Research dissemination: preprints, data repositories, and the traditional journal

October 9, 2017

Georgia CTSA
Georgia Clinical & Translational Science Alliance

CFAR
Emory Center for AIDS Research

EMORY UNIVERSITY SCHOOL OF MEDICINE
Department of Medicine

Children's Healthcare of Atlanta

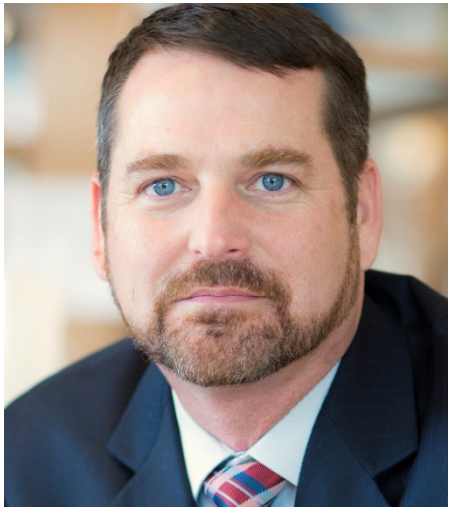
EMORY UNIVERSITY SCHOOL OF MEDICINE
Department of Pediatrics

Survey Drawing

Announcements

- After today's presentation, please take the survey!

Our presenter today:



Gary Miller, PhD

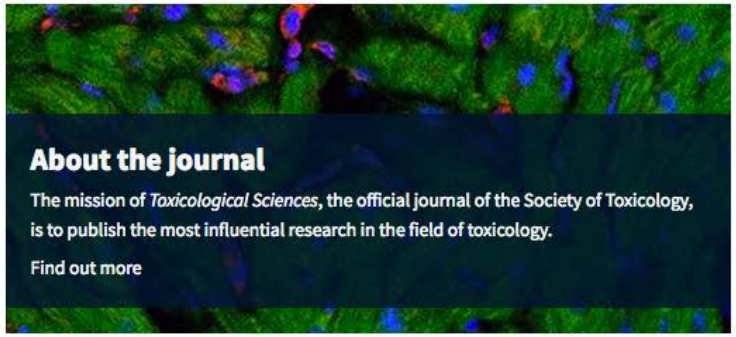
- Professor, Rollins School of Public Health
- Asa Griggs Candler Professor of Environmental Health
- Doctoral training in Pharmacology & Toxicology
- Postdoctoral training in Molecular Neuroscience
- Director of the Emory HERCULES center, an NIEHS-funded center focused on the exposome, the environmental analogue to the genome.
- Serves as Director of Emory's CHEAR U2C Center and Emory's NIEHS-funded T32 Training Grant in Environmental Health Sciences and Toxicology.
- A Georgia Research Alliance Distinguished Investigator and received the Achievement Award from the Society of Toxicology.
- Serves as Editor-in-Chief of Toxicological Sciences, the official journal of the Society of Toxicology.

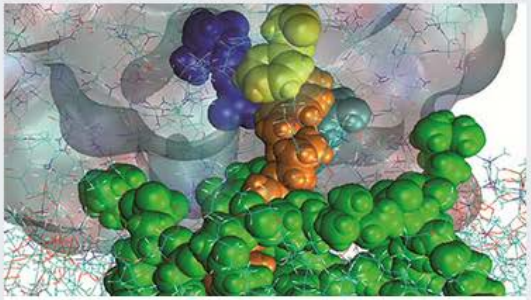
Research dissemination: preprints, data repositories, and the traditional journal

Gary W. Miller, PhD
Associate Dean of Research
Rollins School of Public Health

Current Issue
Volume 156, Issue 1
March 2017

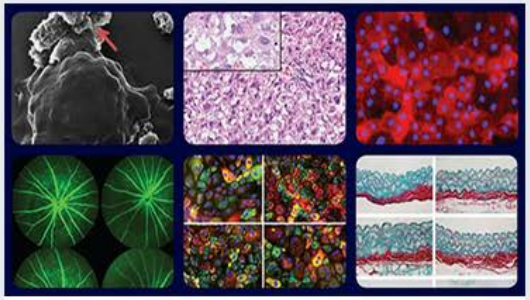
Editor-in-Chief
Gary W. Miller





Featured Content

- Ethanol Attenuates Histiotrophic Nutrition Pathways and Alters the Intracellular Redox Environment and Thiol Proteome during Rat Organogenesis
- Pyruvate Kinase Isoform Switching and Hepatic Metabolic Reprogramming by the Environmental



Virtual Collections

- Editorials, Look Inside ToxSci and Special Content
- Contemporary Reviews
- The Dryad Digital Repository Collection

SOT 2017 · Baltimore

Toxicology News

- SOT 2017 Annual Meeting Website Has Launched: See You in Baltimore!
- Nominate SOT Members for SOT Council and Elected Standing Committees by August 1
- Nominate a Worthy Candidate for the 2017 SOT Arnold J.

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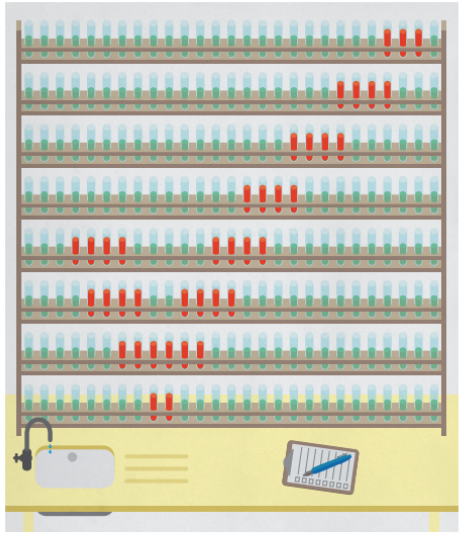
NATURE | COMMENT

Policy: NIH plans to enhance reproducibility

Francis S. Collins & Lawrence A. Tabak

27 January 2014

Francis S. Collins and Lawrence A. Tabak discuss initiatives that the US National Institutes of Health is exploring to restore the self-correcting nature of preclinical research.



NIH plans to enhance reproducibility

Francis S. Collins and **Lawrence A. Tabak** discuss initiatives that the US National Institutes of Health is exploring to restore the self-correcting nature of preclinical research.

A growing chorus of concern, from scientists and laypeople, contends that the complex system for ensuring

shorter term, however, the checks and balances that once ensured scientific fidelity have been hobbled. This has compromised

outnumbered by the hundreds of thousands published each year in good faith.

Instead, a complex array of other factors seems to have contributed to the lack of reproducibility. Factors include poor training of researchers in experimental design; increased emphasis on making provocative statements rather than presenting technical details; and publications that do not report basic elements of experimental design[4]. Crucial experimental design elements that are all too frequently ignored include blinding, randomization, replication, sample-size calculation and the effect of sex differences. And some scientists reputedly use a 'secret sauce' to make their experiments work — and withhold details from publication or describe them only vaguely to retain a competitive edge[5]. What hope is there that other scientists will be able to build on such work to further biomedical progress?

Exacerbating this situation are the policies and attitudes of funding agencies, academic centres and scientific publishers. Funding agencies often uncritically encourage the overvaluation of research published in high-profile journals. Some academic centres also provide incentives for publications in such journals, including promotion and tenure, and in extreme circumstances, cash rewards[6].

Then there is the problem of what is not published. There are few venues for researchers to publish negative data or papers that point out scientific flaws in previously published work. Further compounding the problem is the difficulty of accessing unpublished data — and the failure of funding agencies to establish or enforce policies that insist on data access.

PRECLINICAL PROBLEMS

Reproducibility is potentially a problem in all scientific disciplines. However, human clinical trials seem to be less at risk because they are already governed by various regulations that stipulate rigorous design and independent oversight — including randomization, blinding, power estimates, pre-registration of outcome measures in standardized, public databases such as ClinicalTrials.gov and oversight by institutional review boards and data safety monitoring boards. Furthermore, the clinical trials community has taken important steps towards adopting standard reporting elements[7].

Proceedings of the National Academy of Sciences of the United States of America

Revised standards for statistical evidence

Valen E. Johnson[1]

Department of Statistics, Texas A&M University, College Station, TX 77843-3143

Edited by Adrian E. Raftery, University of Washington, Seattle, WA, and approved October 9, 2013 (received for review July 18, 2013)

THE WALL STREET JOURNAL.

THE SATURDAY ESSAY

The Breakdown in Biomedical Research

Contaminated samples, faulty studies and inadequate training have created a crisis in laboratories and industry, slowing the quest for new treatments and cures

ILLUSTRATION: DOUG CHAYKA

By RICHARD HARRIS
Updated April 7, 2017 2:05 p.m. ET

Open Mike

Helping connect you with the NIH perspective, and helping connect us with yours

Posted on March 28, 2017 by Mike Lauer

Following Up On Interim Research Products

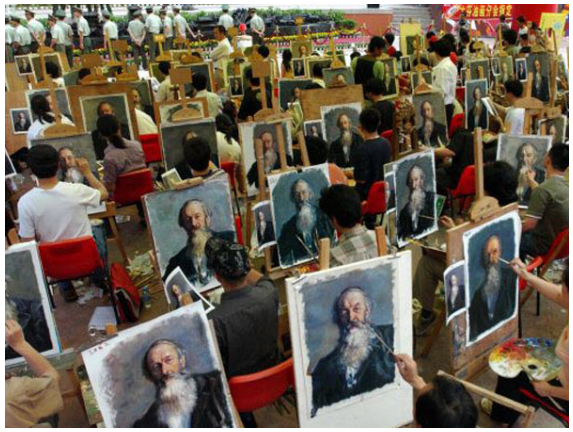
The role of preprints — complete and public draft manuscripts which have not gone through the formal peer review, editing, or journal publishing process – continues to be a hot topic in the biological and medical sciences. In January, three major biomedical research funders – HHMI, the MRC, and the Wellcome Trust, changed their policies to allow preprints to be cited in their progress reports and applications.

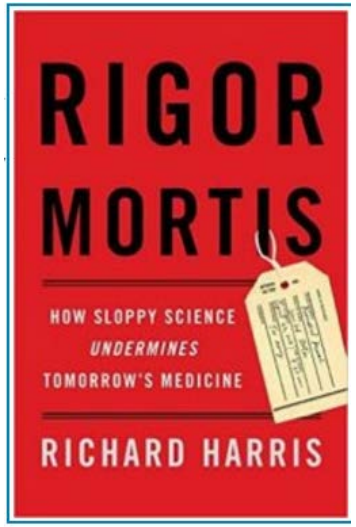
Dr. Michael Lauer is NIH's Deputy Director for Extramural Research, serving as the principal scientific leader and advisor to the NIH Director on the NIH extramural research program.

