

University of Pittsburgh. Open Access Week. October 22, 2014.

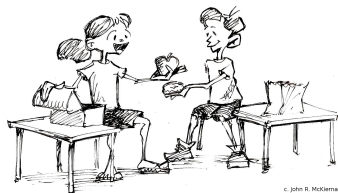
Culture change in academia: Making sharing the new norm

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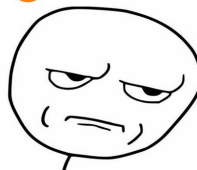
Email: emck31@gmail.com
Twitter: [@emckiernan13](https://twitter.com/emckiernan13)
Blog: emckiernan.wordpress.com



Current academic culture



OPEN  ACCESS? **NO.**



Images: UR - [openscience.com](https://www.openscience.com/); LL - John R. McKiernan;
LR - Opensourceway



Photo: Peter Reed via Flickr

Change requires action and interaction at multiple levels

Regional and national



Institutional



Individual



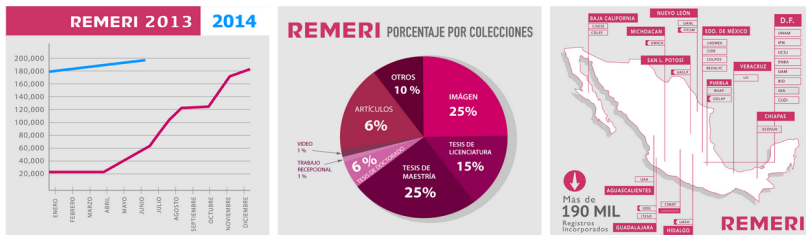
LA Referencia



lareferencia.redclara.net/rfr/

- network of open institutional repositories in Latin America
- 100 institutions in 9 countries
- aims to share and give visibility to scientific production in the region
- 850K+ total documents
- 410K+ articles
- 310K+ Master's theses
- 120K+ PhD dissertations

REMERI

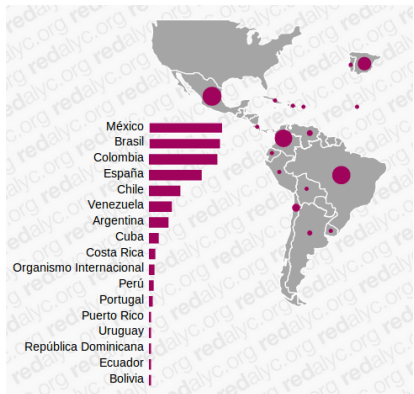


- network of open access repositories in Mexico
- 78 repositories from 39 institutions of higher education
- goals: integrate, disseminate, preserve and give visibility to the academic and scientific production in the country
- 230K+ documents, including articles, theses, and books

www.remeri.org.mx/portal/index.html

Redalyc

"Science that is not seen does not exist"



www.redalyc.org/home.oa

- created by the Autonomous University of the State of Mexico in 2003
- open portal for scientific journals from Latin America, the Caribbean, Spain, and Portugal
- generates bibliometric and usage data for evaluation
- 900+ scientific journals
- 27K+ issues
- 350K+ full text articles
- involved in creation of national open access initiative

Mexico's new open access initiative



Photo: via @Redalyc on Twitter

legislandoatufavor.com.mx

- presented by Senator Ana Lilia Herrera Anzaldo
- in consultation with researchers at Mexican institutions
- approved unanimously by Congress, signed into law by president May 2014
- discusses benefits of open access to society
- encourages all researchers receiving public funds to make work openly available
- will create a national open access repository overseen by CONACyT

Mexican universities with open access mandates



UAEM

Universidad Autónoma
del Estado de México



UANL

UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN

The good news:

**We are making progress on open access at the regional,
national, and institutional levels.**

The bad news...

