LAZY —

Top Harvard cancer researchers accused of scientific fraud; 37 studies affected

Researchers accused of manipulating data images with copy-and-paste.

BETH MOLE - 1/22/2024, 5:45 PM

Getty | Craig F. Walker

Enlarge / The Dana-Farber Cancer Institute in Boston.

The Dana-Farber Cancer Institute, an affiliate of Harvard Medical School, is seeking to retract six scientific studies and correct 31 others that were published by the institute's top researchers, including its CEO. The researchers are accused of manipulating data images with simple methods, primarily with copy-and-paste in image editing software, such as Adobe Photoshop.

The accusations come from data sleuth Sholto David and colleagues on PubPeer, an online forum for researchers to discuss publications that has frequently served to spot dubious research and potential fraud. On January 2, David posted on his research integrity blog, For Better Science, a long list of potential data manipulation from DFCI researchers. The post highlighted many data figures that appear to contain pixel-for-pixel duplications. The allegedly manipulated images are of data such as Western blots, which are used to detect and visualize the presence of proteins in a complex mixture.

FURTHER READING

All Science journals will now do an AI-powered check for image fraud

DFCI Research Integrity Officer Barrett Rollins told The Harvard Crimson that David had contacted DFCI with allegations of data manipulation in 57 DFCI-led studies. Rollins said that the institute is "committed to a culture of accountability and integrity," and that "every inquiry about research integrity is examined fully."

The allegations are against: DFCI President and CEO Laurie Glimcher, Executive Vice President and COO William Hahn, Senior Vice President for Experimental Medicine Irene Ghobrial, and Harvard Medical School professor Kenneth Anderson.

The Wall Street Journal noted that Rollins, the integrity officer, is also a co-author on two of the studies. He told the outlet he is recused from decisions involving those studies.

Amid the institute's internal review, Rollins said the institute identified 38 studies in which DFCI researchers are primarily responsible for potential manipulation. The institute is seeking retraction of six studies and is contacting scientific publishers to correct 31 others, totaling 37 studies. The one remaining study of the 38 is still being reviewed.

Of the remaining 19 studies identified by David, three were cleared of manipulation allegations, and 16 were determined to have had the data in question collected at labs outside of DFCI. Those studies are still under investigation, Rollins told The Harvard Crimson. "Where possible, the heads of all of the other laboratories have been contacted and we will work with them to see that they correct the literature as warranted," Rollins wrote in a statement.

Despite finding false data and manipulated images, Rollins pressed that it doesn't necessarily mean that scientific misconduct occurred, and the institute has not yet made such a determination. The "presence of image discrepancies in a paper is not evidence of an author's intent to deceive," Rollins wrote. "That conclusion can only be drawn after a careful, fact-based examination which is an integral part of our response. Our experience is that errors are often unintentional and do not rise to the level of misconduct."

The very simple methods used to manipulate the DFCI data are remarkably common among falsified scientific studies, however. Data sleuths have gotten better and better at spotting such lazy manipulations, including copied-and-pasted duplicates that are sometimes rotated and adjusted for size, brightness, and contrast. As Ars recently reported, all journals from the publisher Science now use an AI-powered tool to spot just this kind of image recycling because it is so common.

READER COMMENTS   136

BETH MOLE

Beth is Ars Technica's Senior Health Reporter. Beth has a Ph.D. in microbiology from the University of North Carolina at Chapel Hill and attended the Science Communication program at the University of California, Santa Cruz. She specializes in covering infectious diseases, public health, and microbes.

Reader Comments (136)

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Popular

(D) **dantheclamman** *Smack-Fu Master, in training*

1d   1

As a scientist, I feel this wouldn't happen if the motive was destroyed. Right now the scientists who get most rewarded with jobs, awards, and grants are those who find flashy, positive results. Which is a process of luck. Some decide to make their own luck, and we are left to determine their fraud through wasted efforts at replication. This would be undermined if we rewarded workers based on the quality of their research rather than results (which in my opinion will inevitably include negative results, because that's how science works). I say this as a worker who has published plenty of studies accepting the null, which I don't feel have received the same attention or acclaim as my studies where I accepted the alternative hypothesis (a positive result).

∧   468 (471 / -3)   Monday at 6:06 PM

Popular

(B) **bburdge** *Ars Tribunus Militum*

10y   2,277

> Rollins wrote. "That conclusion can only be drawn after a careful, fact-based examination which is an integral part of our response. Our experience is that errors are often unintentional and do not rise to the level of misconduct."