Arthur M. Sackler COLLOQUIA

March 8-10, 2017; Washington, D.C.

Reproducibility of Research: Issues and Proposed Remedies





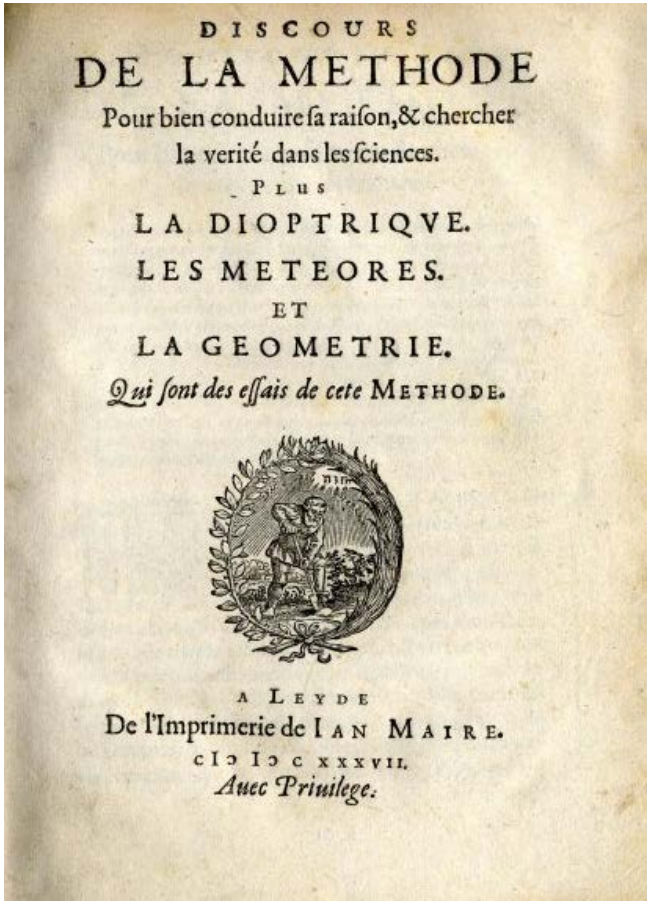
Retraction Watch

Tracking retractions as a window into the scientific process

"Failure is an essential part of science:" …a new book on reproducibility

This is not a new topic

"Discourse on the Method of Rightly Conducting One's Reason and of Seeking Truth in the Sciences"
Rene Descartes, 1637


DISCOURS
DE LA METHODE
Pour bien conduire ſa raiſon,& chercher
la verité dans les ſciences.
PLUS
LA DIOPTRIQVE.
LES METEORES.
ET
LA GEOMETRIE.
Qui ſont des eſſais de cete METHODE.

A LEYDE
De l'Imprimerie de IAN MAIRE.
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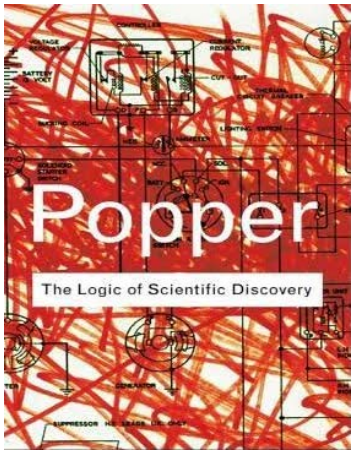
Auec Priuilege.

Rigor, Reproducibility, and Method

- Popper (Logic of Scientific Discovery, 1934)
- Kuhn (Structure, 1962)
- Feyerabend (Against Method, 1975)



- How we define and use the scientific method has been the topic of debate for centuries. It is a never-ending struggle to seek the truth.

Improving Reproducibility in Toxicology FREE

Gary W. Miller ✉

Toxicol Sci (2014) 139 (1): 1-3. **DOI:** https://doi.org/10.1093/toxsci/kfu050
Published: 15 April 2014

Issue Section: Editorial

Over the past few months there has been considerable discussion in scientific circles regarding reproducibility of data, or more specifically, the lack thereof (Nature, 2012, 2013). This is a very serious issue for science, including the discipline of toxicology. The director and deputy director of the National Institutes of Health (NIH) in the United States, Dr Francis Collins and Dr

Poland *et al. Particle and Fibre Toxicology* 2014, **11**:42
http://www.particleandfibretoxicology.com/content/11/1/42

pft PARTICLE AND FIBRE TOXICOLOGY

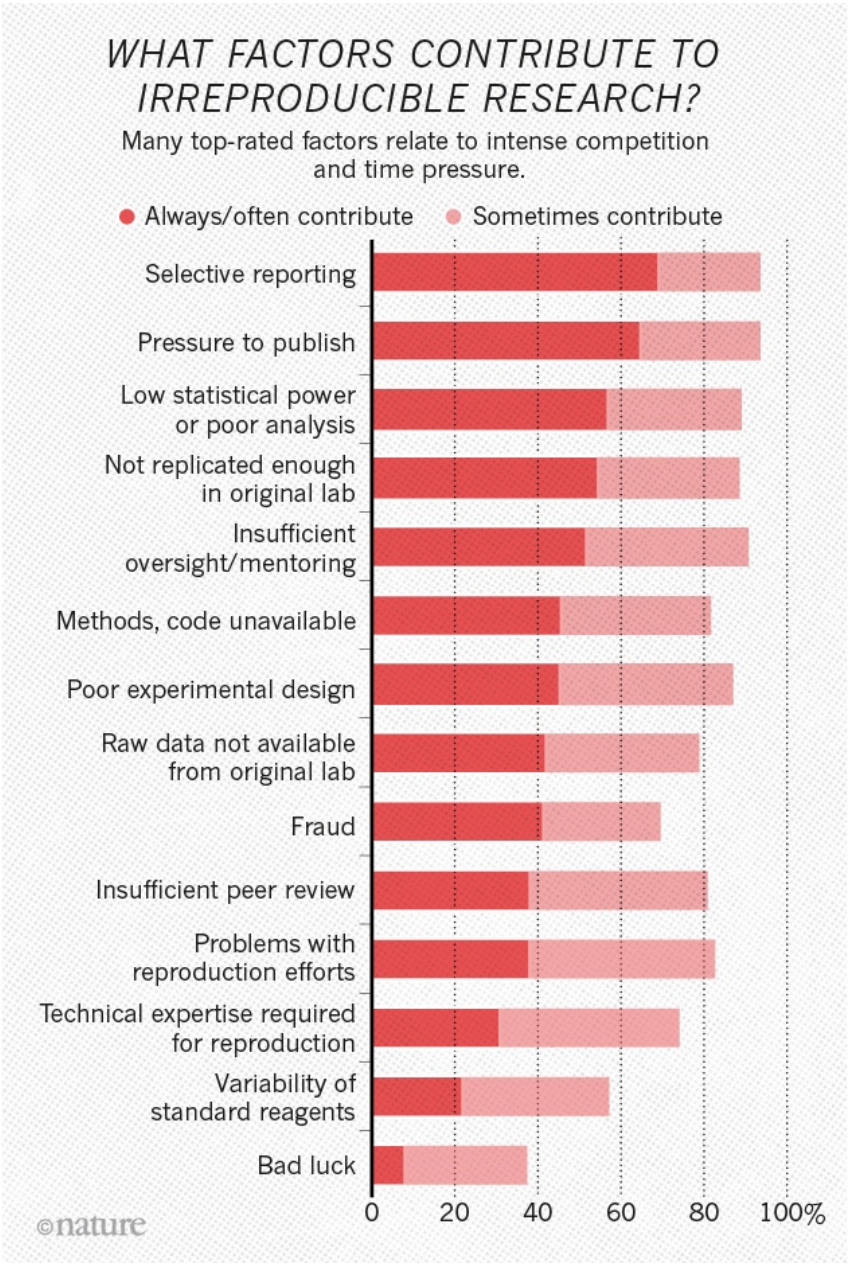
EDITORIAL Open Access

The elephant in the room: reproducibility in toxicology

Craig A Poland[1*], Mark R Miller[2], Rodger Duffin[3] and Flemming Cassee[4,5]

The issue of reproducibility of results in toxicology has long been a concern and, perhaps, at the back of many of our minds but not necessarily at the forefront of our thinking – 'the elephant in the room'. Are the results we have published literally *our* results or are they reproducible and truly part of a credible theory? In the excellent editorial by Gary Miller [1], Editor-in-Chief of the journal *Toxicological Sciences*, he discusses the issue of reproducibility in scientific manu-

driven by the researcher, are heavily influenced by funding bodies, public opinion and political motivations. All will play a role in the distribution of a limited pool of research funds, and rightly expect progress in return for financial support. Yet a lack of reproducibility can destabilise research and undermine the confidence of stakeholders. An additional area of concern relating to reproducibility is when findings are translated into the 'real world' where acceptance and use of premature conclusions resulting