Many academics do not have access to literature they need

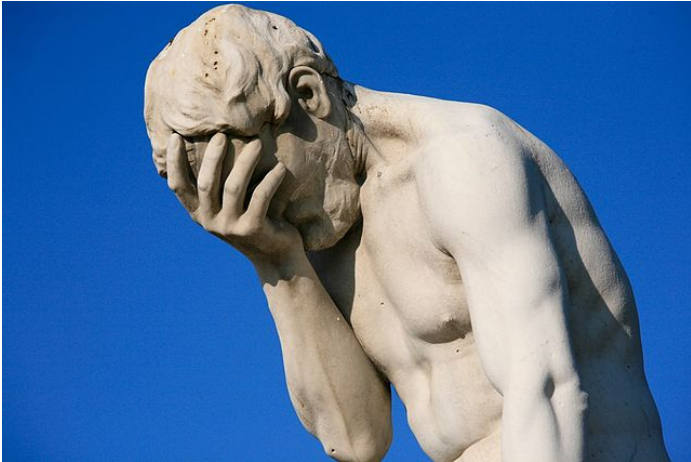


Photo: Mauricio Fino via Flickr

“Frankly, I am unclear what the public access challenge is. Who does not have access? I am not at a large university. I have always been able to get papers I needed over the years.”

Dr. Gordon L. Nelson
President of the Council of Scientific Society Presidents

Interview with Scholarly Kitchen, Aug. 25, 2014.



Alex E. Proimos via Wikimedia Commons

Some institutions in Mexico have insufficient access



Photo: Delmoral815, via Wikimedia

The National Institute of Public Health is a federal research institute.

~300 researchers, ~700 students

Access at INSP:

- **139** journals in total accessible via institute
- 88 journals in total with electronic access
- 66 journals with electronic access via paid subscriptions
- 22 journals with free electronic access provided by publisher
- 51 print-only journals (e.g. Cell, Nature, Science)
- access to select journals through consortium (CONRICyT)

Thanks to Edgar Aguilar Vera at INSP for info.

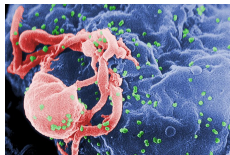
High costs of subscriptions are prohibitive

Researchers in the institute study Chagas' disease, cholera, dengue, HIV, influenza, malaria, tuberculosis...

INSP does **NOT** have access to:

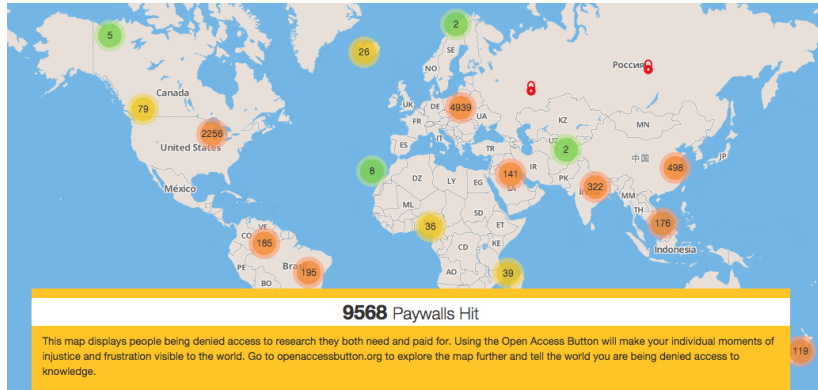
- Annual Reviews of Medicine
- Current Biology
- Nature Medicine
- Nature Immunology
- PNAS
- ...and MANY more

What is the limiting factor? COST.



Photos: Erwin Huebner (top); James Gathany (middle); C. Goldsmith (bottom) via Wikimedia Commons

Lack of access is a global problem



Open Access Button openaccessbutton.org - New launch coming Oct. 21st!

What can I do as an individual researcher to improve access?



My pledge to be open

- I will not edit, review, or work for closed access journals.
- I will blog my work and post preprints, when possible.
- I will publish only in open access journals.
- I will not publish in Cell, Nature, or Science.
- I will pull my name off a paper if coauthors refuse to be open.



If I am going to 'make it' in science, it has to be on terms I can live with.

