# The Wild West of Scientific Publishing: What We've Learned at Retraction Watch

Hong Kong University June 6, 2019

#### Ivan Oransky, MD

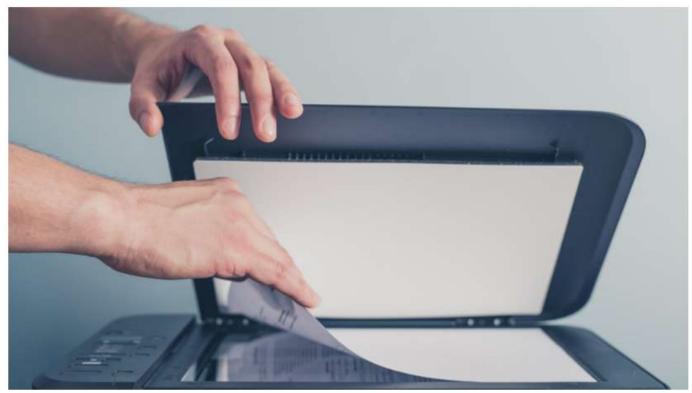
Co-Founder, Retraction Watch
Distinguished Writer In Residence, NYU (Journalism)
Vice President, Editorial, Medscape
@ivanoransky
@retractionwatch



# Stealing It

THE WATCHDOGS

# 'Dear plagiarist': A scientist calls out his double-crosser



APSTOCK



### Fake It 'Till You Make It

### **Retraction Watch**

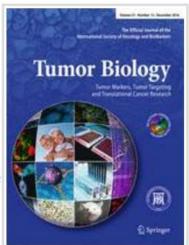
Tracking retractions as

A new record: Major publisher retracting more than 100 studies from cancer journal over fake peer reviews

with 16 comments

Springer is <u>retracting 107 papers</u> from one journal after discovering they had been accepted with fake peer reviews. Yes, 107.

To submit a fake review, someone (often the author of a paper) either makes up an outside expert to review the paper, or suggests a real researcher — and in both cases, provides a fake email address that comes back to someone who will invariably give the paper a glowing review. In this case, Springer, the publisher of *Tumor Biology* through 2016, told us that an investigation produced "clear evidence" the reviews were submitted under the names of real researchers with faked emails. Some of the authors may have used a third-party editing service, which may have supplied the reviews. The journal is now published by SAGE.



### Why We Launched Retraction Watch

# Why write a blog about retractions?

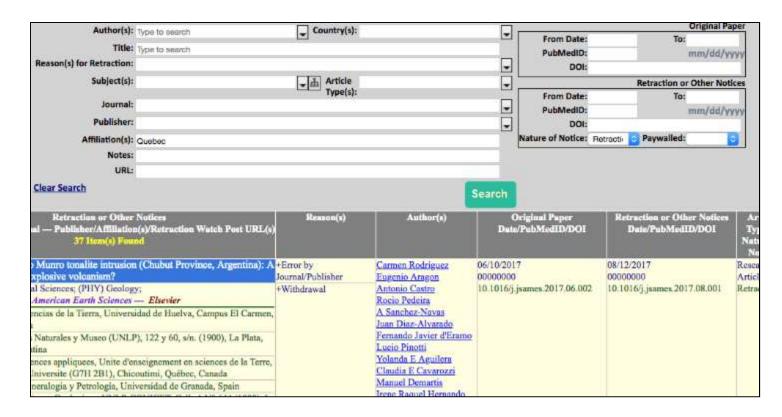


Post by Ivan Oransky and Adam Marcus

The unfolding drama of Anil Potti — a Duke researcher who <u>posed as a Rhodes Scholar</u> and appears to have invented key statistical analyses in a study of how breast cancer responds to chemotherapy — has sent rin-



### The Retraction Watch Database



retractiondatabase.org



## Retractions By The Numbers

Year	# of Retractions	# of Papers Published	%
2000	38	1MM	.004
2008	367	1.2MM	.031
2010	4863	1.4MM	.347*
2014	868	1.6MM	.054
2016	1418	1.8MM	.078

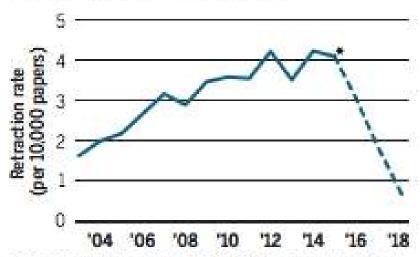
retractiondatabase.org



# Leveling Off?

### Retraction rate levels off

Although the number of retractions ballooned after 1997, the percentage of all papers retracted rose more slowly and leveled off after 2012.