WHAT FACTORS CONTRIBUTE TO IRREPRODUCIBLE RESEARCH?
Many top-rated factors relate to intense competition and time pressure.
Always/often contribute
Sometimes contribute
Selective reporting
Pressure to publish
Low statistical power or poor analysis
Not replicated enough in original lab
Insufficient oversight/mentoring
Methods, code unavailable
Poor experimental design
Raw data not available from original lab
Fraud
Insufficient peer review
Problems with reproduction efforts
Technical expertise required for reproduction
Variability of standard reagents
Bad luck
0
20
40
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80
100%
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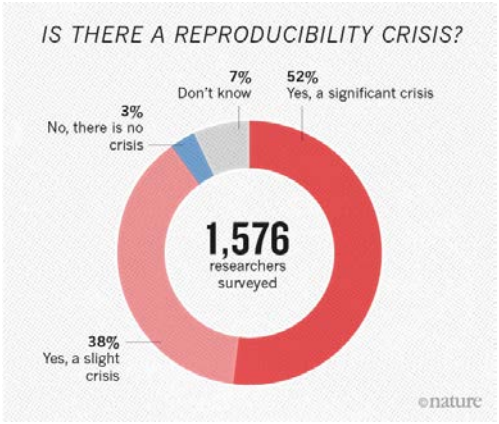
IS THERE A REPRODUCIBILITY CRISIS?
7%
Don't know
52%
Yes, a significant crisis
3%
No, there is no crisis
1,576
researchers surveyed
38%
Yes, a slight crisis
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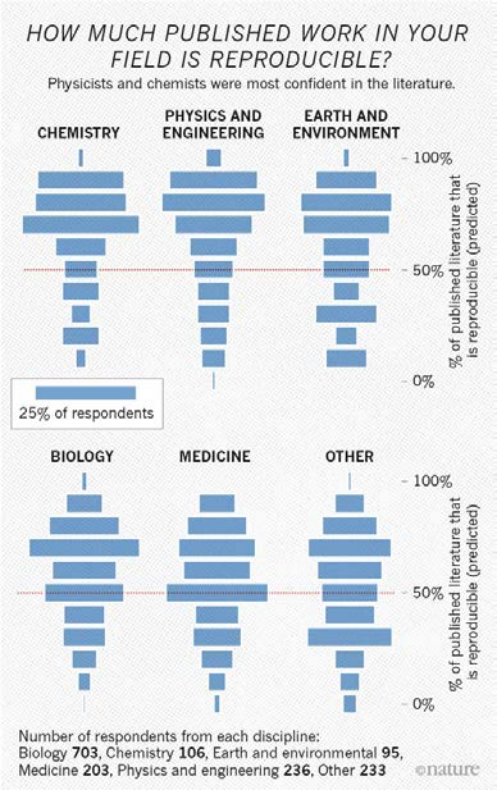
HOW MUCH PUBLISHED WORK IN YOUR FIELD IS REPRODUCIBLE?
Physicists and chemists were most confident in the literature.
CHEMISTRY
PHYSICS AND ENGINEERING
EARTH AND ENVIRONMENT
100%
50%
0%
% of published literature that is reproducible (predicted)
25% of respondents
BIOLOGY
MEDICINE
OTHER
Number of respondents from each discipline:
Biology 703, Chemistry 106, Earth and environmental 95, Medicine 203, Physics and engineering 236, Other 233
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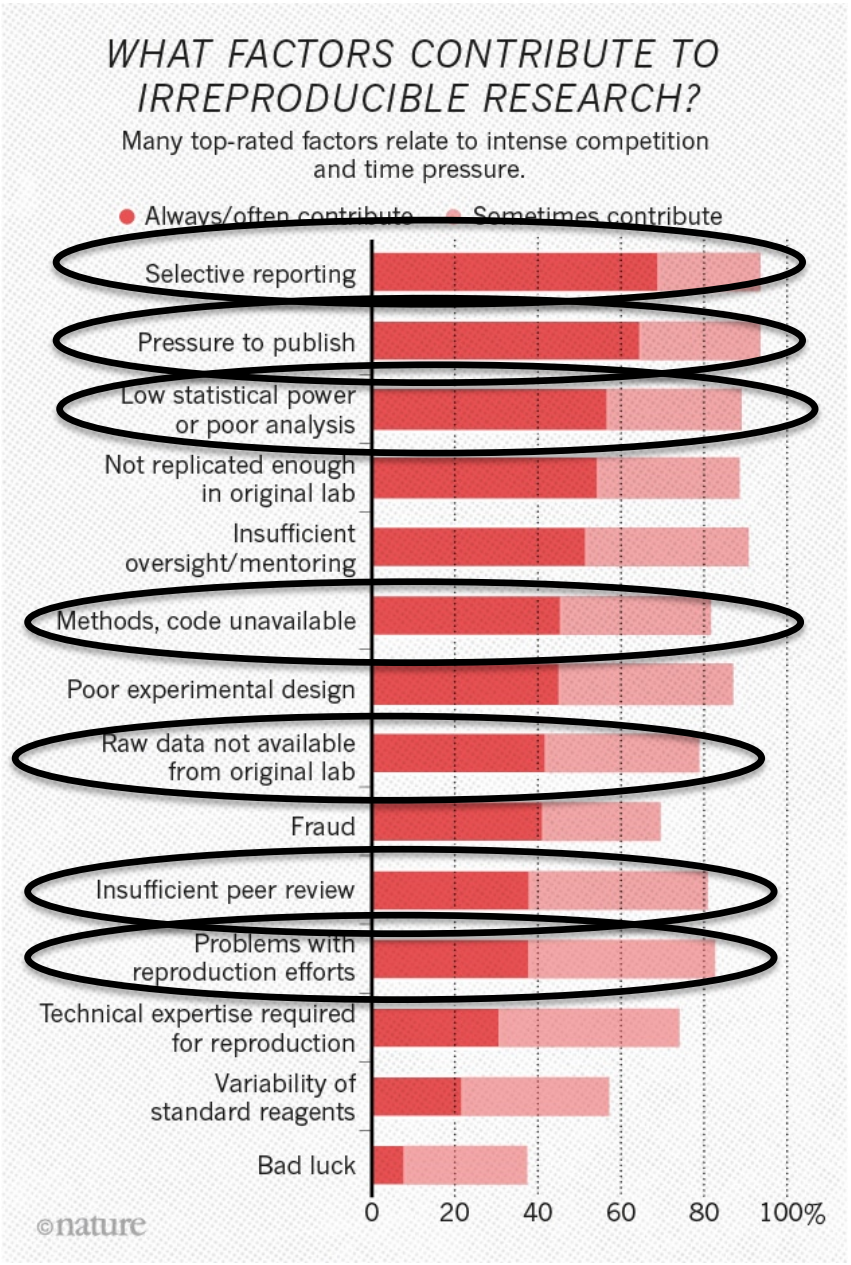
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Poor experimental design
Raw data not available from original lab
Fraud
Insufficient peer review
Problems with reproduction efforts
Technical expertise required for reproduction
Variability of standard reagents
Bad luck
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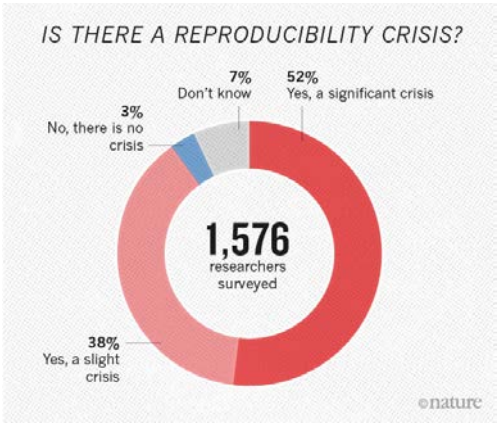
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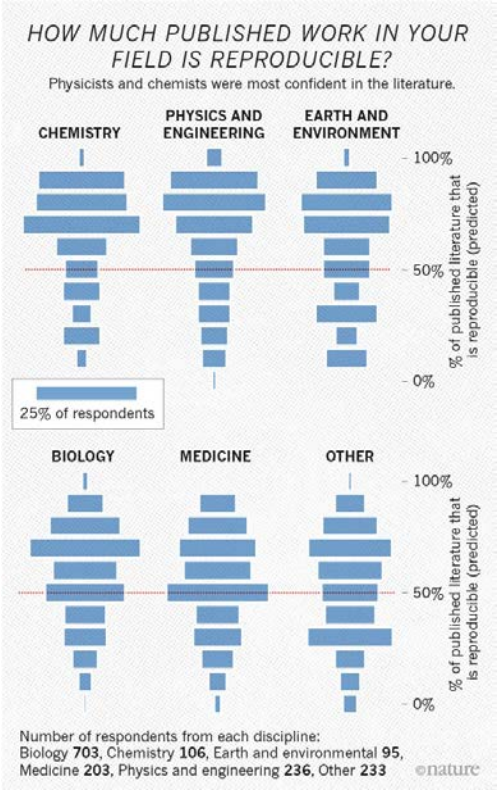
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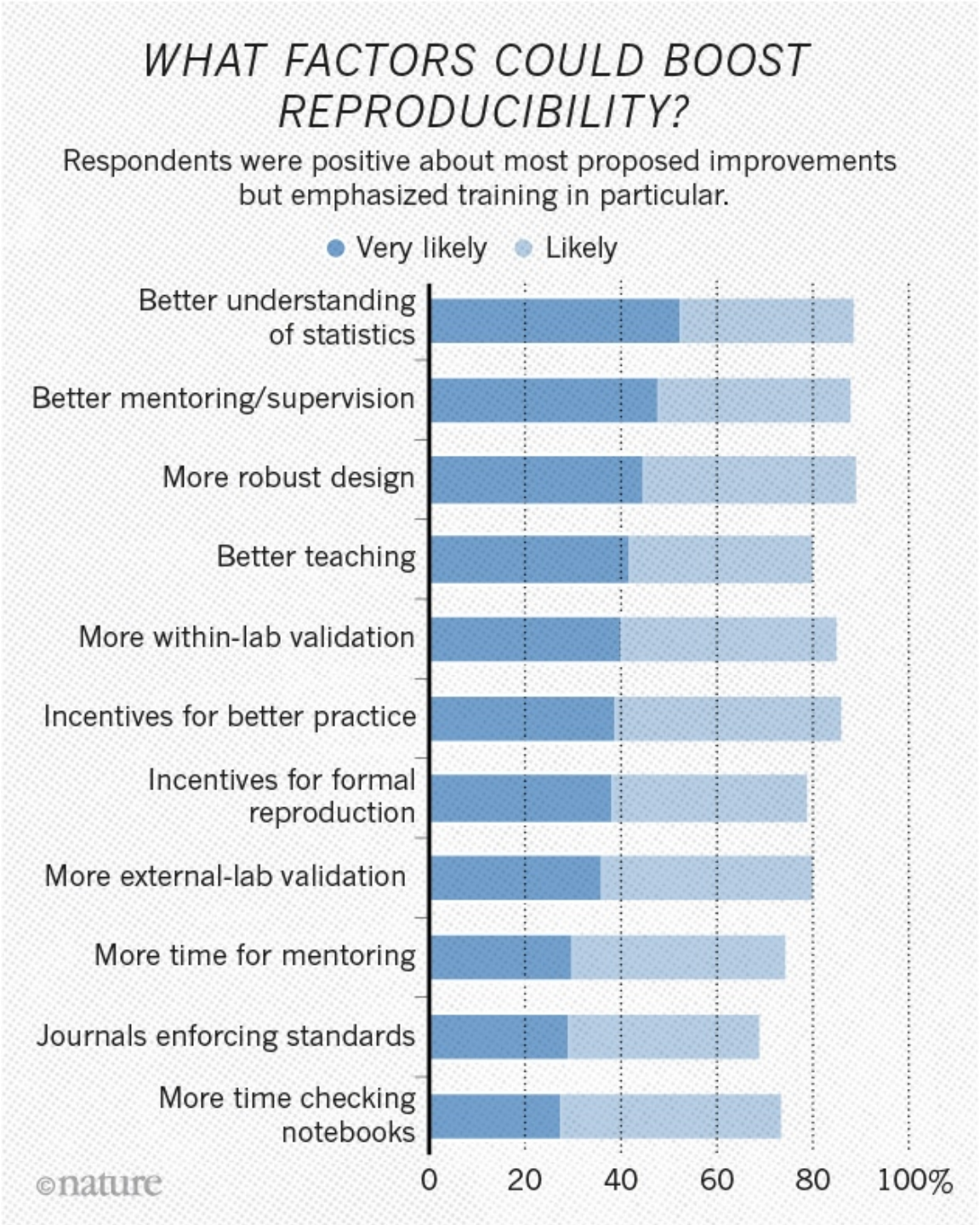
WHAT FACTORS COULD BOOST REPRODUCIBILITY?
Respondents were positive about most proposed improvements but emphasized training in particular.
Very likely
Likely
Better understanding of statistics
Better mentoring/supervision
More robust design
Better teaching
More within-lab validation
Incentives for better practice
Incentives for formal reproduction
More external-lab validation
More time for mentoring
Journals enforcing standards
More time checking notebooks
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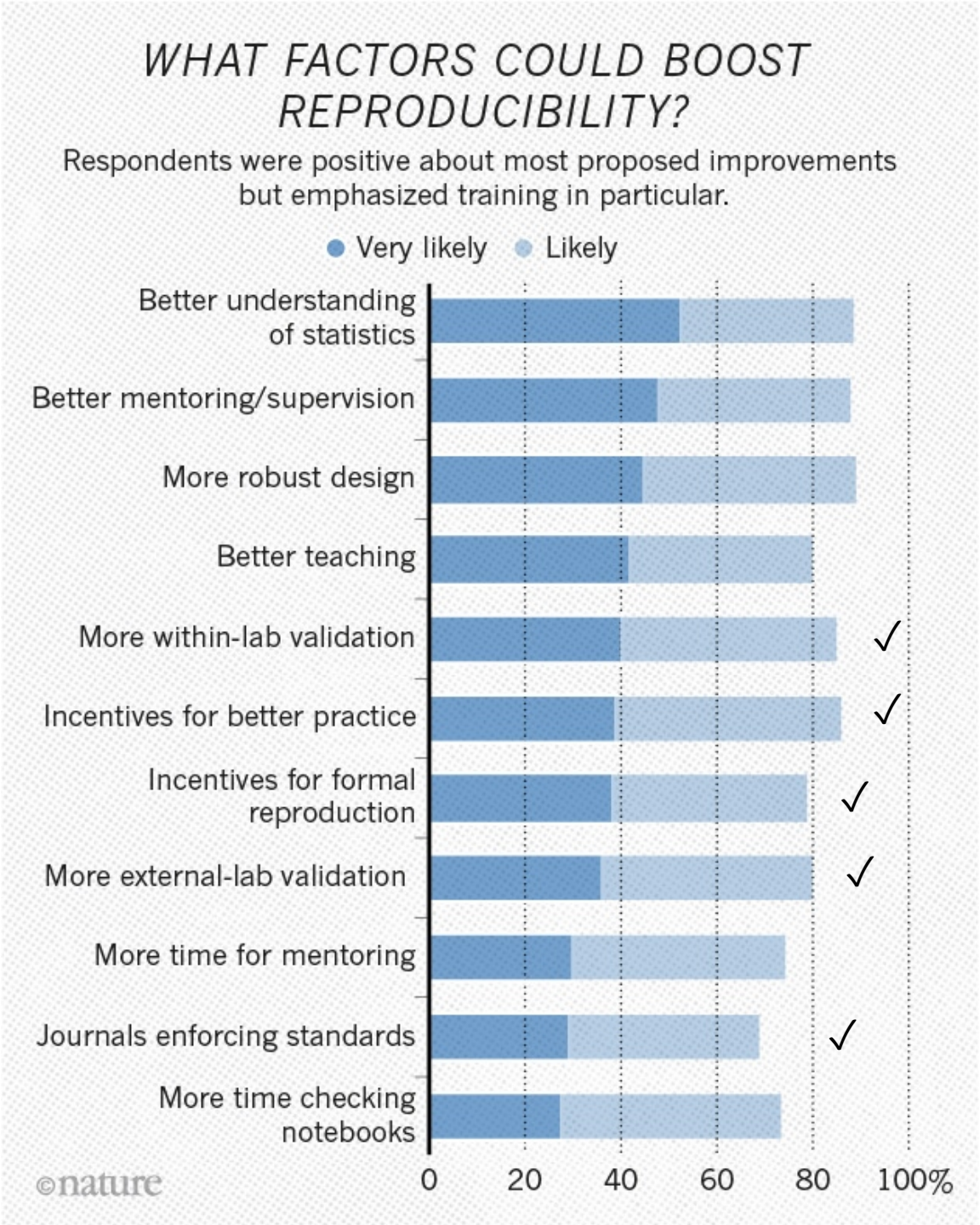
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More time checking notebooks
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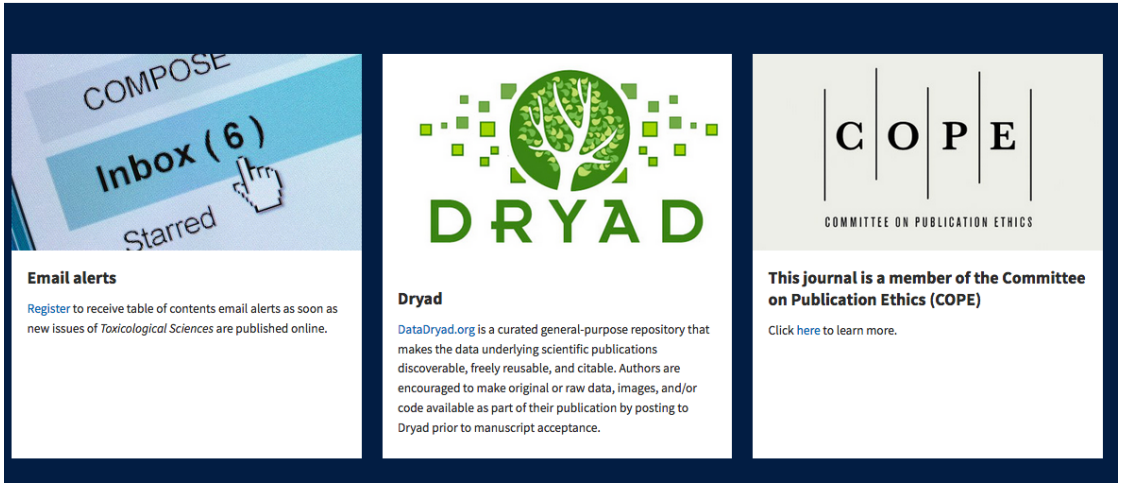
Beyond the NIH requirements

