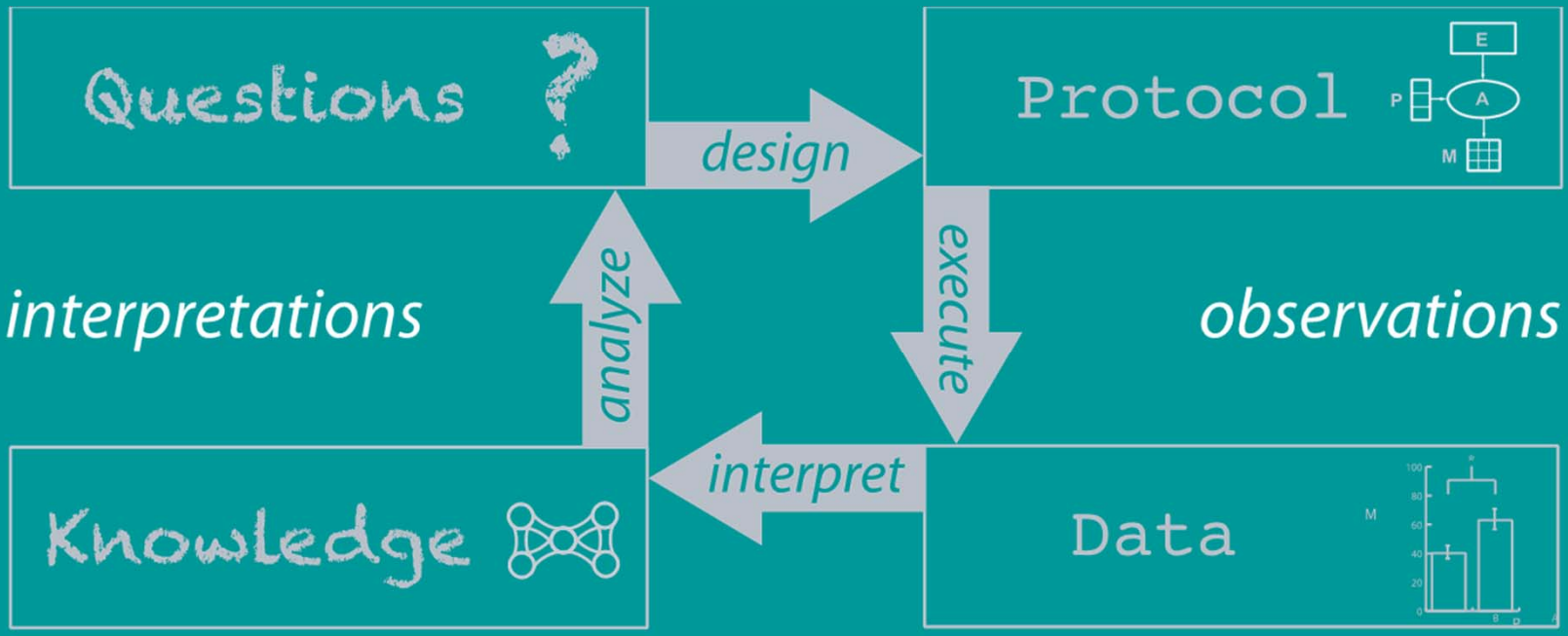
COMMUNICATING YOUR SCIENCE PART 1: YOU

Data After Dark

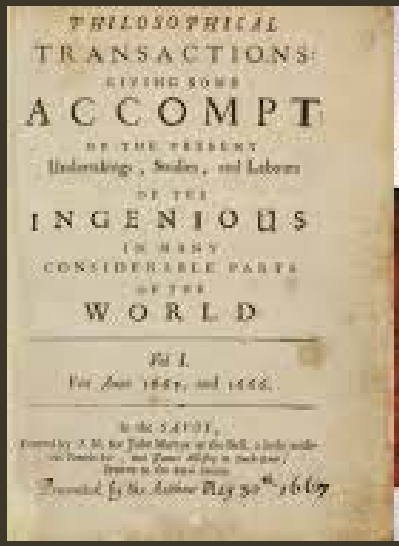
January 2016

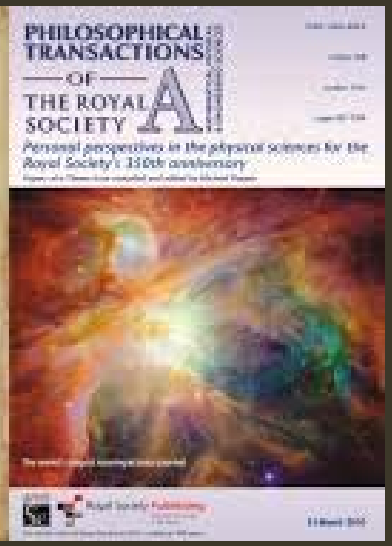
The science cycle



Slide from Gully Burns

How is science traditionally communicated?



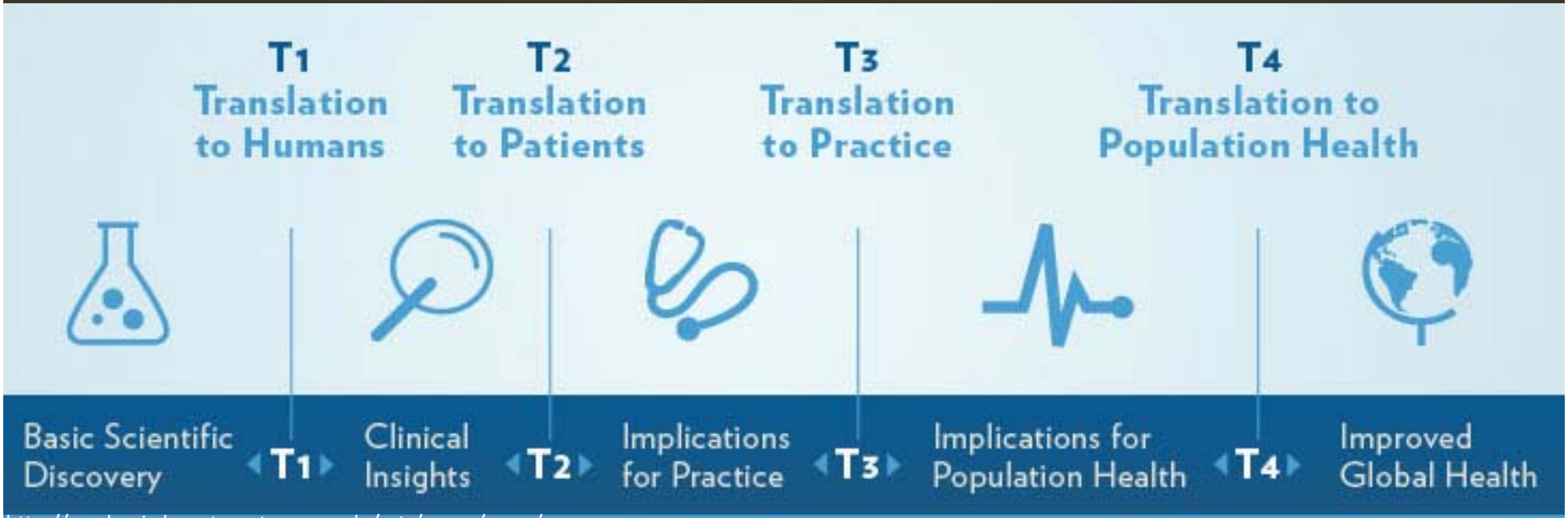


=> In some ways, it hasn't changed in 350 years

On average, timeframe from submission to publication is

9 months

Translational Research



http://academicdepartments.musc.edu/sctr/nexus/news/

How long does it take to bring a basic science discovery to a marketable product? ⇢ **15 years**

http://www.brightfocus.org/details-of-the-drug-discovery-and-approval-process.html?referrer=https://www.google.com/#Q3HowLong

Thinking Beyond the traditional manuscript

Raw Science	Small publications	Self-publishing
Datasets	Nanopublications	Blogging
Code	Argument or passage	Social Networks
Experimental design	Single figure publications	Comments & Reviews
Protocols/instruments		Annotations

How can you manage your scholarly footprint?