Concerns of early-career researchers

the **guardian**

News Sport Comment Culture Business Money Life & style Tra

Professional Higher Education Network About us Awards Find a

Higher Education Network

Ideas, insight and debate from the global higher education community

Series: Early career researchers

Boycotting academic publishers is a career risk for young scientists



AT THE HEART OF THE
HIGHER EDUCATION DEBATE

HOME NEWS COMMENT FEATURES BOOKS RANKINGS AWA

Breaking news Politics and Policy Research World news Interviews Stud

HOME NEWS

High price of gold: How early career researchers will suffer

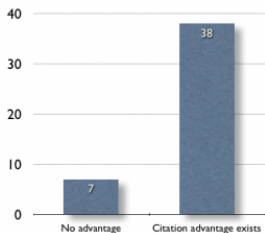
If I publish in OA journals:

- I will be hiding my work away in less visible (low prestige) journals.
- I must relegate my work to low impact (low IF) journals.
- Peer review will be of low quality.
- I will not get a job/grant/tenure.
- It will cost too much.

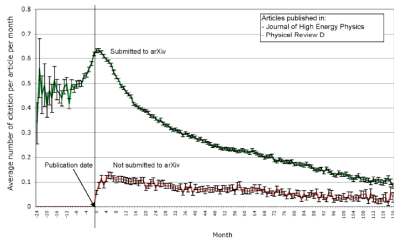
Myth 1: Less visibility and prestige

Be open, get more citations

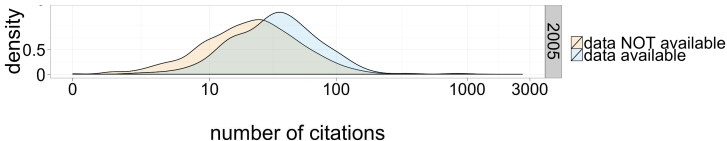
Results from studies on open access citation advantage



Wagner (2010), Issues in Science and Technology




Gentil-Beccot, Mele, Brooks (2009), arXiv:0906.5418



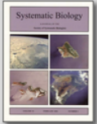
Adapted from Piwowar & Vision (2013), PeerJ 1:e175

What kind of visibility will your data bring you?





[About](#) ▾
 [For researchers](#) ▾
 [For organizations](#) ▾

Data from: Using supermatrices for phylogenetic inquiry: an example using the sedges



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Should we make data open? YES.

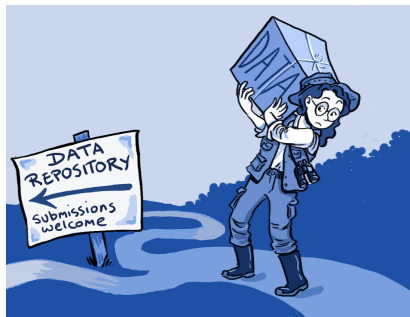


Image: Ainsley Seago doi:10.1371/journal.pbio.1001779.g001

How do we encourage sharing?

- educate researchers (e.g. show them citation advantage)
- have clear policies on citation of primary data
- recognize data sharing in tenure and promotion
- provide financial support for data preparation
- develop infrastructure for data deposit and storage

More ideas: Roche *et al.* (2014). doi:10.1371/journal.pbio.1001779

Myth 2: I have to publish in low Impact Factor journals.

Don't worship the Impact Factor!



Image: John R. McKiernan

More info: occamstypewriter.org/scurry/2012/08/13/sick-of-impact-factors/

But if Impact Factor is an issue...



IF 7.2

frontiers

IF 2.2-4.2



IF 14.0



IF 7.3



IF 3.5



IF 7.4



IF 10.5



IF 4.6



IF 10.7



IF 5.1



IF 11.8



IF 4.4

List of OA journals with Impact Factors

Open access journals 2013 Impact Factors

[Edit article](#)

 OpenAccessJournals_2013ImpactFactor...ods	preview download
 OpenAccessJournals_2013ImpactFactor...pdf	preview download
 OpenAccessJournals_2013ImpactFactor...xlsx	preview download

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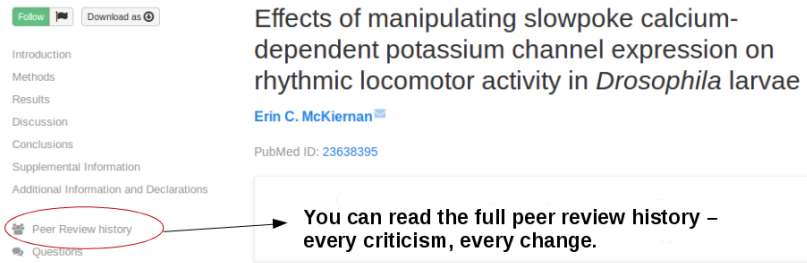
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Cite this: McKiernan, Erin (2014): Open access journals 2013 Impact Factors. [figshare](#).
<http://dx.doi.org/10.6084/m9.figshare.1206415>
Retrieved 02:54, Oct 17, 2014 (GMT)

Myth 3: Peer review at OA journals is poor quality.