Use of data repositories, providing a venue for deposition of large data sets, code, and even methods



"*There is no idea, however ancient or absurd, that is not capable of improving our knowledge." -Paul Feyerabend*

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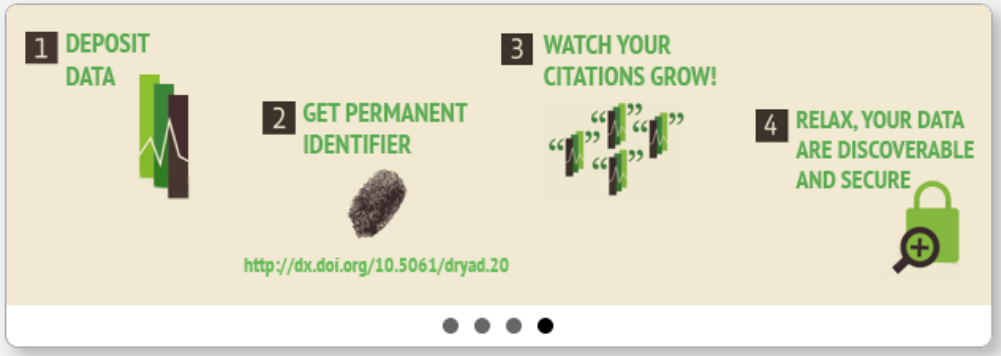

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Pekcan-Hekim Z, Hellén N, Härkönen L, Nilsson PA, Nurminen L, Horppila J (2016) Data from: Bridge under troubled water: turbulence and niche partitioning in fish foraging. *Ecology and Evolution* http://dx.doi.org/10.5061/dryad.3q7c9

Lehnert S, Devlin R, Pitcher T, Semeniuk C, Heath D (2016) Data from: Redder isn't always better: cost of carotenoids in Chinook salmon eggs. *Behavioral Ecology* http://dx.doi.org/10.5061/dryad.2bp67

Douhard M, Pigeon G, Festa-Bianchet M, Coltmann DW, Guillemette S, Pelletier F (2016) Data from: Environmental and evolutionary effects on horn growth of male bighorn sheep. *Oikos* http://dx.doi.org/10.5061/dryad.m5648

Staats E, Agosta S, Vonesh J (2016) Data from: Predator diversity reduces habitat colonization by mosquitoes and midges. *Biology Letters* http://dx.doi.org/10.5061/dryad.2f452

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THOR at PIDapalooza
If November taught us anyt…