You leave bread crumbs wherever you go

https://aelefton.wordpress.com/2015/05/22/a-trail-of-breadcrumbs/

How many of you use social media?

A survey conducted in 2009 by CareerBuilder reported how companies use social media to screen their employees

45%
reported they used social sites to screen their hires

29%

26%

11%

7%

Positive

18% of employees found content on social sites that influenced them to hire the candidate

Negative

35% of employees found content on social sites that influenced them to **NOT** hire the candidate

http://www.adweek.com/socialtimes/5-things-you-can-do-on-twitter-to-make-sure-you-dont-get-hired-infographic/454249?red=at

Things to avoid posting online

1 Digital dirt

Self-incriminating photos, party pictures

2 Terrible troll

Trolling the internet and posting inappropriate comments on multiple sites

3 Big mouth

Posting negative comments about your employer/coworkers

4 Copious contacts and comments

Adding sketchy people/strangers to your contacts, who post inappropriate comments

5 Positively negative

Keeping everything negative

http://www.adweek.com/socialtimes/5-things-you-can-do-on-twitter-to-make-sure-you-dont-get-hired-infographic/454249?red=at

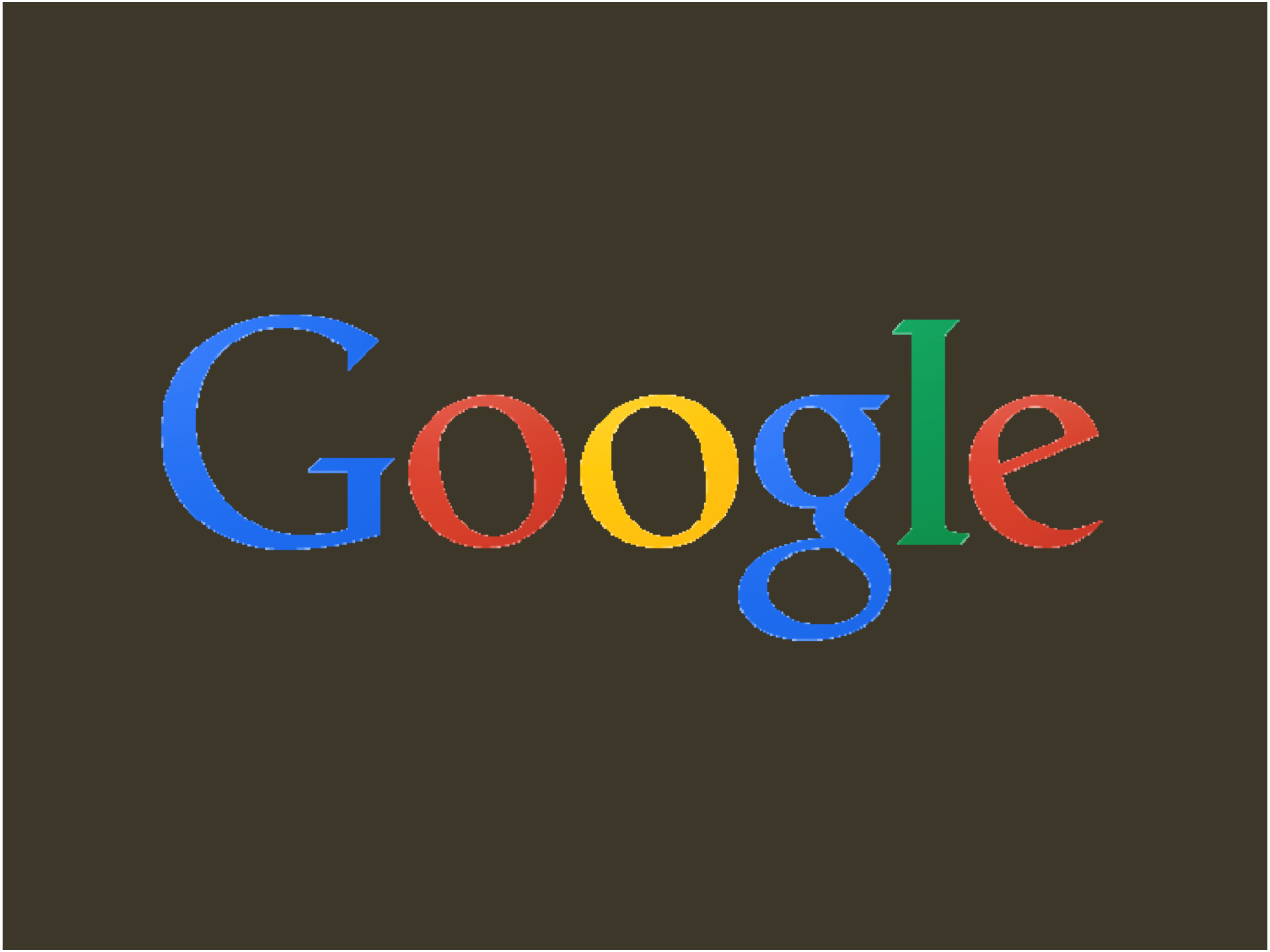
Your data will get used

Twitter data may help shed light on sleep disorders

Researchers generate a 'digital phenotype' of Twitter users with sleep problems

#cantsleep #teamnosleep

http://www.sciencedaily.com/releases/2015/06/150611114544.htm


Google

Open a twitter account and follow leaders in your field

Tweet at conferences, tweet about papers you read, etc.

@ontowonka @n_vasilevsky

Google "campbell, jl" and ecology

Scholar About 2,070 results (0.09 sec)

Post-wildfire logging hinders regeneration and increases fire risk [PDF] from humboldt.edu
DC Donato, JB Fontaine, JL Campbell, WD Robinson... - Science, 2006 - sciencemag.org