Yes, I often unintentionally copy and paste sections of images in critical work products; happens all the time...

/s for modern sensibilities.

∧   341 (345 / -4)   Monday at 5:53 PM

Popular

Unclebugs *Ars Tribunus Militum*

20y   2,327

The saddest part of all this is that is raises even more doubts about any science which plays into the hands of the loony tunes out there hawking anti-vaccine conspiracies. I look forward, sadly, to RFK Jr. citing this in his campaign literature.

∧   276 (290 / -14)   Monday at 5:59 PM

Popular

(D) **DorkboyDC** *Ars Centurion*

10y   306

> dantheclamman said: ↺
>
> As a scientist, I feel this wouldn't happen if the motive was destroyed. Right now the scientists who get most rewarded with jobs, awards, and grants are those who find flashy, positive results. Which is a process of luck.

As a fellow scientist, these are the most true words that will be written on the internet, today. Luck has **so much** to do with basic research. It's not good or bad... it is what it is.

∧   239 (240 / -1)   Monday at 6:17 PM

Popular

sarusa *Ars Tribunus Militum*

12y   2,759

Yeah, okay, at this point it's like Bill Cosby. One paper is a 'hmmmm', but there's no way you accidentally copied and pasted the wrong data in 57 different papers (even if a couple of them end up being inconclusive). Pretty crazy that it's apparently the whole institute, though. Including the 'Research Integrity Officer' [insert emoji for laughing while crying].
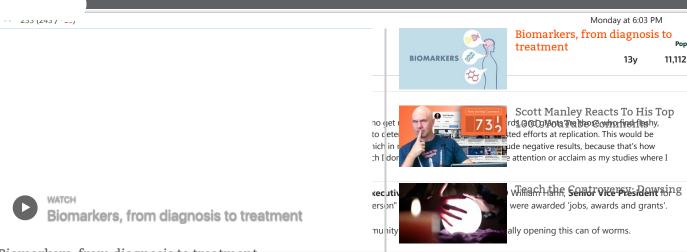
∧   233 (236 / -3)   Monday at 6:02 PM

Popular

FlameOfUdun *Ars Praetorian*

10y   502

> klarg said: ↺
>
> Seems Harvard is a world leader in both plagiarism and fraud!

Don't forget it... imary output of sociopaths - thank you School of Business!

Monday at 6:03 PM

Scott Manley Reacts To His Top

who get ... rds ... to dete... which in r... ch I don...

ude negative results, because that's how ...e attention or acclaim as my studies where I

Teach the Controversy: Dowsing

...ecutiv... William Hahn, **Senior Vice President** for ...erson" ... were awarded 'jobs, awards and grants'.

...munity ...ally opening this can of worms.

▶ **WATCH**
Biomarkers, from diagnosis to treatment

Monday at 6:17 PM

Biomarkers, from diagnosis to treatment
226 (227 / -1)
To find cancer before it strikes, look for the molecular clues

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Popular

(L) **LesDawg** *Ars Tribunus Militum*   7y   1,937

"all journals from the publisher Science now use an AI-powered tool to spot just this kind of image recycling *because it is so common."*

I guess I'd take exception to the statement that AAAS (the publisher of Science, and America's oldest and largest scientific society) is now monitoring for image manipulation

Related Stories

because it is "so common." I rather think (speaking as a past editorial employee of Science and an elected Fellow of AAAS) that the organization is now using tools to look ... because it (undeniably) happens sometimes, and sometimes is too often. But I feel like the choice of the words "so common" tends to suggest rampant fraud which, certainly at the level of top research journals like *Science* and *Nature,* there is no evidence of.

Scientists are people. Some people cheat. Law enforcement (or in this case, editorial enforcement) is meant to make those bad apples think twice before even trying it. Enforcement is every bit as appropriate in science as it is in accounting, on highways, in police departments, in elections, and anywhere else that even low levels of cheating must be unacceptable.

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183 (185 / -2)   Monday at 6:37 PM

Popular

(K) **klarg** *Ars Scholae Palatinae*   9y   1,347

Seems Harvard is a world leader in both plagiarism and fraud!