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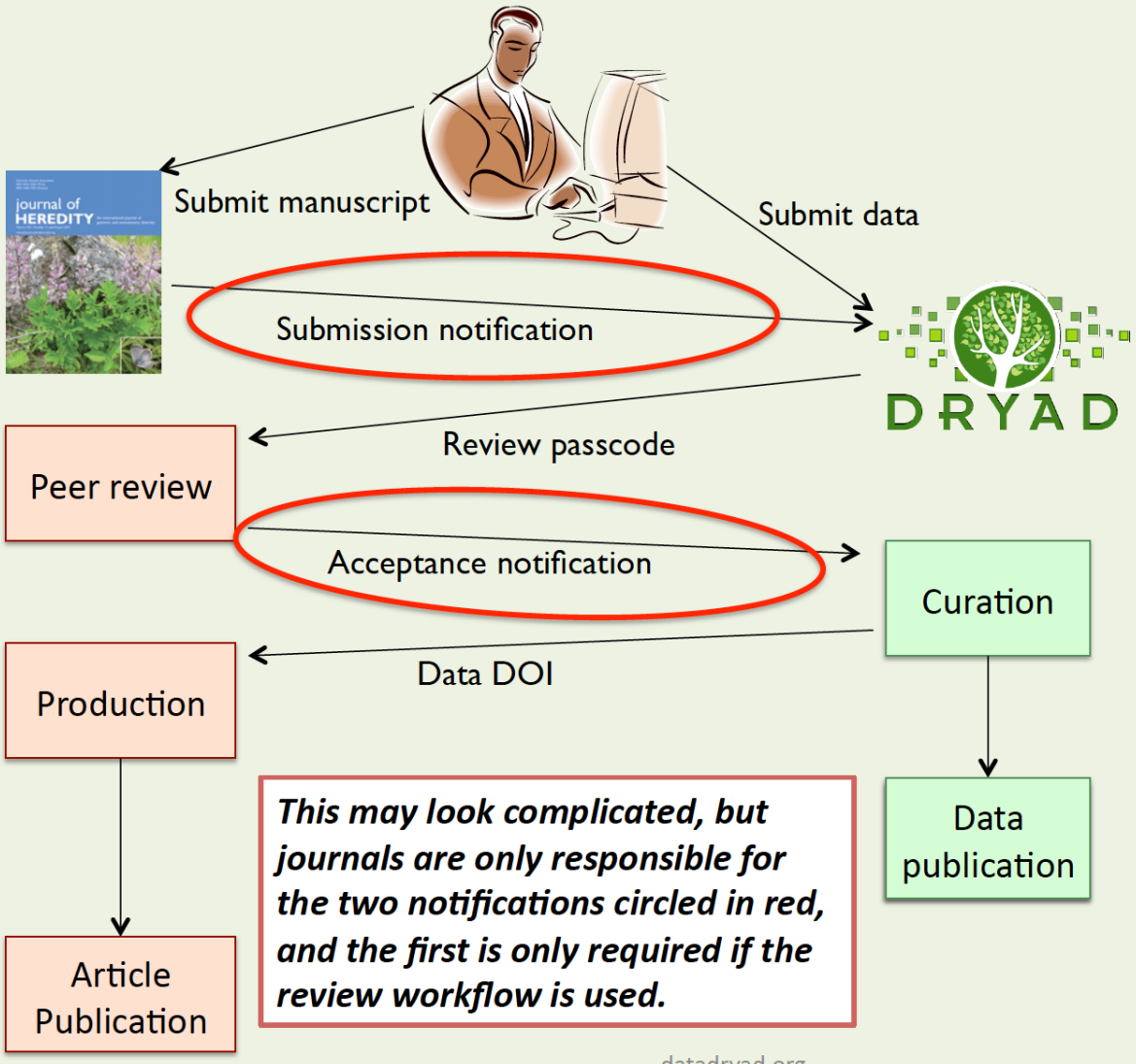
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Data from: Candidate risk factors and mechanisms for Tolvaptan-induced liver injury are identified using a collaborative cross approach

Mosedale M, Kim Y, Brock W, Roth S, Wiltshire T, Eaddy JS, Keele G, Corty R, Xie Y, Valdar W, Watkins P

Date Published: December 20, 2016

DOI: http://dx.doi.org/10.5061/dryad.ch4p5

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Toxicological Sciences

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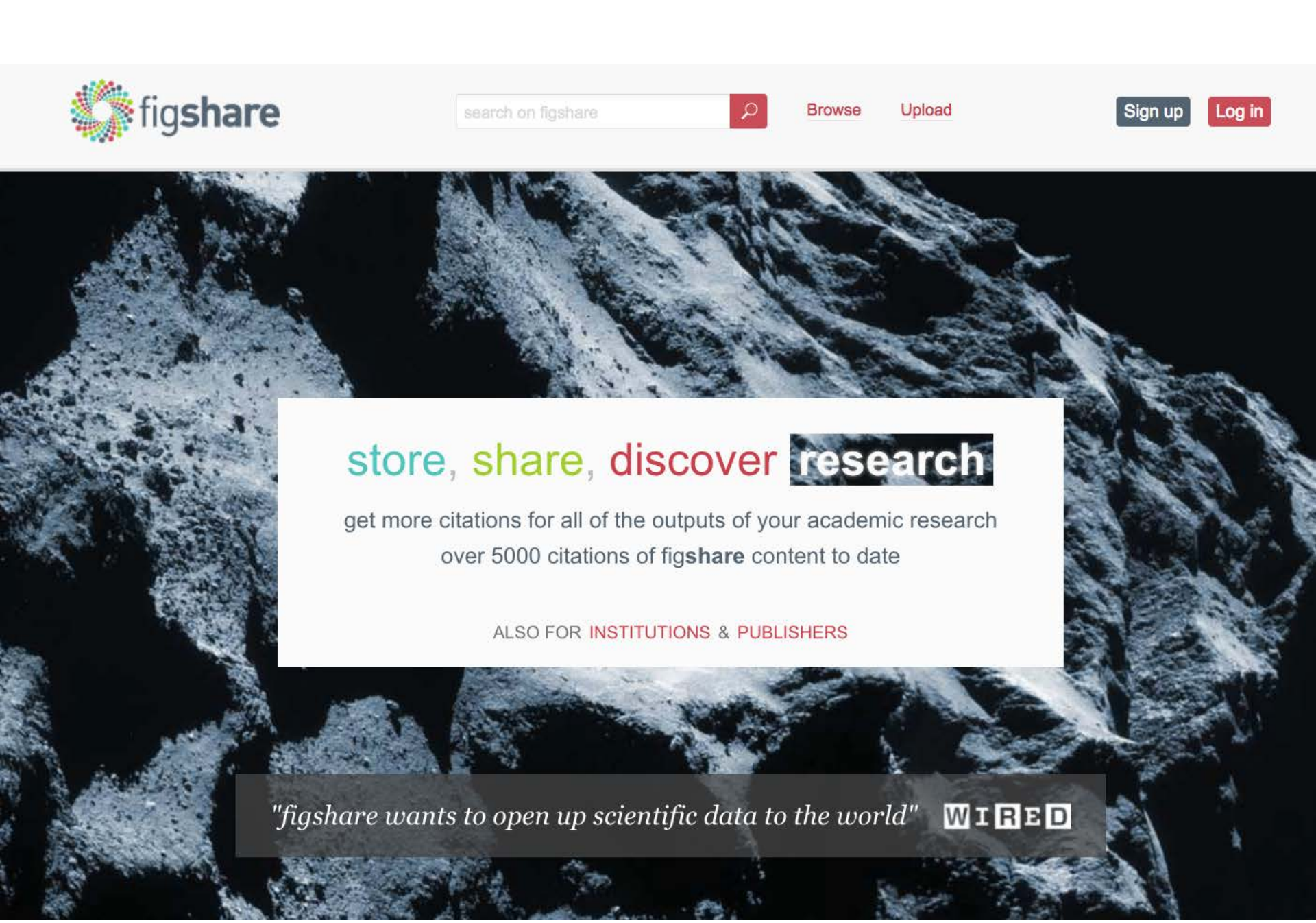
Subfunctionalization of Paralogous Aryl Hydrocarbon Receptors from the Frog Xenopus Laevis: Distinct Target Genes and Differential Responses to Specific Agonists in a Single Cell Type
Scott H. Freeburg, Eric Engelbrecht, and Wade H. Powell

Dryad in the UK and USA—Prospective and Retrospective Data Publication
Kursheed Khan and Andrew Weeks

Editor's Highlight: Neonatal Activation of the Xenobiotic-Sensors PXR and CAR Results in Acute and Persistent Down-regulation of PPARα-Signaling in Mouse Liver
Cindy Yanfei Li, Sunny Lihua Cheng, Theo K. Bammler and Julia Yue Cui

Identification of the Additional Mitochondrial Liabilities of 2-Hydroxyflutamide When Compared With its Parent Compound, Flutamide in HepG2 Cells
Amy L. Ball, Laleh Kamalian, Ana Alfirevic, Jonathan J. Lyon and Amy E. Chadwick

Vesicular Monoamine Transporter 2 (VMAT2) Level Regulates MPTP Vulnerability and Clearance of Excess Dopamine in Mouse Striatal Terminals
Kelly M. Lohr, Merry Chen, Carlie A. Hoffman, et. al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COLLECTION

Collection: Phosphine-Catalyzed Sequential [4 + 3] Domino Annulati…

Junlong Chen today

Call127	Call351	Call204	Call205	Call232	Call347	Call282
346350	*247255*	*224228*	*171171*	*174182*	*198206*	*211215*
346350	*243255*	*244248*	*167171*	*182198*	*232240*	*202210*
346350	247255	224248	171171	182182	206210	215215
346346	243247	228244	171171	182182	198210	199211
350350	243255	228244	171171	182182	198202	215215
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346346	247255	224244	171171	182182	202206	199211
346350	243247	228248	167171	174182	198210	211215

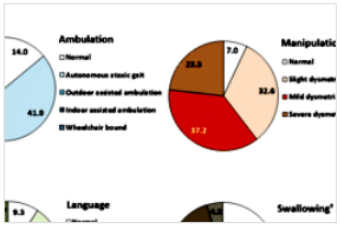
Genetic confirmation of filial cannibalism in North America's gia…

Shem D. Unger today

PAPER

Anti-inflammatory effect of ethanolic extract of spine, skin and rind of J…

M. Meera today



Psychiatric and neurological symptoms in patients with Nieman…

Olivier Bonnot today

Discovery and Engineering of Pathways for Production of α-Bran…

Michael R. Blaisse today

COLLECTION

Collection: Discovery and Engineering of Pathways for Produ…

Michael R. Blaisse today

COLLECTION

Collection: Structural Evidence for the Dopamine-First Mechanism of …

Benjamin R. Lichman today

DATASET

Phylogenetic data of Zucchini et al., 2017. Nature Microbiology

Pierre Garcia today

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Anna Itkin today

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Support Information

The "Healing" Effect of Graphene Oxide in Achieving Robust Dilute Ferromagnetism in Oxygen-Deficient Titanium Dioxide

Qing Zhu,† Xijun Wang,† Jun Jiang,* and Jin-Wu Xu*

Hefei National Laboratory for Physical Sciences at the Microscale, Department of Physical Chemistry, Department of Chemistry and Materials Science, University of Science and Technology of China, Hefei, Anhui 230026, P. R. China

Correspondence and requests for materials should be addressed to J. J. (email:

"Healing" Effect of Graphene Oxide in Achieving Robust Dilute Ferrom…

Qing Zhu today


Supporting Information

Isothermal vapor-liquid equilibria for binary mixtures of methyl nonafluorobutyl ether + acetone, cyclopentyl methyl ether, ethyl acetate, n-heptane, methanol, and toluene

Karel Řehák*, Martin Kilpinen, Martin Dreja, and Pavel Morávek

Department of Physical Chemistry, University of Chemistry and Technology, Prague

166 28 Prague 6, the Czech Republic

* e-mail: karel.rehak@vscht.cz

Saturated vapor pressure and liquid density data for cyclopentyl methyl ether (CPME)