Myth of poor peer review


- Retraction rate is highest in high IF subscription journals
- No controlled study comparing peer review in subscription vs. OA journals
- Bohannon 'sting' did not look at peer review in subscription journals
- Bohannon 'sting' found reputable OA publishers rejected spoof paper
- Peer review is often transparent in OA journals




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Introduction
Methods
Results
Discussion
Conclusions
Supplemental Information
Additional Information and Declarations

 Peer Review history

 Questions

Effects of manipulating slowpoke calcium-dependent potassium channel expression on rhythmic locomotor activity in *Drosophila* larvae

Erin C. McKiernan 

PubMed ID: 23638395

You can read the full peer review history – every criticism, every change.

OA journals offering open peer review



Myth 4: I won't get a job, grants, or tenure.

Hiring, tenure, and promotion...is tide changing?

Over 500 organizations and 12,000 individuals have signed DORA, pledging:



am.ascb.org/dora/

- **not** to consider journal-based metrics (JIF) in hiring, promotion, or funding decisions
- the content of a paper will be weighed more heavily in evaluations than the journal in which it was published
- to consider the value and impact of all research outputs



Signers include at least 25 individuals from Pitt!

Institutions valuing open access, open data



“VCU Promotion and tenure committees should recognize that publication...[in open access formats] offers added value and greater public good”

www.facultysenate.vcu.edu/2010/11/17/vcu-faculty-senate-resolution-1/



“Open access to research data benefits society...Value inheres in data as a standalone research output”

openaccess.unt.edu/denton-declaration

Funders with open access or public access mandates



wellcometrust



RESEARCH
COUNCILS UK



THE WORLD BANK

Use SHERPA/JULIET to search funder policies



Funding Organisation (linked to their JULIET summary)	Publications Policy		Data Archiving Policy	Country
	Open Access Publishing	Open Access Archiving		
Autism Speaks		✓ ==		United States
Gordon and Betty Moore Foundation (GBMF)	==		✓ ==	United States
Howard Hughes Medical Institute (HHMI)		✓ ✓ ==	✓ ==	United States
Institute of Education Sciences (IES)		✓ ✓ ==		United States
MacArthur Foundation (John D. and Catherine T. MacArthur Foundation)	==	== ==	== ==	United States
National Institutes of Health (NIH)		✓ ✓ ==	✓ ==	United States
Phelan-McDermid Syndrome Foundation		✓ ✓ ==		United States
World Bank		✓ ✓ ==	✓ ==	United States

- Whether to archive articles: deposit required
- What to archive: full final version of article
- When to archive: when accepted for publication (or subject to embargoes)
- Data archiving is required
- Data must be deposited with 5 years

Funders care about open access and open data

● Full Coverage
 ◐ Partial Coverage
 ○ No Coverage

Research Funders	Policy Coverage		Policy Stipulations				Support Provided				
	Published outputs	Data	Time limits	Data plan	Access/sharing	Long-term curation	Monitoring	Guidance	Repository	Data centre	Costs
AHRC	●	●	●	●	●	◐	○	●	○	◐	◐
BBSRC	●	●	●	●	●	●	●	●	●	◐	●
CRUK	●	●	●	●	●	●	●	◐	●	○	○
EPSRC	●	●	●	◐	●	●	●	◐	○	○	●
ESRC	●	●	●	●	●	●	●	●	●	●	◐
MRC	●	●	●	●	●	●	○	◐	●	○	◐
NERC	●	●	●	●	●	●	●	●	●	●	◐
STFC	●	●	●	●	●	●	●	◐	●	◐	◐
Wellcome Trust	●	●	●	●	●	●	●	●	●	◐	●

<http://www.dcc.ac.uk/resources/policy-and-legal/overview-funders-data-policies>

Myth 5: OA publishing costs too much.