... However, our data indicate that delay was responsible for ~10% of the woody fuel present after logging. ↵ JK Agee, Fire **Ecology** of Pacific Northwest Forests (Island Press, Washington, DC, 1993). ... More in Collections. **Ecology**. Related Jobs from ScienceCareers. ...
Cited by 149 Related articles All 66 versions Cite

Winter in northeastern North America: a critical period for ecological processes [PDF] from esf.edu
JL Campbell, MJ Mitchell, PM Groffman... - Frontiers in **Ecology** ..., 2005 - Eco Soc America
Ecological research during winter has historically been a low priority in northeastern North America, an oversight that stems from the commonly accepted notion that there is little biological activity when temperatures drop below freezing. However, recent research has ...
Cited by 95 Related articles All 10 versions Cite

Can fuel-reduction treatments really increase forest carbon storage in the western US by reducing future fire emissions? [PDF]
JL Campbell, ME Harmon... - Frontiers in **Ecology** and ..., 2011 - Eco Soc America
It has been suggested that thinning trees and other fuel-reduction practices aimed at reducing the probability of high-severity forest fire are consistent with efforts to keep carbon (C) sequestered in terrestrial pools, and that such practices should therefore be rewarded ...
Cited by 17 Related articles All 5 versions Cite

Create alert

Mixed-severity fire regimes: lessons and hypotheses from the Klamath-Siskiyou Ecoregion [PDF] fro
JE Halofsky, DC Donato, DE Hibbs, JL Campbell... - Ecosphere, 2011 - Eco Soc America
... Fire regimes—the characteristic pattern and effects of wildland fire in a given area—are major drivers of the **ecology** of many vegetation types and are widely applied as a guiding framework for management of fire-prone ecosystems globally (Bond and van Wilgen 1996 ...
Cited by 21 Related articles All 8 versions Cite

