

Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE



Recruiting PostDoc and  
Research Scientists?

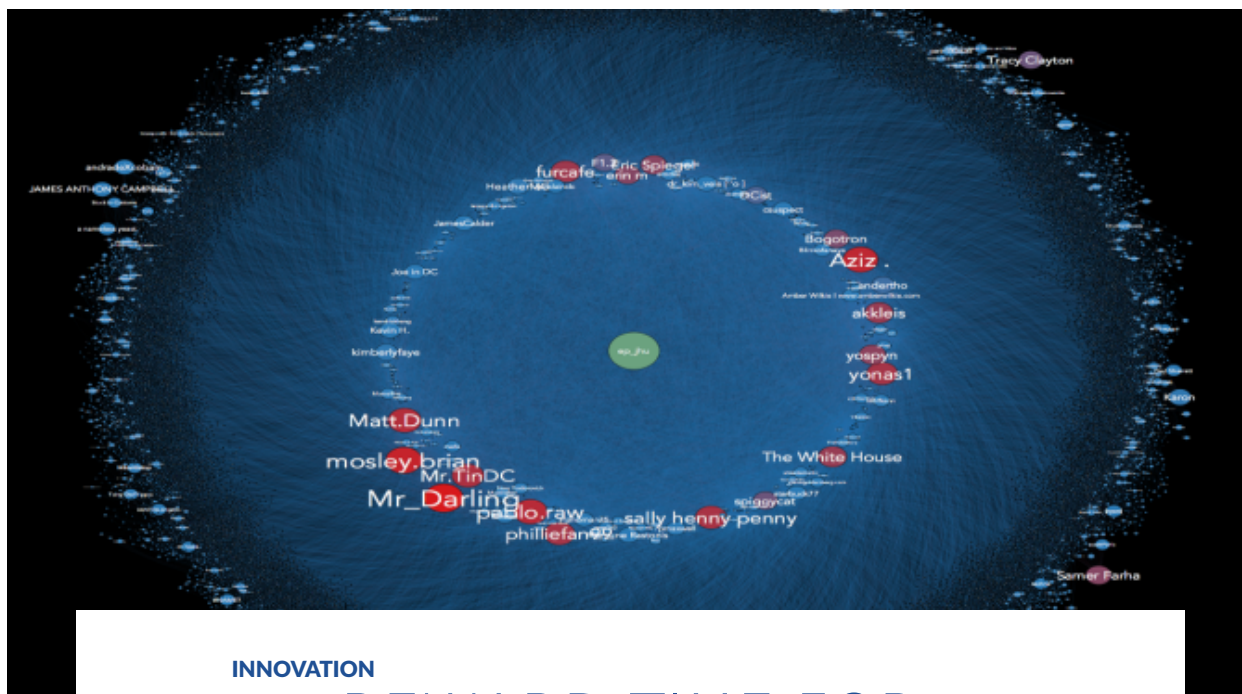
Euro★ScienceJobs.com  
RESEARCH AND POSTDOC JOBS IN EUROPE



European science conversations  
by the community, for the community



Innovation » Reward time for reproducibility



INNOVATION

## REWARD TIME FOR REPRODUCIBILITY

© 29 APRIL, 2015    FIONA DUNLEVY    LEAVE A COMMENT

**Reproducibility studies have yet to be  
factored in as positive contributions  
for research evaluation**

funding. The problem is that publishing and funding both prize one thing above all else: novelty. This obsession with shiny new science undermines the scientific tradition of self-correction. Reproducing and verifying other peoples' work is a crucial but thankless task that does not earn high impact kudos for researchers. It is therefore unlikely to translate into research grants. Researchers often cannot afford to spend precious time and money reproducing others' work, at the risk of seeing their own lab sink.

Reproducibility is now having a renaissance. Examples such as the US [Reproducibility Initiative](#) provide a case in point. It is backed by ScienceExchange, Figshare, PLOS and Mendeley. And it aims to identify and reward high-quality reproducible research via independent validation of key experimental results in the life science. But does buzzword status actually translate into real life change? It depends from which angle we look at the issue. The biggest progress has, in fact, been in promoting reproducible research.

## Publishers support

Some of the largest academic publishers have been heavily involved in the debate. For example, in 2013, Nature took steps to improve the reporting of science. "We introduced a checklist of reporting requirements," says Veronique Kiermer, director of author and reviewer services at the Nature Publishing Group, "We eliminated length limits on methods sections, increased the scrutiny of statistics by appointing a statistical advisor and re-emphasised our commitment to data-sharing."



Download a free PDF version of the article and spread it!

As for publishing reproducibility studies, refutations meeting peer-review standards can be published in the same journal. And it is "bi-directionally linked to the paper on the Nature website and at the major indexers," according to Kiermer. Confirmation studies that add no new information are best suited to "minimal threshold journals, such as Scientific Reports," she adds. To put this in context, the 2014 impact factor for Scientific Reports was approximately eight times lower than Nature-not much of a reward for the scientist who confirmed the original study.

By comparison, other publishers put some emphasis on greater levels of quality control during the publishing process to ensure greater reproducibility.



Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE

Meanwhile, others believe that making research data more widely available could encourage more reproducibility. EMBO asks researchers to consider openly sharing their source data. Nature is following a similar route, according to Kiermer. “Recently, we have stressed the importance of depositing data in public repositories, launching a sister publication Scientific Data, where authors can publish Data Descriptors to enhance reusability of datasets,” she says.

Could funders use their financial clout to force researchers to undertake a certain amount of reproducibility work? “[Reproducibility studies are] not everybody’s expertise,” Leptin says, warning that “it requires a lot of thought before you just turn around and say we’ll require you to do this now.”

