
Jan 2016	427	38
Feb 2016	227	23

Due process in the Twitter age

Until recently, the only insight that the research community had into published papers that might be suspect, and thus candidates for retraction, was through the formal investigations by institutions or funders and the official announcements made by journals. Today, online communities such as PubPeer and Retraction Watch could be the first to raise an alert that a paper may require additional scrutiny. The involvement of such online entities has made the standardization of processes to address allegations more complex and has led to less patience from the scientific community and the public with what are often long timelines in institutional misconduct investigations. Editors are caught in the middle: They want to correct the literature as quickly as possible to avoid misleading readers with flawed information, but they also want to ensure that authors have received due process, even as rumors of scientific misconduct may be amplified through social media. Last month, a Journals Summit convened by the U.S. National Academy of Sciences tackled this topic in the larger context of research integrity, and several solutions emerged.

Journals have their own requirements for author certification of the openness, transparency, and quality of a research paper and can take preemptive action to retract papers if the authors falsify those certifications, even before misconduct investigations have concluded. One example provided was a paper retracted based on lack of availability of the data, falsification of funding sources, and misrepresentation of approval by an institutional review board. In situations where a journal lacks authority to act, but preliminary evidence suggests that a paper will need to be retracted, an “editorial expression of con-

cern” can suitably alert the community that the results may be suspect, without the journal taking irreversible action. Although the summit attendees agreed that only institutions had the necessary access to conduct investigations, those institutions would benefit from the involvement and oversight of an experienced, independent party with no conflict of interest in the matter to speed up the process and ensure a quality outcome. Many participants felt that the stigma of having a retraction is so great that it might discourage authors from removing papers that are flawed because of honest

errors. Finding some other terminology for such situations would help clean up the literature and reward good behavior.

Should there be a statute of limitation on retractions? Two panelists had experiences as editors with requests to retract papers that were published more than 50 years ago. This clearly raises the question of due process. None of the authors were alive to respond to the charges of misconduct. Only incomplete records survived regarding how decisions about those papers were made. The requests were declined. Although panelists did not come up with a fixed amount of time beyond which a paper would be too old to retract, consideration of a paper’s current influence and whether evidence exists to provide due process

should weigh into the course of action in such cases.

Editors are often caught in the crossfire between impatient readers who may reach conclusions about the validity of misconduct allegations on the basis of incomplete information online, and authors who are concerned about damage to their reputation. In the final analysis, the editor’s paramount concern should be for the integrity of the scientific record.

— Marcia McNutt



“...rumors of scientific misconduct may be amplified through social media.”



Marcia McNutt
Editor-in-Chief
Science Journals

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PHOTOS (LEFT) © GUYA U. STRONAWA/SHUTTERSTOCK; (TOP) JENNEY FORT AND PHOCCOMANY

Finding smooth sailing

- “Today, online communities such as PubPeer and Retraction Watch could be the first to raise an alert that a paper may require additional scrutiny. The involvement of such online entities has made the standardization of processes to address allegations more complex and has led to less patience from the scientific community and the public with what are often long timelines in institutional misconduct investigations. Editors are caught in the middle: They want to correct the literature as quickly as possible to avoid misleading readers with flawed information, but they also want to ensure that authors have received due process, even as rumors of scientific misconduct may be amplified through social media.”

“An editor's paramount concern should be for the integrity of the scientific record.”

- “Journals have their own requirements for author certification of the openness, transparency, and quality of a research paper and can take preemptive action to retract papers if the authors falsify those certifications, even before misconduct investigations have concluded.”
- “Although the summit attendees agreed that only institutions had the necessary access to conduct investigations, those institutions would benefit from the involvement and oversight of an experienced, independent party with no conflict of interest in the matter to speed up the process and ensure a quality outcome. Many participants felt that the stigma of having a retraction is so great that it might discourage authors from removing papers that are flawed because of honest errors. Finding some other terminology for such situations would help clean up the literature and reward good behavior.”
- Statue of Limitations?

My observations

- An investigation does not guarantee a clear, black & white answer at the end.
- Smart, dedicated, concerned individuals can reach different conclusions whether behaviors cross the line from sloppy/poor oversight to deliberate misconduct. How important is the word “deliberate” in this context?
- Behaviors occur along a continuum but our “labels” are more like endpoints.
- We need to work within an established legal framework that at times seems too lack nuance, flexibility.

Where do we start?

- Develop better communication mechanisms throughout the process – set frequency of updates. Transparency about the process: We are here now, next steps will be, and approximate time line.
- Need more guidance on when to alert an institution.
- Alternative ways to investigate that mitigate the institution's inherent conflict of interest.
- Come to a resolution about the purpose of the retraction statements and craft them to meet that purpose. Focus on fact-based statements about what can be trusted and built upon.
- Find another mechanism for community awareness of acceptable practice.

Big picture issues that worry me

- The incentives are working against our desired outcome at almost every point in the system.
- The potential gain from cutting corners can be hard to resist, particularly in the absence of lab practices that support the “rules.”
- Research moves quickly, technology and methods are complex, projects involve multiple labs, and can be international. Collaborators may be unaware of each others lab cultures or country standards/legal frameworks. What is “trust” built upon?