Intake, digestibility, and passage of a commercially designed diet by two Propithecus species
JL Campbell, JH Eisemann, KE Glander... - American journal of ..., 1999 - Wiley Online Library
... **Campbell**, **JL**, Eisemann, JH, Glander, KE and Crissey, SD (1999), Intake, digestibility, and passage of a commercially designed diet by two propithecus ... Though both animals have a similar feeding **ecology**, the captive status of P. verreauxi is considered more stable than that of ...
Cited by 16 Related articles All 5 versions Cite

Dissolved organic nitrogen budgets for upland, forested ecosystems in New England] from fs.fed.us
JL Campbell, JW Hornbeck, WH McDowell, DC Buso... - Biogeochemistry, 2000 - Springer
Page 1. Biogeochemistry 49: 123–142, 2000. © 2000 Kluwer Academic Publishers. Printed in the Netherlands. Dissolved organic nitrogen budgets for upland, forested ecosystems in New England JOHN L. CAMPBELL1, JAMES ...
Cited by 155 Related articles All 17 versions Cite

Who are you?

ORCiD
orcid.org
Connecting Research
and Researchers

RESOURCES

www.plumanalytics.com

Impact.Story

impactstory.org

=> Rely largely on social network mentions, URLs, and DOIs

Services to identify yourself and your impact

Scientists must share early and share often to boost citations

http://theconversation.com/scientists-must-share-early-and-share-often-to-boost-citations-18699

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Melissa Anne Haendel	POSITION TITLE Assistant Professor, Oregon Health and Science University
eRA COMMONS USER NAME MHAENDEL	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as*

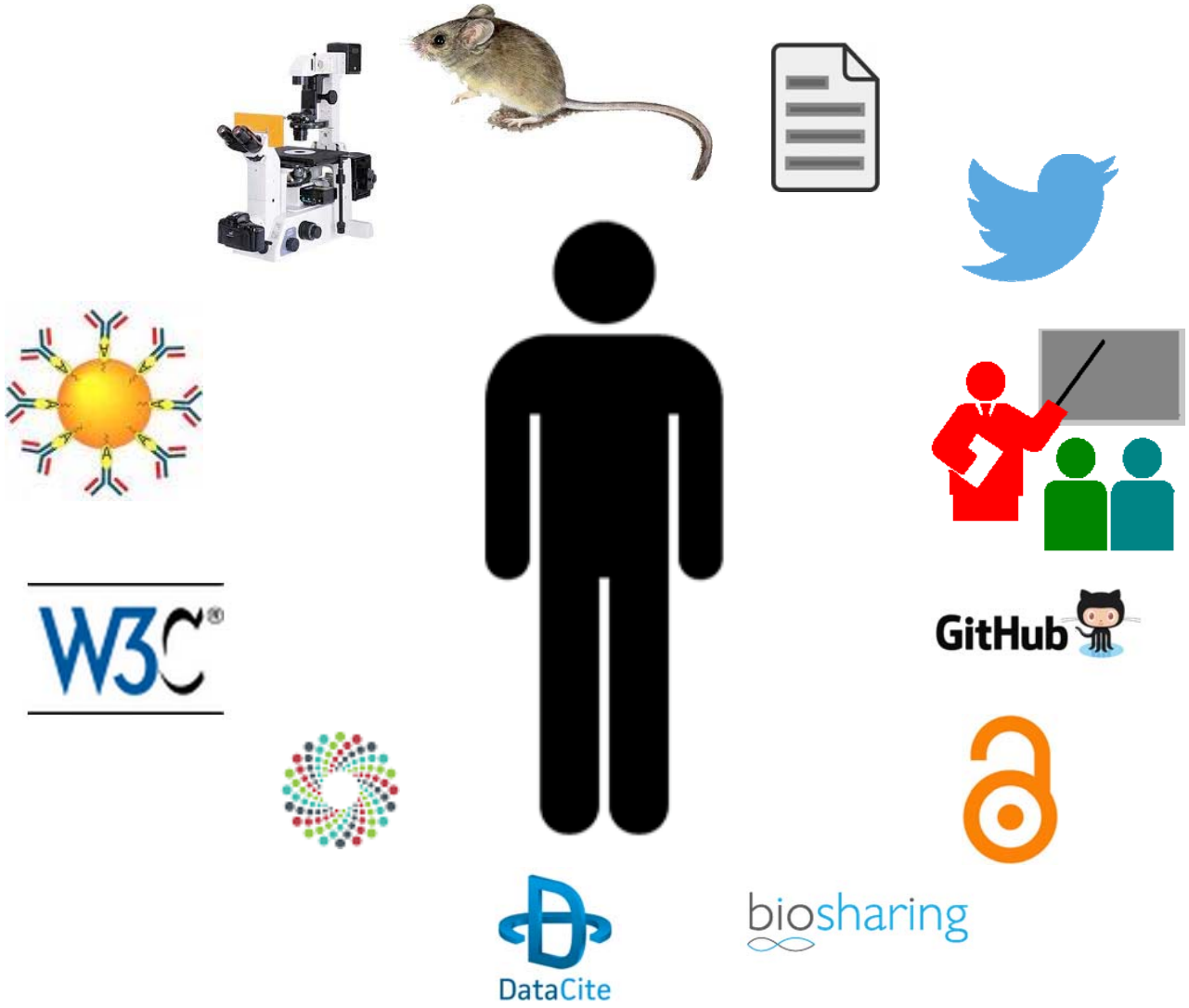
INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Reed College, Portland, Oregon	B.A.	1991	Chemistry
University of Wisconsin, Madison, Wisconsin	Ph.D.	1999	Neuroscience
University of Oregon, Eugene, Oregon	Postdoctoral	2002	Neuroscience
Oregon State University, Corvallis, Oregon	Postdoctoral	2004	Environmental Health and Toxicology