Isothermal Vapor–Liquid Equilibria for Binary Mixtures of Methyl Nona…

Karel Řehák today

Structural Evidence for the Dopamine-First Mechanism of Norcoclaurine Synthase

Version 2 Published on 09 Oct 2017 - 08:49

Norcoclaurine synthase (NCS) is a Pictet-Spenglerase that catalyzes the first key step in plant benzylisoquinoline alkaloid metabolism, a compound family that includes bioactive natural products such as morphine. The enzyme has also shown great potential as a biocatalyst for the formation of chiral isoquinolines. Here we present new high-resolution X-ray crystallography data describing *Thalictrum flavum* NCS bound to a mechanism-inspired ligand. The structure supports two key features of the NCS "dopamine-first" mechanism: the binding of dopamine catechol to Lys-122 and the position of the carbonyl substrate binding site at the active site entrance. The catalytically vital residue Glu-110 occupies a previously unobserved ligand-bound conformation that may be catalytically significant. The potential roles of inhibitory binding and alternative amino acid conformations in the mechanism have also been revealed. This work significantly advances our understanding of the NCS mechanism and will aid future efforts to engineer the substrate scope and catalytic properties of this useful biocatalyst.

https://doi.org/10.1021/acs.biochem.7b00769

AUTHORS

Benjamin R. Lichman
Altin Sula
Thomas Pesnot
Helen C. Hailes
John M. Ward
Nicholas H. Keep

Volume 95 Issue 40 | p. 22 | News of The Week
Issue Date: October 9, 2017 | Web Date: October 5, 2017

Publishers taking legal action against ResearchGate to limit unlicensed paper sharing on networking site

Separate suit against pirate site Sci-Hub by the American Chemical Society appears likely to succeed

*By **Jyllian Kemsley & Andrea Widener***

[+]Enlarge

ResearchGate encourages users to upload full text, supplementary material, and figures, as shown in this screen shot for a C&EN story referenced on the site.

Credit: ResearchGate

Several scientific publishers, including the American Chemical Society, are expanding their legal actions against sites that facilitate sharing of scientific articles in violation of copyright law.

The publishers are preparing to issue what could be millions of notices to the scientific networking site **ResearchGate** asking it to remove copyrighted material. ACS and Elsevier have

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TOXICOLOGICAL SCIENCES, 143(1), 2015, 3–5

doi: 10.1093/toxsci/kfu237
EDITORIAL

EDITORIAL

Data Sharing in Toxicology: Beyond Show and Tell

Gary W. Miller[1]

EDITORIAL

Making Data Accessible: The Dryad Experience

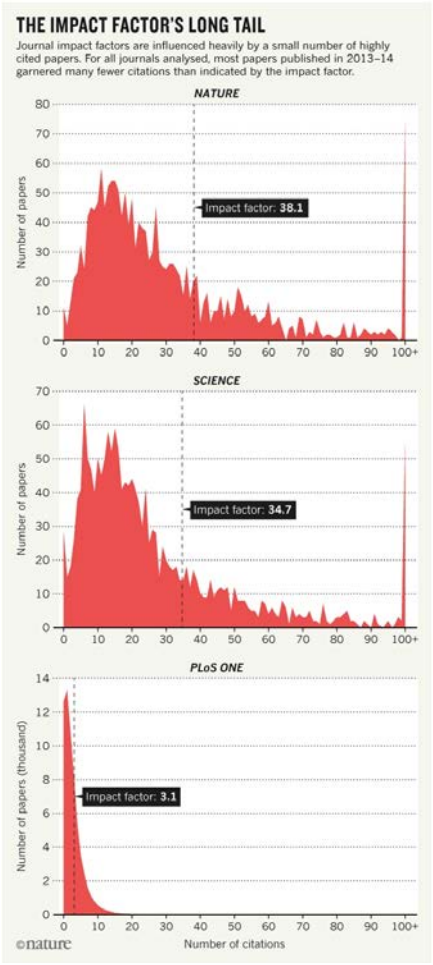
Gary W. Miller[1]

Editor-in-Chief, Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, Georgia 30322 and [1]For correspondence. E-mail: gary.miller@toxicology.org

EDITORIAL

More than Manuscripts: Reproducibility, Rigor, and Research Productivity in the Big Data Era

Lance A. Waller[1] and Gary W. Miller[2]



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PUBLICATIONS EVENTS SCIENCE SKILLS CAREERS MEMBERSHIP PUB

ASM Media Advisory: ASM No Longer Supports Impact Factors for its Journals

Washington, DC – July 11, 2016 - The editors-in-chief of ASM journals and ASM leadership have decided to no longer advertise the impact factors of ASM journals on the journals' websites. This decision was made in order to avoid contributing to a distorted value system that inappropriately emphasizes high IFs. High-IF journals limit the number of accepted articles to create a perception of exclusivity, and individuals receive disproportionate rewards for articles in high IF journals, while science as a whole suffers from a distorted values system and delayed communication of research.

It is the hope of ASM journal editors-in-chief and ASM leadership to move away from this system and the undue focus on journal IF, which detracts from the advancement of scientific research, by removing IFs from ASM journal websites. In doing so, ASM hopes to make a statement of principle that other journals will follow.

nature International weekly journal of science

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Archive > Volume 535 > Issue 7611 > News > Article

NATURE | NEWS

Journal impact factors 'no longer credible'

The measure of scholarly impact is now being manipulated so much that it has ceased to be meaningful, editorial claims

November 5, 2015

Beat it, impact factor! Publishing elite turns against controversial metric

Senior staff at leading journals want to end inappropriate use of the measure.

One way to increase IF

Publish a lot of reviews

- October-8 (6)
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- February-4 (23)
- March-5 (25)

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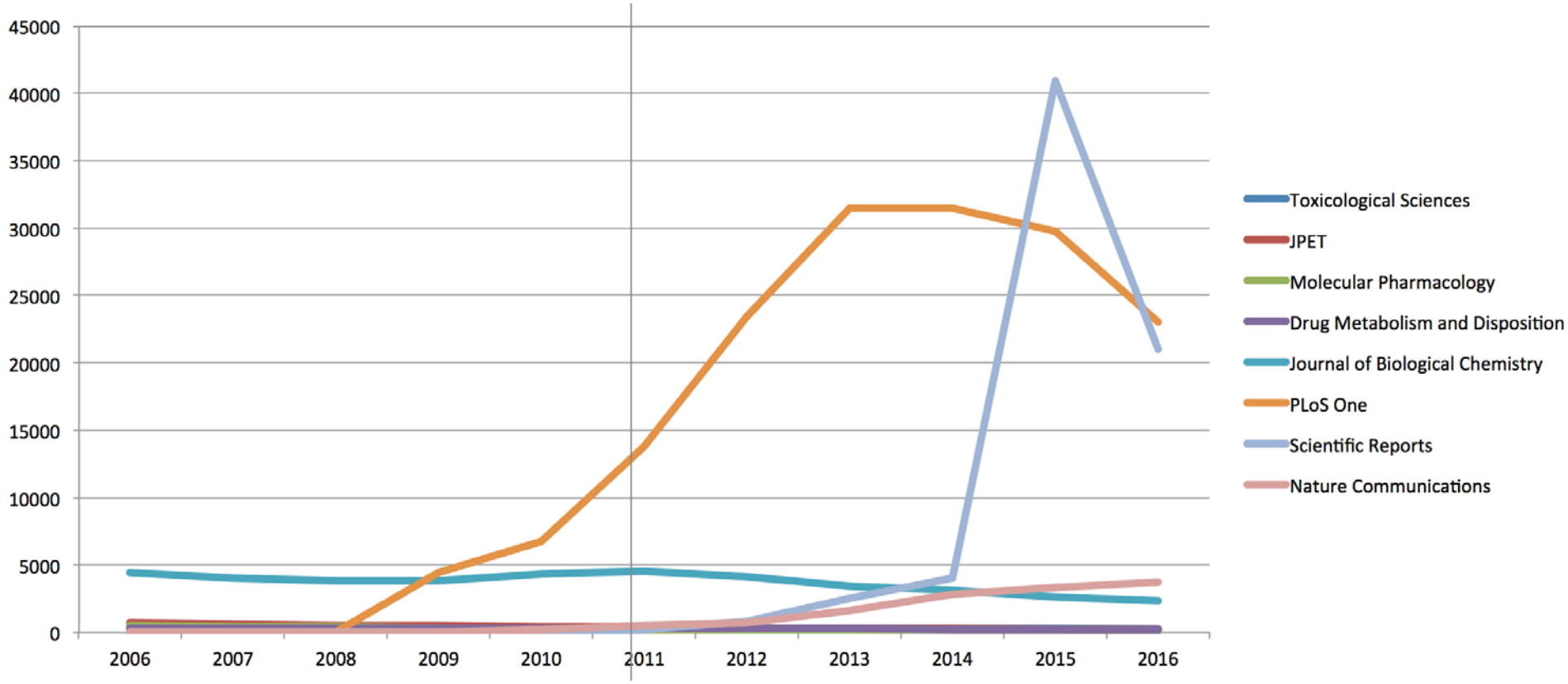