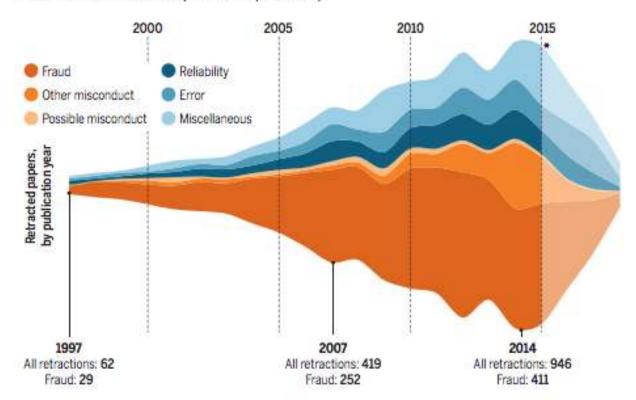
\*The rate appears to decline after 2015, but numbers are almost certainly incomplete because of delays in publication of retractions:



## Why Are Papers Retracted?

#### The burden of misconduct

The majority of retractions have involved scientific fraud (fabrication, falsification, and plagiarism) or other kinds of misconduct (such as fake peer review).





# Why Does It Take So Long?

Why did all of these retractions take more than three years?

Nearly two years after a university asked for retractions, two journals have done nothing

The waiting game: A university requests a retraction. Then it waits three years.



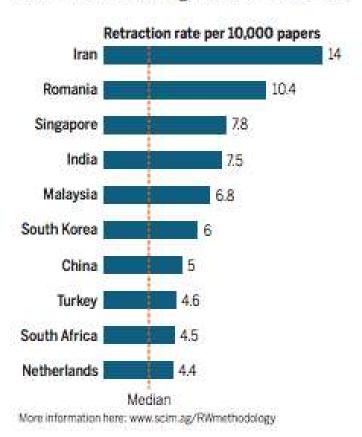
### Common Reasons for Retractions

- Duplication ("self-plagiarism")
- Plagiarism
- Image Manipulation
- Faked Data
- Fake Peer Reviews
- Publisher Error
- Authorship Issues
- Legal Reasons
- Not Reproducible



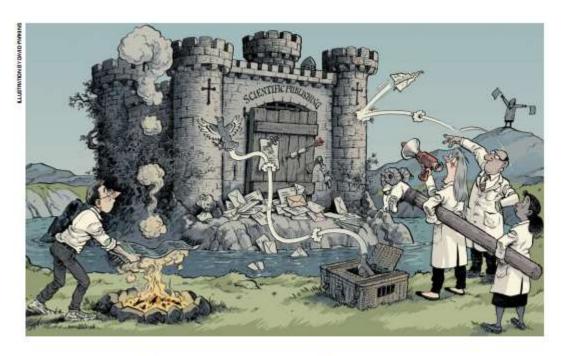
### Which Countries Retract Most?

#### Countries with the highest retraction rates





## Are We Catching Them All?



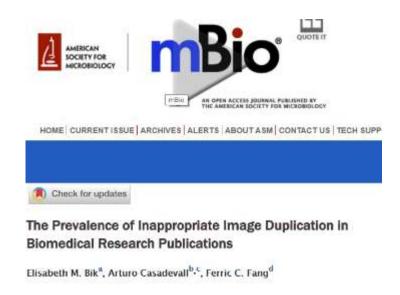
### A tragedy of errors

Mistakes in peer-reviewed papers are easy to find but hard to fix, report **David B**. **Allison** and colleagues.

Allison et al Nature 2016 http://www.nature.com/news/reproducibility-a-tragedy-of-errors-1.19264



# Are We Catching Them All?



"Overall, 3.8% of published papers contained problematic figures, with at least half exhibiting features suggestive of deliberate manipulation. The prevalence of papers with problematic images has risen markedly during the past decade."