Today on Ars

164 (218 / -54)   Monday at 5:59 PM

Popular

(Q) **quamquam quid loquor** *Ars Tribunus Militum*   6y   2,009

> jnuneznj said: ↩
>
> There is a certain news outlet whose common saying is "I should know I went to Harvard..." add that and a ton of other scams (finance and political) and I have to say that if I had "Harvard" on my degree I would start thinking of leaving it off any resume.

Harvard undergrad helps a lot in almost every context. It's life changing, which is an indictment of it as well; It highly suggests the gate keepers to the university dramatically shape society, especially with legacy admissions.

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146 (150 / -4)   Monday at 6:09 PM

Popular

(B) **Bigdoinks** *Ars Scholae Palatinae*   5y   604

> The Wall Street Journal noted that Rollins, the integrity officer, is also a co-author on two of the studies. He told the outlet he is recused from decisions involving those studies.

Really Rollins? How about recusing yourself from all of them? If these accusations are true, these researchers didn't just commit scientific fraud, they defrauded the taxpayers through NSF funding and almost certainly defrauded families of victims of cancer through private donation/fundraising. This shouldn't be an academic integrity proceeding, everyone involved should be picked up and arraigned on federal fraud charges.

Last edited: Monday at 7:28 PM

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90 (93 / -3)   Monday at 7:18 PM

C **ChefJeff789** *Ars Scholae Palatinae*

6y 1,235

> first_citazen said: ↩
>
> which data is trustworthy? Now we have to rely to AI which doesn't have a great track record either, to tell us what research to trust?

Some caution is warranted, but with the flood of AI-generated everything it's only sensible to try and leverage the same tools to help fight it

∧ 88 (91 / -3)   Monday at 5:58 PM

P **prc117f** *Ars Tribunus Militum*

17y 1,896

> klarg said: ↩
>
> Seems Harvard is a world leader in both plagiarism and fraud!

The difference between Ivy League and regular schools is you pay a lot more for the connections. If pure education and learning is your goal then a regular state university is more than fine.

∧ 84 (86 / -2)   Monday at 7:33 PM

FlameOfUdun *Ars Praetorian*

10y 502

> AndrewZ said: ↩
>
> These guys scrutinize a lot of studies: Data Colada

🎶 If you like Data Coladas 🎵... (sorry, couldn't resist)

∧ 81 (89 / -8)   Monday at 6:22 PM

DarthSlack *Ars Tribunus Angusticlavius*

9y 17,581

> plugh said: ↩
>
> If someone manipulated an image with Photoshop, obviously a problem. On the other hand, accidentally using the wrong Western Blot image could be a writeup mistake. I haven't done any work like that, but I have seen Western Blots and It would take some really careful study to identify one versus another. Many research projects probably collects hundreds or even thousands of Western Blots, and IDing the relevant ones to include in a paper could be mistake-prone. There is a reason computers analyze data like this.

Go have a look at the first link to the actual data that's being withdrawn. There's no way that many duplications are an accident or a writeup mistake. Someone took some time to assemble those images.

∧ 78 (78 / 0)   Monday at 6:56 PM

FerociousLabRetriever *Ars Centurion*

1y 273

> Soriak said: ↩
>
> A big problem in academia is that fraud pays off. You can get tenure or large grants on the basis of fabricated results and the odds you get caught are low, especially in fields where people don't share data. If you do get caught, the penalties are often laughable: the paper gets retracted, but your tenure does not. In egregious cases, people have been banned from applying for federal grants for two years, but they got to keep the grant funding they fraudulently obtained.
>
> It's crazy to think that there wouldn't be rampant fraud with these incentives and the present lack of enforcement. We now request data from finalist candidates for assistant professor positions and found data irregularities that the candidates can't explain. These people get hired by good universities (that are perhaps more trusting or more willing to look away), and I don't buy for a moment that they only happened to cheat the one time we caught them. But when your options are unemployment or a $200k/year job and all you need to do is change some data in a spreadsheet... pretty tempting.

I really can't emphasize this enough. The top journals in most fields have absurdly high standards--typically seeking a mix of fabulous theory, best practice in methods, and perfect results. It's a difficult trifecta, and massaging data is the easiest way for the unscrupulous save a study. Then consider that these top academic jobs are obscenely selective, so they are looking exclusively at the outlier applicants--those who may be most likely to be cheating.

Just consider that most public cases of academic fraud are for outright, almost laughably pathetic attempts at fraud. What about those with actual brain cells who trim a few inconvenient cases or change a few cases to get the desired results?