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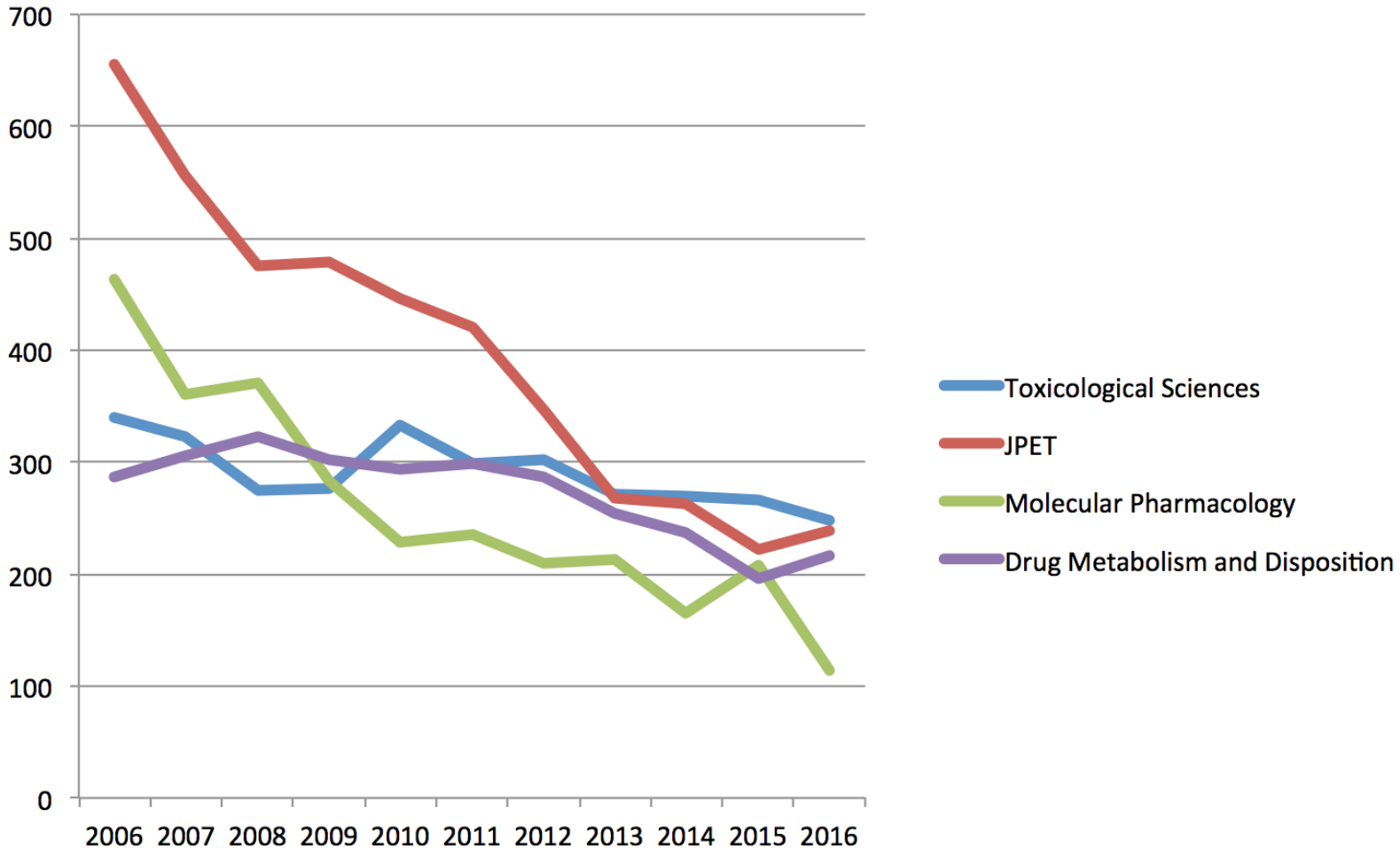

Support Science by Publishing in Scientific Society Journals

By PHIL DAVIS | OCT 2, 2017 | 2 COMMENTS

CONTROVERSIAL TOPICS | EDUCATION | MARKETING | READING | WORLD OF TOMORROW

Microbiology is a growing field, nevertheless, a shrinking proportion of papers are being published in society-sponsored journals, a recent analysis of PubMed records reveals.

An editorial, "Support Science by Publishing in Scientific Society Journals," was published recently in the journal, *mBio,* by Pat Schloss, chair of the journals board for the American Society for Microbiology (ASM), Arturo Casadevall, Editor in Chief of *mBio* (an ASM journal), and Mark Johnston, the Editor in Chief of *Genetics*, from the Genetics Society of America (GSA).

Journals A-Z

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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- American Journal of Gastroenterology
- American Journal of Gastroenterology Supplements

B

- BDJ Open
- BDJ Team
- Blood Cancer Journal
- Bone Marrow Transplantation
- Bone Research
- British Dental Journal
- British Journal of Cancer

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- Cancer Gene Therapy
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- Communications Chemistry
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- Emerging Microbes & Infections
- European Journal of Clinical Nutrition
- European Journal of Human Genetics
- Evidence-Based Dentistry
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- Eye

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N

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- NPG Asia Materials
- npj 2D Materials and Applications
- npj Aging and Mechanisms of Disease
- npj Biofilms and Microbiomes
- npj Breast Cancer
- npj Clean Water
- npj Climate and Atmospheric Science
- npj Computational Materials

A new National Institutes of Health policy encourages researchers to include in their grant proposals preprints, which are early, unedited versions of papers that later appear in journals like these.

Sergei25/shutterstock

NIH enables investigators to include draft preprints in grant proposals

By **Jocelyn Kaiser** | Mar. 24, 2017 , 5:45 PM

Researchers should feel free to include preprints, or draft manuscripts that haven't yet been gone through peer review, as part of their applications when they seek funding from the Bethesda, Maryland–based National Institutes of Health (NIH), the agency **announced today**.

arXiv.org, 1992

A rotating black hole in the Galactic Center

Heino Falcke (1)
Peter L. Biermann (1)
Wolfgang J. Duschl (2)
Peter G. Mezger (1)

Accepted for publication in A&A: December 4, 1992

Abstract

Recent observations of Sgr A* give strong constraints for possible models of the physical nature of Sgr A* and suggest the presence of a massive black hole with $M \leq 2 \cdot 10^6 M_\odot$ surrounded by an accretion disk which we estimate to radiate at a luminosity of $< 7 \cdot 10^5 L_\odot$. We therefore calculate

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Classification: Biological sciences, Pharmacology

Synaptic vesicle glycoprotein 2C (SV2C) modulates dopamine release and is disrupted in Parkinson's disease

Amy R. Dunn[1], Kristen A. Stout[1], Minagi Ozawa[1], Kelly M. Lohr[1], Alison I. Bernstein[1], Yingjie Li[1,2], Minzheng Wang[1], Carmelo Sgobio[3], Namratha Sastry[3], Huaibin Cai[3], W. Michael Caudle[1,2], and Gary W. Miller*[1,2]

1. Rollins School of Public Health, Emory University, Atlanta, GA 30322. 2. Center for Neurodegenerative Disease, Emory University, Atlanta, GA 30322. 3. Transgenics Section, Laboratory of Neurogenetics, National Institute on Aging, National Institutes of Health, Bethesda, MD 20892.

Corresponding author: Dr. Miller, Department of Environmental Health, Emory University, Atlanta, GA 30322. Tel.: 404-712-8582, email: gary.miller@emory.edu

The synaptic vesicle glycoprotein 2 (SV2) family of proteins are involved in synaptic function throughout the brain. The ubiquitously expressed SV2A has been widely implicated in

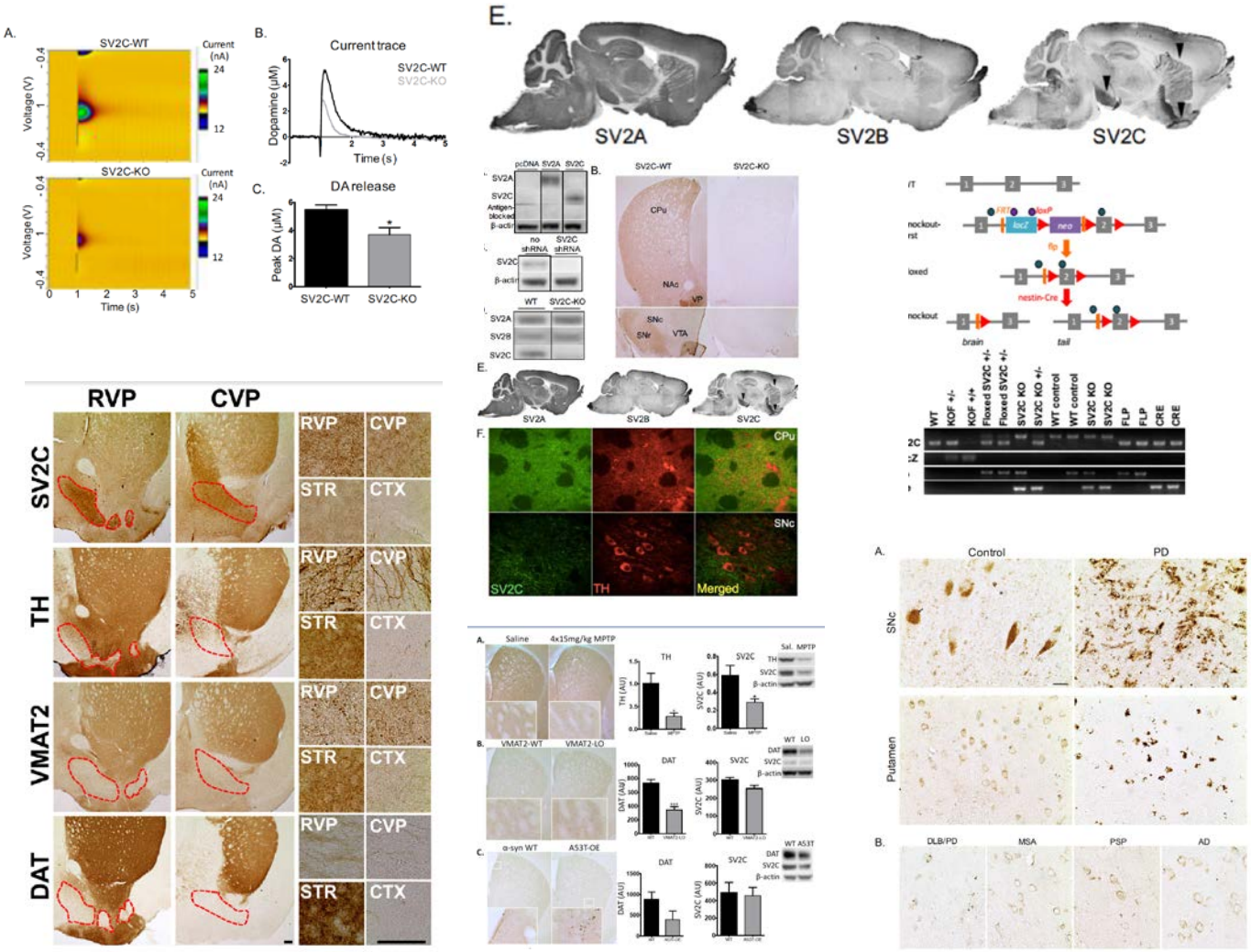
Disrupted vesicle function may represent a common pathway to degeneration and identifying novel mediators of

Synaptic vesicle glycoprotein 2C (SV2C) modulates dopamine release and is disrupted in Parkinson disease

Amy R. Dunn[a], Kristen A. Stout[a], Minagi Ozawa[a], Kelly M. Lohr[a], Carlie A. Hoffman[a], Alison I. Bernstein[a], Yingjie Li[a,b], Minzheng Wang[a], Carmelo Sgobio[c], Namratha Sastry[c], Huaibin Cai[c], W. Michael Caudle[a], and Gary W. Miller[a,b,d,e,1]

