# TRANSPARENCY IN PEER REVIEW

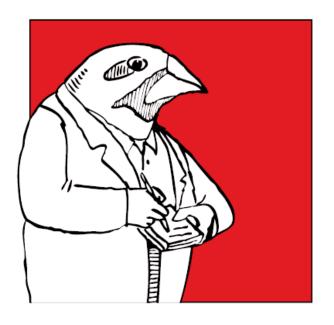
Eva Amsen, PhD Outreach Director, *F1000Research* 

Open Access conference, Bern, May 19, 2014

eva.amsen@f1000.com http://f1000research.com @f1000Research



# FACULTY OF 1000







# F1000Prime

Directory of recommendations of the best research in biology and medicine from a faculty of global experts.

(Launched 2002)

# F1000Research

Open science journal for life scientists that offers rapid publication and transparent peer review.

(Launched 2012)

# F1000Posters

Open access repository for posters and slide presentations in biology and medicine that is free to view and deposit (Launched 2010)

# WHAT IS F1000RESEARCH?

F1000Research is an open science journal for life scientists, launched in January 2013

# **Key features:**

- All data included
- Accepts all sound science
- Publication within a week
- Transparent, post-publication peer review by invited referees



### **ADVISORY BOARD**

F1000Research has a prestigious international Advisory Board of more than 1300 of the most eminent names in biology and medicine, including the following from Switzerland:

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# The Seer of Science Publishing

Vitek Tracz was ahead of the pack on open access. Now he wants to rewrite the rules of peer review

LONDON—"Nobody reads journals," says science publisher Vitek Tracz, who has made a fortune from journals. "People read papers." Tracz sees a grim future for what has been the mainstay of scientific communication, the peer-reviewed print journal. Within the next 10 years, he says, it will cease to exist.

This prophecy ought to carry weight. Over the past 3 decades, Tracz, chairman of a conglomerate called the Science Navigation Group, has helped transform the world of science publishing. His most notable creation to date may be BioMed Central, the first for-



profit open-access publisher. The pioneering site, founded in 2000 in London, has grown into an empire with more than 250 biology and medicine journals in its stable.

BioMed Central earned Tracz a reputation as a visionary. "He's one of the most important publishers of the last decade," says Michael Eisen, a biologist at the University of California, Berkeley, and co-founder of the Public Library of Science (PLOS), a nonprofit open-access publisher that launched its first journal in 2003. Tracz "always has many irons on the fire; he likes to experiment. That's unlike the rest of science publishers who are quite conservative and work on standardizing, consolidating, and reducing costs," says Matthew Cockerill, managing director of BioMed Central, which Tracz sold in 2008. By contrast, he says, "Vitek doesn't believe in business plans, but in ideas."

Now, the revolutionary, who calls himself "shy" and "un-neat," is stirring up what could become one of the biggest controversies yet in scientific publishing. Tracz is setting out to shake the very

foundations of contemporary science by abolishing anonymous peer review.

#### Michelin Guide of science

Tracz was born in 1940 in a Polish village then occupied by the Soviet Union, and soon afterward his family joined relatives in Siberia, where his father worked in a mine. After the war they made it back to Poland, where Tracz, as an undergraduate at the University of Warsaw, tried his hand at architecture for a year and then switched to mathematics. Before he completed his degree, Tracz's family emigrated to Israel, where he continued his math studies. A year later, he moved to London and studied cinematography at the Slade School of Art. He put down roots and launched Medi-Cine, a company that made educational films for medical doctors. His enthusiasm for filmmaking soon waned, however. Tracz sold Medi-Cine and started up Gower Medical Publishing, which printed full-color medical atlases (at a time when most textbooks were in black and white) and assembled slide collections for lecturers.

Tracz grew bored of textbooks, too. In the early 1980s, he saw an opportunity to create something truly novel. That was the Current Opinion journals, publications that offer comprehensive reviews in biology and medicine. Tracz likens them to "Michelin Guides": "There is a problem with the quantity of literature, just like with the quantity of restaurants available out there. You need some [expert] advice and selection, especially when you're outside your territory," he says. He later sold Current Opinion's biology journals to Elsevier, and its clinical journals to Rapid Communications of Oxford, which became part of Thomson.

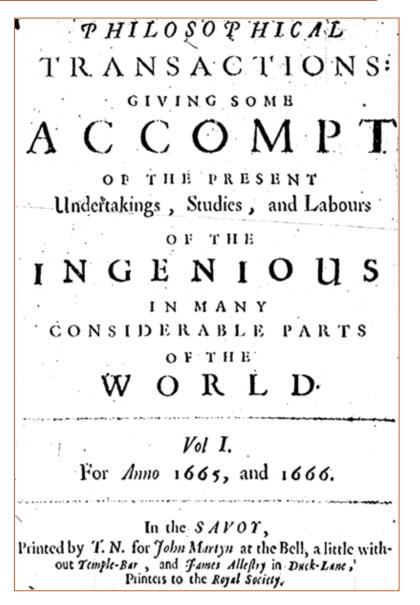
Tracz was quick to grasp how the rise of the Internet in the 1990s could transform scientific communication. In 1996, he launched BioMedNet, an online club for biomedical researchers that included a library of scientific papers and a news service called HMS Beagle, named after the ship that Charles Darwin sailed on to South America. "We had a community of 1 million scientists, biologists, and doctors. It was incredibly popular," Tracz recalls. Two years later, at the height of BioMedNet's popularity, Tracz sold the site for an undisclosed sum to publishing giant Elsevier, which be set to be set in 2004.