A. Personal Statement

My personal career goal is to further the collaboration and connection between the basic science research performed on model organisms and that performed in the clinic. I was originally a basic sciences researcher, utilizing chicken, mice and zebrafish in my research, and these connections were seemingly something to be taken on faith most of the time. My training includes ontology development, bioinformatics, and molecular biomedical research, which are specific areas of expertise that are key for this application. In my graduate work, I gained a broad background of anatomy, histology, and neuroscience, and was doing molecular biology in model organisms when bioinformatics was just becoming commonly computable. In my post-doctoral work, I utilized the zebrafish to examine the role of nuclear hormone receptors during neural development. I also worked on the effects of biocides on early development, and found this project interesting from the perspective of relating to work being done by the EPA and regulation of these compounds. As a scientific curator at the Zebrafish Information Network (ZFIN), I was responsible for the development of data standards and tools in support of the zebrafish as a model system. As nomenclature coordinator, I named genes and organisms and coordinated naming and orthology links with governing bodies of nomenclature for other model organisms and humans. At ZFIN I was also in charge of anatomical and phenotype ontologies for indexing gene expression

Citing products of your research

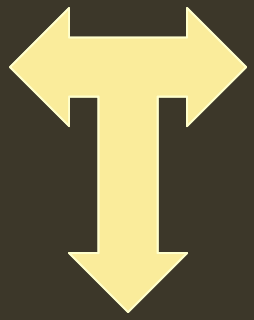
Credit and expertise are represented by the things that are connected to you



Science Experts Network Curriculum Vitae

Finally: Federal biosketch allows inclusion of non-traditional scholarly products