In my field, a couple of top journal papers is the difference between a nice 2-1 or 2-2 teaching load and $250,000 salary + grants + expense accounts + + + + +, and

teaching at a 3-3 or 4-4 college with half the salary and limited perks. That's a huge incentive to cheat.

I like to look at myself in the mirror, so several of my publications are middle-tier failures to replicate major studies. As I joke to my wife, integrity is very expensive.

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72 (72 / 0)   Monday at 10:23 PM

Jackattak *Ars Praefectus*

Popular

14y   5,804

> **dantheclamman said:** ↩
>
> As a scientist, I feel this wouldn't happen if the motive was destroyed. Right now the scientists who get most rewarded with jobs, awards, and grants are those who find flashy, positive results. Which is a process of luck. Some decide to make their own luck, and we are left to determine their fraud through wasted efforts at replication. This would be undermined if we rewarded workers based on the quality of their research rather than results (which in my opinion will inevitably include negative results, because that's how science works). I say this as a worker who has published plenty of studies accepting the null, which I don't feel have received the same attention or acclaim as my studies where I accepted the alternative hypothesis (a positive result).

I don't know if this is your first time posting or if you've just discovered Ars but WELCOME.

Welcome, god damn it. 👏

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69 (76 / -7)   Monday at 7:05 PM

S **Soriak** *Ars Legatus Legionis*

Popular

17y   11,477

A big problem in academia is that fraud pays off. You can get tenure or large grants on the basis of fabricated results and the odds you get caught are low, especially in fields where people don't share data. If you do get caught, the penalties are often laughable: the paper gets retracted, but your tenure does not. In egregious cases, people have been banned from applying for federal grants for two years, but they got to keep the grant funding they fraudulently obtained.

It's crazy to think that there wouldn't be rampant fraud with these incentives and the present lack of enforcement. We now request data from finalist candidates for assistant professor positions and found data irregularities that the candidates can't explain. These people get hired by good universities (that are perhaps more trusting or more willing to look away), and I don't buy for a moment that they only happened to cheat the one time we caught them. But when your options are unemployment or a $200k/year job and all you need to do is change some data in a spreadsheet… pretty tempting.

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67 (68 / -1)   Monday at 8:15 PM

T **Trondal** *Ars Praetorian*

5y   581

I hope this kind of chicanery hasn't resulted in money/resources chasing after things that are illusory.

IIRC it may have well happened with some Alzheimer's research.

To me the most heinous aspect of this behavior would be a disregard for the downstream impacts on research pursuits for life-saving research.

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61 (62 / -1)   Monday at 6:59 PM

Koga Onutalepo *Ars Legatus Legionis*

Popular

10y   18,454

> **Unclebugs said:** ↩
>
> The saddest part of all this is that is raises even more doubts about any science which plays into the hands of the loony tunes out there hawking anti-vaccine conspiracies. I look forward, sadly, to RFK Jr. citing this in his campaign literature.

Antivaxxers have been using fake western blot data for far longer: https://arstechnica.com/science/201...k-scientists-find-fake-data-have-rage-stroke/

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58 (60 / -2)   Monday at 6:48 PM

Q **quamquam quid loquor** *Ars Tribunus Militum*

Popular

6y   2,009

> **Roadside Picnic said:** ↩
>
> Looks like Bill Ackman has silently declared war on Harvard.

He's been pretty loud about it actually. I also know this isn't the work of Ackman because it is actually thorough, unlike the trash analysis that he put together when shorting Herbalife, wasted my time reading 200 slides.

Dana Farber has over 6,500 employee.

Harvard has a bunch of affiliated hospitals which have basically nothing to do with Arts & Sciences which is where the undergraduates are.

[Harvard Medical School - Wikipedia](en.wikipedia.org)
en.wikipedia.org

this is not the first scandal at Dana Farber, a friend of mine became president just before a prior big scandal (killing patients etc) became public. Took a long time to get over that.

> FlameOfUdun said: ↩
>
> 🎵 If you like Data Coladas 🎵... (sorry, couldn't resist)

and gettin caught in the brain . 🎵

These guys scrutinize a lot of studies: Data Colada

"Data sleuths have gotten better and better at spotting such lazy manipulations, including copied-and-pasted duplicates that are sometimes rotated and adjusted for size, brightness, and contrast."

Just in time for the new tools to become available...