#### Subscribe to a unique source of information!

Get high quality articles on Science policy, innovation and society delivered directly to your inbox.

email address

Subscribe

 We respect your privacy.

## Awarding credit to researchers

The key to promoting reproducibility is to redefine it away from “a nuisance to a symbol of quality,” says Peter Kraker, a postdoctoral computer scientist in the [Graz University of Technology, Austria](#) specialising in visualisation of scholarly communications, and a 2013 recipient of a [Panton Fellowship](#) awarded to researchers actively promoting open data. He says that the first step is a “grassroots movement, [which] shows it is possible.” But then, he says “you need some top down rules or mandates.”

But if funders don’t mandate reproducibility studies and if high-impact publishers only publish high impact refutations, relegating confirmation studies to lower impact publications, where’s the incentive?

One solution was introduced in the concept of a [Reproducibility Index](#) (RI) for journals. It was proposed, in 2013, by Ivan Oransky, editor of the highly regarded blogs [Retraction Watch](#) and [Embargo Watch](#) and vice president of MedPage Today. Accordingly, journals would be rewarded with a high RI for



Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE

off but it did drag reproducibility that bit further into the spotlight.

Technology could be reproducibility's [saving grace](#) in this debate. The challenge is how to give researchers credit for participating in online post-publication peer review communities such as, to name only a few, PubPeer, F1000, [ScienceOpen](#) and [ResearchGate](#). Such post-publication mechanism made it possible for Kenneth Ka-Ho Lee from Hong Kong to post his [results](#) on ResearchGate Open Review section, after he failed to reproduce the now infamous Obokata experiments, which claimed to turn adult cells into stem cells by bathing them in acid. He was the first to come out with evidence that the method did not work.

### Are there weak points to scientific replicability?

*Your thoughts and opinions are valuable, feel free to use our simple comment section below.*

Featured image credit: [CC BY-NC 2.0 by ep.jhu](#)

EuroScientist is looking for contributors!

If you would like to write guest posts in EuroScientist magazine, send us your suggestions of articles at [office@euroscientist.com](mailto:office@euroscientist.com).

Go back to the Special Issue: [Reproducibility and Replicability](#)

About

Latest Posts



### Fiona Dunlevy

After a PhD and postdoc in molecular biology, Fiona swapped her Dublin lab bench for a desk in the south of France to write about other peoples' research. She is interested in anything got to do with medicine, medtech and research policy. Fiona is also a medical writer, mostly sifting through reams of data to write reports after clinical trials.

### Related posts



Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE

scientific culture

next wave of Open  
Access?

delicate touch?

towards eco-friendly  
diagnosis

HIGH-QUALITY RESEARCH

OPEN DATA

REPRODUCIBILITY

## LEAVE A REPLY

Your email address will not be published. Required fields are marked \*

Comment



Name \*

Email \*

Website

☒ Get EuroScientist delivered in my mailbox!

POST COMMENT

### SUPPORT EUROSIDENTIST

Organisations: support us

Sponsor a post!

Individuals: donate

Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE

## Show EUROPE

Wear.  
Vote.  
Europe.



## JOIN EUROSCIENCE



EuroScientist is the official publication  
of EuroScience, the non-profit  
grassroots association of researchers  
in Europe.

Discover the benefits of being  
a EuroScience member

## OUR LATEST VIDEOS



1/19

Next»

By PoseLab

## GET EUROSCIENTIST NEWSLETTERS!

You will only receive the latest news  
and articles from EuroScientist.

Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE

SUBSCRIBE

## MOST POPULAR POSTS



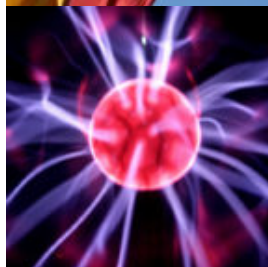
Trust  
under **Special  
Issue**



The evolving  
relationship  
between  
business and  
science  
under **Innovation**



Spain, the  
European  
exception:  
'economic  
miracle' &  
scientific  
suicide  
under **Policy**



Top 10  
YouTube  
science  
channels to  
enlighten and  
entertain  
under **Science  
communication**



Disruptive  
innovation  
requires  
humanities'  
input  
under **Innovation**



Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE

CAREER

SCIENCE IN SOCIETY

COMMUNICATION

POLICY

INNOVATION



ING



S



ONSIBLE SCIENCE

TISTS' LIFESTYLE



SCIENCE



AN SCIENCE BEAT



ADVERTISE  
HERE!

Click for  
further information

Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE



## GET EUROSCIENTIST DELIVERED IN YOUR MAILBOX!



You will only receive the latest news and articles from EuroScientist.



Enter your email address



SUBSCRIBE



Donate

## PARTICIPATE

EuroScientist is an independent participatory magazine offering a discussion platform to help progress current issues affecting the European research community.

It is a publication of **EuroScience**.

Find out more here on how to take part to the EuroScientist community.

Write Opinion Pieces

Sponsored posts on EuroScientist

Support our organisation

Donate

Advertise

Distribute our content

Receive EuroScientist articles directly in your mailbox:

Enter your email address

SUBSCRIBE



Strasbourg

Tel: +33 (0) 3 88 24 11 50

[Become a member !](#)

*Disclaimer: Material in EuroScientist does not necessarily reflect the views of the Editor or of EuroScience, and Contributors are solely responsible for the material they submit to the magazine.*



## SUBSCRIBE TO EUROSCIENTIST VIA EMAIL

You will only receive the latest news and articles from EuroScientist.

Your email address

SUBSCRIBE