Getting a DOI for a dataset or code or other kinds of documents



zenodo

figshare

https://guides.github.com/activities/citable-code/

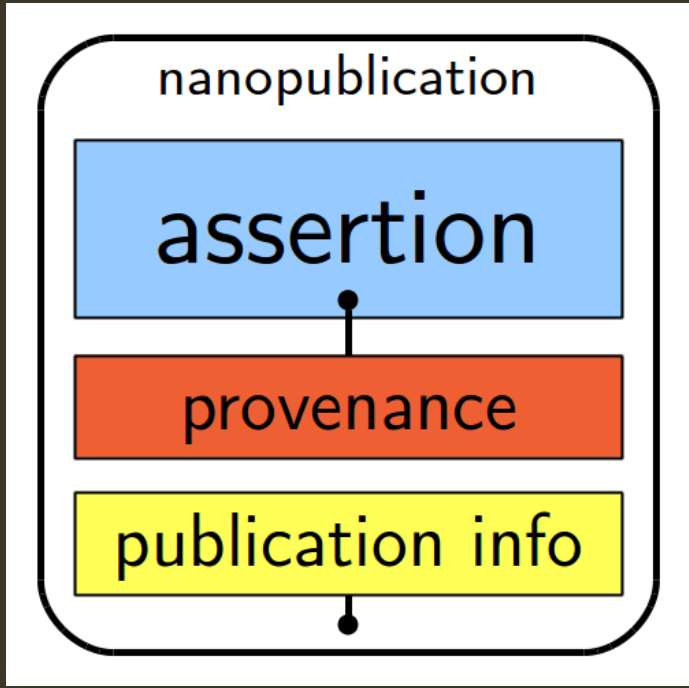
Can your products be found?

Release early and often

F1000Research
Open for Science

bioRxiv
beta
THE PREPRINT SERVER FOR BIOLOGY

SCIENTIFIC DATA

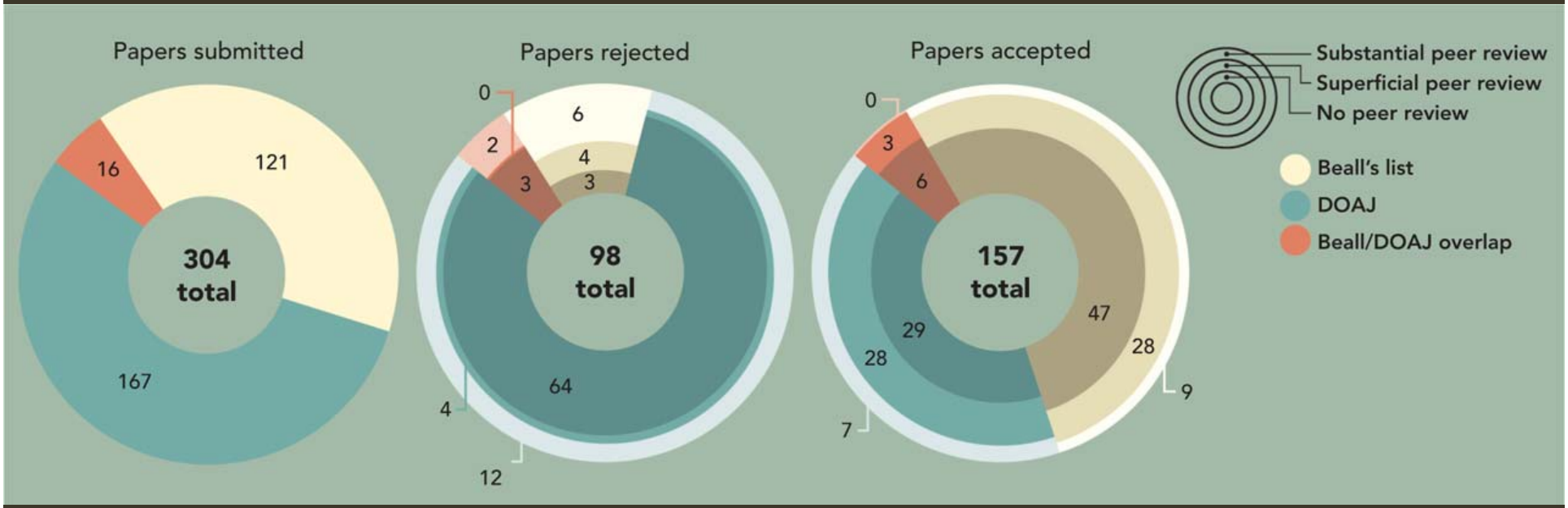


Example here:
http://nanopub.org/wordpress/?page_id=57

Not just your code, your ideas too.