> dantheclamman said: ↩
>
> As a scientist, I feel this wouldn't happen if the motive was destroyed. Right now the scientists who get most rewarded with jobs, awards, and grants are those who find flashy, positive results. Which is a process of luck. Some decide to make their own luck, and we are left to determine their fraud through wasted efforts at replication. This would be undermined if we rewarded workers based on the quality of their research rather than results (which in my opinion will inevitably include negative results, because that's how science works). I say this as a worker who has published plenty of studies accepting the null, which I don't feel have received the same attention or acclaim as my studies where I accepted the alternative hypothesis (a positive result).

Alternatively (or perhaps in addition to rewarding good research), you make the punishment prohibitively brutal. As you said, these people have not just falsified data for their own gains; they've created a foundation for research that followed, wasting millions (at least) of research dollars and precious years of sick people's lives. At these levels, this should be treated as a criminal offense. People are literally going to die unnecessarily because of falsification like this (let alone the damage it does to public trust of the scientific community).

It *is* interesting that the persons in question are "DFCI **President** and **CEO** Laurie Glimcher, **Executive Vice President and COO** William Hahn, **Senior Vice President** for Experimental Medicine Irene Ghobrial, and Harvard **Medical School professor** Kenneth Anderson" (my emphasis). People who were awarded 'jobs, awards and grants'.

Looks like their plan worked, until it didn't. This is horribly damaging to everyone in the community but it is good that we're finally opening this can of worms.

But will it cost them their jobs? After all, all it took was a little plagiarism to cost Harvard's President her job. Here we have falsified evidence.

37 (37 / 0)	Monday at 8:34 PM

Popular

(D) **dodelmitderrodel** *Smack-Fu Master, in training*   8y   83

at least this bad apple isn't a real cancerous growth, and was hopefully terminated on discovery.

the usual peer reviews for most publications of this caliber usually would reveal even this 'minor laziness' or result in some severe private scoldings (among these elitist types).

the incidence of these 'apparent' shortcuts/outright falsifications does cause the reputation of associated colleagues some problems, even to the point of unnecessary wasted time as they must 'explain away' how this detracts their own efforts.

Why would peer review reveal this? Not in todays environment where you get angry mails if you dare taking more than two weeks to review a paper. Reviewing is a task that typically does nothing for your career but actively takes away time from research and is unpaid. The job of peer review (as intended) is to check if what the authors claim to have done is plausible and state of the art not to reproduce the work or re-evaluate the data.

37 (38 / -1)	Yesterday at 1:07 AM

Popular

(D) **dodelmitderrodel** *Smack-Fu Master, in training*   8y   83

A big problem in academia is that fraud pays off. You can get tenure or large grants on the basis of fabricated results and the odds you get caught are low, especially in fields where people don't share data. If you do get caught, the penalties are often laughable: the paper gets retracted, but your tenure does not. In egregious cases, people have been banned from applying for federal grants for two years, but they got to keep the grant funding they fraudulently obtained.

It's crazy to think that there wouldn't be rampant fraud with these incentives and the present lack of enforcement. We now request data from finalist candidates for assistant professor positions and found data irregularities that the candidates can't explain. These people get hired by good universities (that are perhaps more trusting or more willing to look away), and I don't buy for a moment that they only happened to cheat the one time we caught them. But when your options are unemployment or a $200k/year job and all you need to do is change some data in a spreadsheet... pretty tempting.

Academia as a whole runs on systems that were built by and for independently rich or tenured people, with little incentive to climb higher through flashy research results. But nowadays most academics are staring into financial oblivion into their mid- to late thirties and their income depends on their results.

IMHO, this is not a problem that can be solved by adding a few more fraud checkers. Requiring data availability will help by making it harder to outright fabricate results, but the real culprit are the exploitative systems that academia has built on the backs of idealistic young people.

35 (35 / 0)	Yesterday at 12:53 AM

Popular

(L) **llewyn** *Smack-Fu Master, in training*   12y   67

which data is trustworthy? Now we have to rely to AI which doesn't have a great track record either, to tell us what research to trust?

Unfortunately this is a much bigger problem than many realize. There are an absolute ton of research papers every year and the phrase publish or perish is not just a cliche. People are people and some of them are going to cheat for money or power, whether the end result kills or disables you or not. The peer review process seems to be inadequate to some degree. Hopefully we can come up with some better method of figuring out what is true and what is not.