[a]Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA 30322; [b]Center for Neurodegenerative Diseases, Emory University School of Medicine, Atlanta, GA 30322; [c]Transgenics Section, National Institute on Aging, National Institutes of Health, Bethesda, MD 20892; [d]Department of Pharmacology, Emory University School of Medicine, Atlanta, GA 30322; and [e]Department of Neurology, Emory University School of Medicine, Atlanta, GA 30322

Edited by Reinhard Jahn, Max Planck Institute for Biophysical Chemistry, Gottingen, Germany, and approved January 30, 2017 (received for review October 11, 2016)



New Results

Synaptic vesicle glycoprotein 2C (SV2C) modulates dopamine release and is disrupted in Parkinsons disease

Amy R. Dunn, Kristen A. Stout, Minagi Ozawa, Kelly M. Lohr, Alison I. Bernstein, Yingjie Li, Minzheng Wang, Carmelo Sgobio, Namratha Sastry, Huaibin Cai, W. Michael Caudle, Gary W. Miller

doi: https://doi.org/10.1101/077586

Now published in *PNAS* doi: 10.1073/pnas.1616892114

Abstract

The synaptic vesicle glycoprotein 2 (SV2) family of proteins are involved in synaptic function throughout the brain. The ubiquitously expressed SV2A has been widely

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TOXICOLOGICAL SCIENCES, 155(2), 2017, 300–301

doi: 10.1093/toxsci/kfw266
Editorial

EDITORIAL

Preprints in Toxicology

Gary W. Miller[1,*,†]

*Editor-in-Chief, *Toxicological Sciences*; †Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, Georgia 30322

[1]For correspondence via E-mail: gary.miller@toxicology.org

Imagine attending a national meeting with the expectation of 50–100 people showing up to your presentation, and looking up

field of physics in 1991. This service called arXiv (pronounced "archive") was originally dedicated to papers in high-energy

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Editorial

EDITORIAL

Preprints in Toxicology

Gary W. Miller[1,*,†]

*Editor-in-Chief, *Toxicological Sciences*; †Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, Georgia 30322

[1]For correspondence via E-mail: gary.miller@toxicology.org

Imagine attending a national meeting with the expectation of 50-100 people showing up to your presentation, and looking up

field of physics in 1991. This service called arXiv (pronounced "archive") was originally dedicated to papers in high-energy

Richard Sever
@cshperspectives

Following

Medawar on scooping: an “endearing trait of a young research[er] is the illusion everyone else is eager to do his research before he can"

> **Richard Sever** @cshperspectives
> Toxicologists embrace bioRxiv academic.oup.com/toxsci/article…

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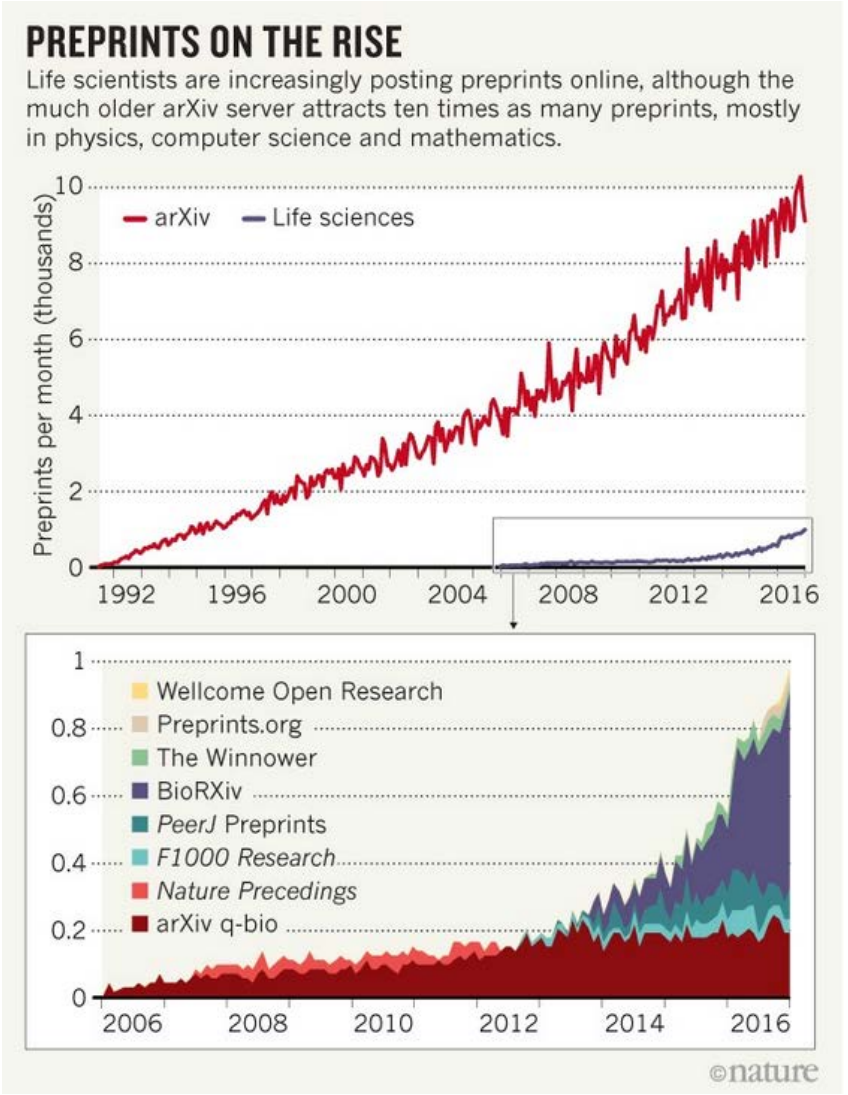
Use of Preprints in the health sciences

- Reporting Preprints and Other Interim Research Products
- https://grants.nih.gov/grants/guide/notice-files/NOT-OD-17-050.html
- Newly NIH issued statement endorses use including citation within biosketches, progress reports, and grant applications



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NIH intends to maximize impact of interim research products that are developed with NIH funds. Therefore, NIH expects awardees to ensure a high level of public access to NIH supported interim products. To facilitate text mining and other analysis of these products as data, the NIH expects standardized terms of use. NIH also expects awardees will adhere to other norms of responsible scientific communication.

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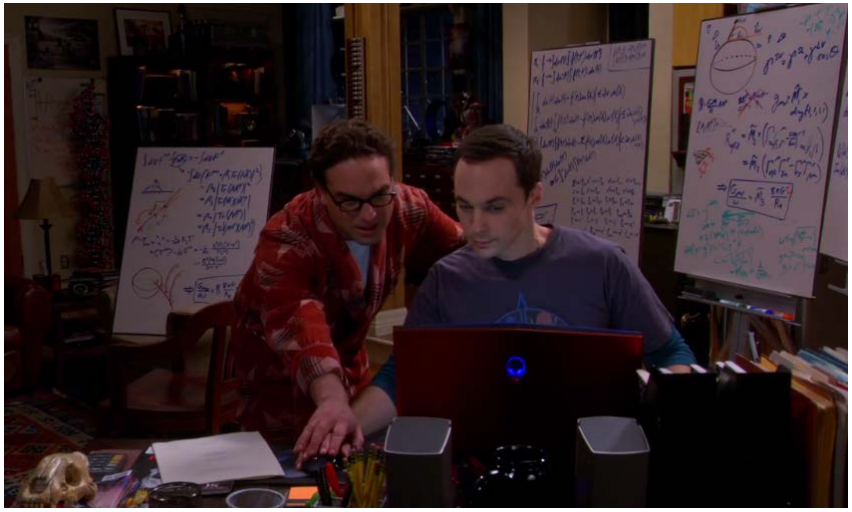
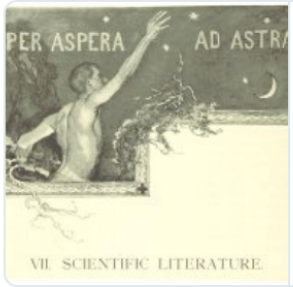
For applications submitted for the May 25, 2017 due date and thereafter, awardees can claim these products on their progress report publication list. They can also report them on their RPPR as of May 25, 2017, and link them to their award in their My Bibliography account.

- Sheldon: For a man whose last observation was our universe may be the surface of a multidimensional supercooled liquid, you're still awake seems like quite the sophomore slump.
- Leonard: You worked out all the math.
- Sheldon: Oh, I did more than work out all the math. I wrote a paper.
- Leonard: You wrote a paper on my idea?
- Sheldon: I wrote a paper on our idea.
- Leonard: When did my idea become our idea?
- Sheldon: When I mixed it with Sheldony goodness and cooked it in the Easy-Bake oven of my mind.
- Leonard: This is good. Our idea is really good.
- Sheldon: Well, the lightbulb in this oven is ridiculously bright.
- Leonard: You know, if no one's thought of this, yet, this could be a big deal.
- Sheldon: Only way we'll know for sure **is if we post it online to the pre-print server**. I have it ready to go, but I wasn't gonna do it without you.
- Leonard: Wow, it's all happening so fast. Should we just sleep on it?
- Sheldon: We could, but we always run the risk of someone else beating us to the punch.
- Leonard: You're sure it's good?
- Sheldon: My name is right on there with yours. That is a surefire mark of quality. That might as well say directed by Joss Whedon.
- Leonard: Okay, partner, let's do it.
- Sheldon: Come on. Click the mouse with me.
- Leonard: One, two three.
- Together: Click.
- Leonard: Well, we did it.
- Sheldon: Yes, we did, my friend.



Guest Post: Emory's Gary Miller, "The Literature of Science"



Guest Post: Emory's Gary Miller, "The Literature of Science"

Emory Professor and journal Editor in Chief Gary Miller offers a long term view of the scholarly literature and offers thoughts on the important values worth preserving in the shift from print to d…

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EDITORIAL

The Literature of Science

Gary W. Miller[1,*,†]

*Editor-in-Chief, *Toxicological Sciences*, †Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, Georgia 30322

[1]For correspondence via E-mail: gary.miller@toxicology.org.

Pouring through the stacks of journals during my early scientific training, I was awestruck. Reading scientific papers from 50 to 100 years ago instilled a sense of reverence. I could peruse the scientific literature for hours, not even looking for topics within my discipline. The writing was rich. The contributions were ob-

making the output seem more abstract and distancing the current creators of scientific knowledge from the archives of scientific literature. Does an interactive PDF convey the findings as well as the weathered and tattered pages of history? I am no Luddite, but at times I deliberately eschew technology because