### Who Retracts Most?

### The Retraction Watch Leaderboard

Who has the most retractions? Here's our unofficial list (see notes on methodology), which we'll update as more information comes to light:

- 1. Yoshitaka Fujii (total retractions: 183) See also: Final report of investigating committee, our reporting, additional coverage
- 2. Joachim Boldt (97) See also: Editors-in-chief statement, our coverage
- 3. Yoshihiro Sato (64) See also: our coverage
- 4. Diederik Stapel (58) See also: our coverage
- 5. Jun Iwamoto (54) See also: our coverage
- 6. Yuhji Saitoh (53) See also: our coverage
- 7. Adrian Maxim (48) See also: our coverage
- 8. Chen-Yuan (Peter) Chen (43) See also: SAGE, our coverage
- 9. Fazlul Sarkar (41) See also: our coverage
- 10. Hua Zhong (41) See also: journal notice





# How the Biggest Fabricator in Science Got Caught

Yoshitaka Fujii falsified 183 papers before statistics exposed him.

BY ADAM MARCUS & IVAN ORANSKY ILLUSTRATION BY LOUISA BERTMAN MAY 21, 2015



# What Happens to Retracted Papers' Citations?

# Retracted Publications in Biomedicine: Cause for Concern

John M. Budd, Zach C. Coble and Katherine M. Anderson

#### Abstract

Retractions of articles and citations to retracted work continue to be a cause for concern. In 1999, Budd et al. found 235 retracted publications in the biomedical literature for a 30-year period. Nearly 40% were retracted because of misconduct. The current study found 1,164 retracted articles in the 12-year period between 1997 and 2009. Of the 1,112 articles included for analysis, 55% were retracted for some type of misconduct. While this number represents a small minority of the total number of publications in biomedicine, it is still substantial, and the impact of the retracted works can be significant. In PubMed, notifications of retractions

error and (especially) misconduct, the current study is intended to alert information professions and information users about the challenges inherent in the literatures of many fields, particularly biomedicine.

#### Introduction

At times and for a variety of reasons, it can be necessary for a published article to be retracted. While retracted articles represent a small minority of all published articles, there is continued concern about the phenomenon of retraction. In a recent report in the Times Higher Education, Corbyn notes that the rate at which scientific articles are retracted has increased



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# Of 391 citations analyzed, only 6% acknowledge the retraction.

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### Do Journals Get the Word Out?

ISSN 2162-3309 10.7710/2162-3309.2199

RESEARCH

# Retracted Publications in Mental Health Literature: Discovery across Bibliographic Platforms

#### Caitlin Bakker

Biomedical/Research Services Liaison, University of Minnesota

### Amy Riegelman

Social Sciences Librarian, University of Minnesota

Journal of Librarianship and Scholarly Communication, January 8, 2018



### Do Journals Get the Word Out?

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RESEARCH

Of the 812 records for retracted publications, 40.0% (n=325) did not indicate that the paper had been retracted.

#### Amy Riegelman

Social Sciences Librarian, University of Minnesota

Journal of Librarianship and Scholarly Communication, January 8, 2018



### Post-Publication Peer Review On The Rise

Tracking retractions as

### Retraction Watch

### PubPeer strikes again: Leukemia paper retracted for image duplications

with 4 comments

In July, a PubPeer commenter called out a paper in *Biochimica et Biophysica Acta* for image duplication; by September, the paper was retracted for the exact reason detailed in the anonymous comment.

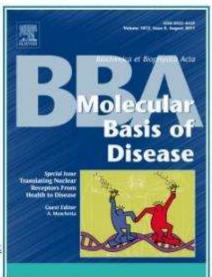
Here's the <u>notice</u> for "Effect of ST3GAL 4 and FUT 7 on sialyl Lewis X synthesis and multidrug resistance in human acute myeloid leukemia," a paper initially published in June:



This article has been retracted at the request of the authors. It contained several inappropriate—by processed and incorrect Figures. On behalf of all authors, the corresponding author has taken full responsibility and apologizes to the readers of BBA Molecular Basis of Disease for submitting and publishing the erroneous article and any inconvenience caused.

An anonymous PubPeer commenter compiled the following criticism (click here or on the picture below for a larger image):







### Post-Publication Peer Review On The Rise

"PubPeer was created specifically to bypass the suffocating and restricted channels of 'correspondence to the editors' and journal commenting. The tens of thousands of useful comments that users have posted on PubPeer were previously suppressed by that system, yet facilitated by an open framework encouraging factual discussion. We're not going back."

-- Brandon Stell, co-founder, PubPeer



# The Sleuths, aka 'Data Thugs'





### Whistleblowers to Watch

News > Medscape Medical News

# Meet the Whistleblower Who Just Cost Duke \$112.5 Million



Joseph Thomas



### Contact Info/Acknowledgements

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@retractionwatch

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