31 (31 / 0)	Monday at 8:41 PM

Popular

(J) **JerryLove** *Ars Praefectus*   15y   3,723

What scares me about so many of these is that we are catching what amounts to incompetence. How many competent frauds are out there?

31 (31 / 0)	Monday at 11:13 PM

Popular

(D) **dodelmitderrodel** *Smack-Fu Master, in training*   8y   83

That seems like a very good model and I am envious that my field (Chemistry) does not do this. Too much of it is "Data was evaluated in GUI tool XY, trust me bro."

Where is this magical place where you can get on the tenure track without publications? I lead a team of four PhDs, have brought in roughly 900 kUSD in grant money, around four to five papers a year and my university is maybe considering giving me a tenure track position, soonish.

⌃ 31 (31 / 0)   Yesterday at 2:23 AM

Popular

D **dodelmitderrodel** *Smack-Fu Master, in training*   **8y**   **83**

A professor friend of mine has a bonmot that goes something like: "More reliable protocols and better laboratory practice yield less flashy results."

⌃ 28 (28 / 0)   Yesterday at 1:00 AM

Popular

L **lordloki** *Seniorius Lurkius*   **8y**   **5**

Umm. The presence of image discrepancies in a paper is *ABSOLUTELY* evidence of an author's intent to deceive. It may not be *DISPOSITIVE* of the matter (i.e., may not be enough to confirm it alone), but come on - you're an integrity officer! At least have integrity of meaning and grammar!

⌃ 27 (28 / -1)   Yesterday at 12:42 AM

Popular

M **Martin123** *Ars Centurion*   **8y**   **342**

I call BS on that. The average tenure track faculty salary at Harvard is just under $150k and I've **never ever** heard of someone getting a tenure track position anywhere (I've been on dozens of academic search committees for university math positions, admittedly strongly biased towards top institutions) without having at least half a dozen publications.

Regarding the top of the scale, in mathematics at least, there are at most a couple handful of institutions in north America (and a few more in Switzerland and Saudi Arabia, maybe Luxembourg, but then that's it) where the most senior professors get paid above $300k. None of them pays starting salaries near that.

Last edited: Yesterday at 3:06 AM

⌃ 27 (27 / 0)   Yesterday at 2:35 AM

Popular

D **dmsilev** *Ars Praefectus*   **14y** **5,102**

I've known and/or worked with a few such people over the years, and what they've said is that being able to spend a bit of time focusing on individual research projects is essentially a respite or a change of pace from their 'main' job. One that I knew a while back said he liked going into his (sub-basement) lab because his Blackberry[*] didn't get any signal there, so he could escape for a while the incessant emails he normally had to field.

[*] This should give you a rough definition of 'a while back'.

26 (26 / 0)   Monday at 11:55 PM

E **entropy_wins** *Ars Scholae Palatinae*   4y   1,347

> llewyn said: ↩
>
> Unfortunately this is a much bigger problem than many realize. There are an absolute ton of research papers every year and the phrase publish or perish is not just a cliche. People are people and some of them are going to cheat for money or power, whether the end result kills or disables you or not. The peer review process seems to be inadequate to some degree. Hopefully we can come up with some better method of figuring out what is true and what is not.

peer review costs money - the time of the reviewer. Even at $LAB I was only really allowed 10% to be charged to reviewing etc...

Also there is the difficulty in find qualified reviewers, which if you need large facilities (computing or experimental), the pool of people that are even able to comment shrinks.

Finally, the rent seeking publishers that have propped up the "race to bottom" of citation ranking - those established get more attention than those that don't - and universities count on this to sell student places.

23 (23 / 0)   Monday at 9:31 PM

M **Mentil** *Ars Centurion*   4y   260

Not benign.

22 (22 / 0)   Monday at 6:21 PM

L **Little-Zen** *Ars Praefectus*   23y   3,073

Maybe I'm missing something here, but... if you're a C-level, don't you have an organization to run? Shouldn't the research and writing be done by the actual researchers?

I realize you *can* do both, but that seems like a recipe for disaster.

22 (24 / -2)   Monday at 8:41 PM

O **Oldmanalex** *Ars Tribunus Angusticlavius*   12y   9,574

And people think I am too Aspy when I say that one can be a liar or a scientist, but not both. Misinterpretation of data is one thing, manipulation of data another, much more serious, beast.

20 (25 / -5)   Monday at 8:02 PM

1 2 3 4 Next ›   **You must log in or register to reply here.**