Be careful where you publish

Peer review reviewed. Few journals did substantial review that identified the paper's flaws.



John Bohannon Science 2013;342:60-65

Published by AAAS

RESOURCES

figshare.com

datadryad.org

thedata.org

n2t.net/ezid

www.dataone.org

data.rutgers.edu/

nature.com/scientificdata/

Data journals and repositories

RESOURCES

rubriq.com

thedata.org

scalar.usc.edu

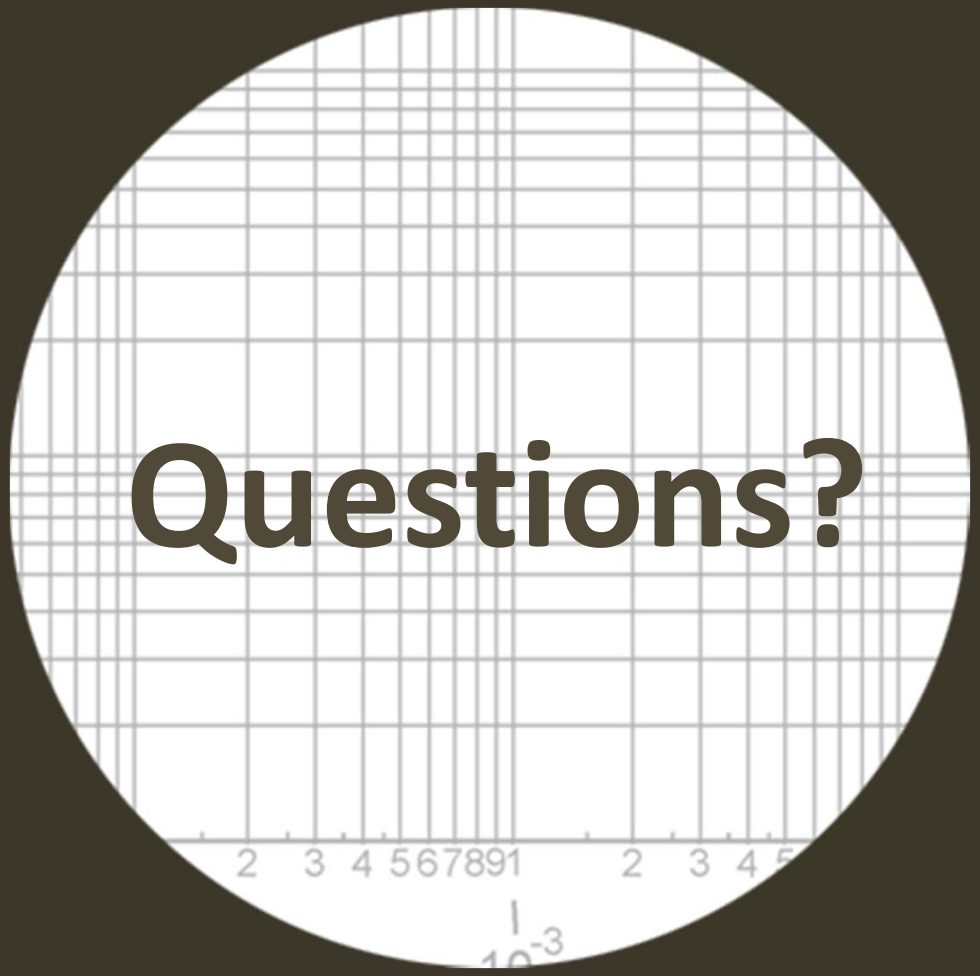
Alternative publishing mechanisms

RESOURCES

www.wf4ever-project.org

runmycode.org

galaxyproject.org/

Data Analysis Pipeline Reproducibility Platforms

Questions?