Being open doesn't have to break the bank

- Many OA journals do not charge.
- Journals like PeerJ have one-time, low-cost membership fees.
- Many journals have waivers.
- Many institutions have OA publisher memberships.
- Many institutions have OA publishing funds.
- Some funders have started charities to pay for APCs.
- Self-archiving costs nothing.



New funder-run charity to cover OA fees

Charity Open Access Fund



www.wellcome.ac.uk/About-us/Spotlight-issues/Open-access/Charity-open-access-fund/index.htm

**Open access doesn't just mean publishing in OA journals.
You can go green!**


Self-archiving is a great way to be open




arXiv.org


bioRxiv
beta

- institutional repositories
- personal website



Erin McKiernan
(Neuroscience)



 **figshare** advisor

Research statistics

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0
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<p>Culture change in academia: Making sharing the new norm.</p>	presentation	● 638 views ■ 8 shares
<p>Being open as an early career researcher</p>	presentation	● 627 views ■ 4 shares
<p>Relating ion channel expression, bifurcation structure, and diverse firing patterns in a model of an iden...</p>	paper	● 511 views ■ 4 shares
<p>Open access options for publishing neuroscience research</p>	fileset	● 477 views ■ 1 shares
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A genetic manipulation of motor neuron excitability does not alter locomotor output in *Drosophila* larvae

[Erin C. McKiernan](#) 

> Author and article information

∨ Abstract










Motor activity, like that producing locomotion, is generated by networks of neurons. At the last output level of these networks are the motor neurons, which send signals to the muscles, causing them to contract. Current research in motor control is focused on finding out how motor neurons contribute to shaping the timing of motor behaviors. Are motor neurons just passive relayers of the signals they receive? Or, do motor neurons shape the signals before passing them on to the muscles, thereby influencing the timing of the behavior? It is now well accepted that motor neurons have active, intrinsic membrane properties - there are ion channels in the cell membrane that allow motor neurons to respond to input in non-linear and diverse ways. However, few direct tests of the role of motor neuron intrinsic properties in shaping motor behavior have been carried out, and many questions remain about the role of specific ion channel genes in

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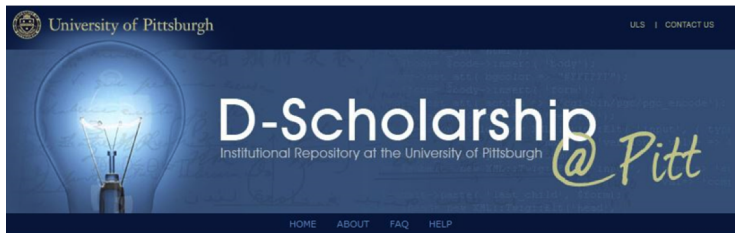
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Save article as: Private Public

Your institutional repository is a great way to go green!



Know your rights - don't sign them away

Know your Author Rights

What you should know when publishing your intellectual property

NEGOTIATE
You have the right to change your publication agreement!

NATIONAL GRANTS
If you have conducted your research using a national grant, you may be **REQUIRED** to make it publicly accessible.

LOCAL REPOSITORIES
FAIR USE allows you to place your work in a library repository under certain restrictions.

ADDENDUM
The easiest way to alter an agreement is by attaching a standardized addendum like the one from SPARC.

CHOOSE WISELY
You can choose to publish in a journal that supports **OPEN ACCESS** or **SELF-ARCHIVING**.



For More Information:

SHERPA/ROMEO www.sherpa.ac.uk/romeo

PLOS www.plos.org/about/open-access

SPARC www.arl.org/sparc

Via openaccess.commoncs.gc.cuny.edu/2014/03/07/you-know-what-you-write-but-do-you-know-your-rights/

AUTHOR RIGHTS

Use the SPARC Author Addendum to secure your rights as the author of a journal article



SPARC

<http://www.arl.org/sparc/>

What it really means to publish openly



CC-BY Danny Kingsley & Sarah Brown

My advice to ECRs

- Make a list of OA journals in your field - know your options

The screenshot shows a webpage titled "Open access options for publishing neuroscience research" with an "Edit article" button. It features a table of file formats for "OANeuroscienceJournals":

OANeuroscienceJournals.ods	preview	download
OANeuroscienceJournals.xls	preview	download
OANeuroscienceJournals.pdf	preview	download


Below the table is a "Download all" button. To the right, there are statistics: 434 views, 1 share, and a "cites coming soon" badge. At the bottom right, it says "Published on 26 Oct 2012 - 18:49 (GMT)" and "Filesize in total is 72.62 KB".

- Directory of Open Access Journals doaj.org can help
- Discuss open access, preprints, self-archiving upfront with collaborators
- Blog about your science - write so those outside your field can understand
- Be active on social media to increase visibility
- Document your altmetrics (Impact Story)


Show your real impact with altmetrics



Researcher in experimental and computational neuroscience.



 Open Access



 Connect more accounts

Selected works

Drag to change order



 **Relating ion channel expression, bifurcation structure, and diverse firing patterns in a model of an identified motor neuron** 

(2012) *figshare*.

highly discussed

highly viewed +1

highly discussed +1139

 **A Brunswikian evolutionary developmental theory of preparedness and plasticity** 

(2012) *figshare*.

highly viewed

highly discussed +5518

discussed

Key profile metrics

Drag to change order

184.9k |  impressions on
 12 articles

784 |  views on
 12 articles

648k |  impressions on
 4 slide decks

103.1k |  impressions on
 3 datasets

Discussing OA with your mentor

- Ask your mentor for a meeting to discuss publishing options
- Put together concise (15 mins max) presentation on benefits of OA
- Include **data** (lack of access worldwide, advancements made through open science, citation advantage)
- Explain how your work and the lab could benefit from being open
- Create a list of OA options and share this list with your mentor
- If your mentor insists on a toll access journal, discuss submitting an author addendum
- Start these discussions EARLY!!

From interview with ARCSCon at arcscon.tumblr.com/post/84942060277/advocating-for-openness

How to support ECRs in being open

- LISTEN! LISTEN! LISTEN!
- Lead by example - be open and others will see benefits
- Be receptive - answer emails, tweets, questions from ECRs about OA
- Say yes to giving tutorials, guest lectures, talks at meetings
- Do not consider where people publish in making hiring, grant, or tenure decisions
- Write open access publishing funds into your grants
- Create incentives for being open



Photo: listentomyvoice via flickr

Empowering ECRs to advocate for change



OPENCON2014

The Student and Early Career Researcher Conference on
Open Access, Open Education and Open Data

More info: opencon2014.org

OpenCon 2014 satellite events



Bring OpenCon to you.
Host a satellite event!

More info: opencon2014.org/satellite

In sum...Don't lock up your research!

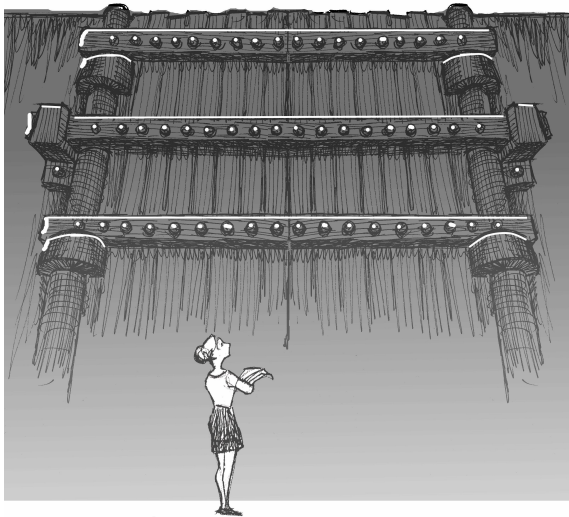


Image: John R. McKiernan

Take-home messages

- There does not have to be a conflict between being open and being successful.
- Being open does not have to hurt your career - it can help it!
- At any stage of your career, you have the right to stand up for your beliefs.
- If you believe in openness, stand up for it. Make it happen.
- Opening up academia starts with you and the choices you make.



Photo: Gideon Burton via flickr

These are some of the people you will help...Thank you!

Students in Puerto Rico



Students and researchers in Mexico