# **CHANGES IN PEER REVIEW**



### PUBLISHING AND PEER REVIEW

- First scientific journals were not peer reviewed.
- Peer review was introduced later, and developed as a method to select what is fit to print in limited available space.
- Journals as gatekeepers.
- Current popular system of peer review dates from mid-twentieth century.



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# CURRENT STATE OF PEER REVIEW (AS REFLECTED BY A TWITTER HASHTAG)



Dean Burnett @garwboy

"I've researched this. So you shouldn't". #SixWordPeerReview

10:28 AM - 22 Jan 2014



Spiny Norman @threadtangler

Taking my time. Love, your Competitor. #SixWordPeerReview

7:48 PM - 21 Jan 2014



Killian Hanlon @Killianhmmm

Do Western blots of everything, please #SixWordPeerReview

10:27 AM - 22 Jan 2014



Follow

Oliver Robinson @olijrobinson

Minor comment: add 100 fMRI subjects.
#SixWordPeerReview

11:54 AM - 22 Jan 2014



Matthew R. Francis
@DrMRFrancis

#SixWordPeerReview You didn't cite my paper: reject.

7:37 PM - 21 Jan 2014



My T Chondria @MyTChondria

Could be suited for specialty journal #SixWordPeerReview

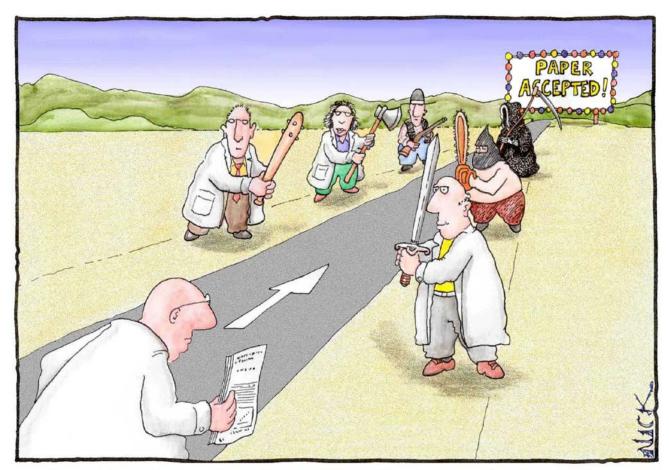
7:43 PM - 21 Jan 2014

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Most scientists regarded the new streamlined peer-review process as "quite an improvement."

### TYPES OF PEER REVIEW

#### Time of review:

- Before publication: mediated by each individual journal
- Cascading review: reviews carried over to the next journal after rejection
- Third-party review: the peer review is no longer coupled to a journal.
- Post-publication peer review: journal publishes the article, then reviewers look at it.

### **Transparency of review:**

- Single-blind: the reviewer knows who the authors are, but the authors don't know who the reviewers are
- Double-blind: authors and reviewers are both anonymous
- Open peer review: all names are public.

See: http://www.britishecologicalsociety.org/publications/journals/ for examples of each

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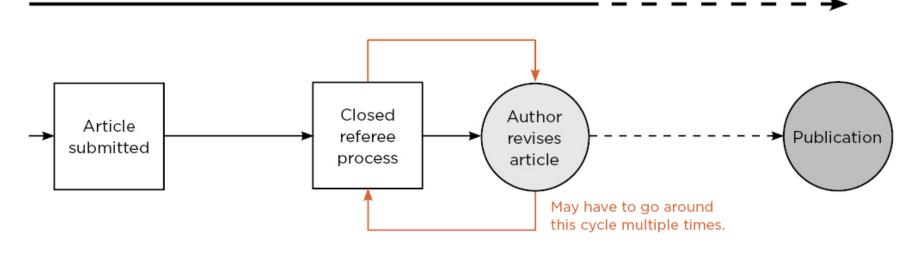
See: http://www.britishecologicalsociety.org/publications/journals/ for examples of each

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# THE PUBLICATION PROCESS

# Traditional journal

#### Submission to publication: MONTHS



The peer review process can take months – sometimes years.

After rejection, start over again with another journal.

This delays publication.

Referees are anonymous.

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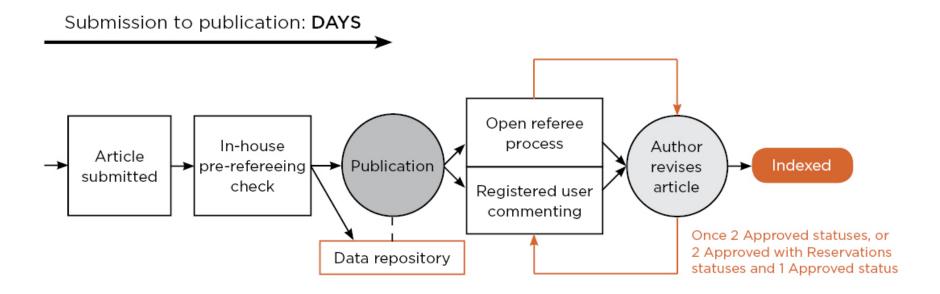
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# THE PUBLICATION PROCESS

# F1000Research



- *F1000Research* articles are published online after an in-house pre-refereeing check, on average, within 5 working days.
- Peer review and revisions are carried out publicly by invited referees.
- Articles with sufficient positive referee reports are indexed in PubMed.

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# **OPEN PEER REVIEW**



# JOURNALS WITH TRANSPARENT PEER REVIEW

#### 2012:

F1000Research, eLife, PeerJ, GigaScience

#### 2011

**BMJ** Open

#### 2010

EMBO journal

#### 2007

Frontiers journals

#### 2006

**Biology Direct** 

#### 2001

Atmospheric Chemistry and Physics

#### 2000

Medical journals in the BMC series

#### **Variations:**

All referees are named Optional referee names Reports shown Editorial decision public



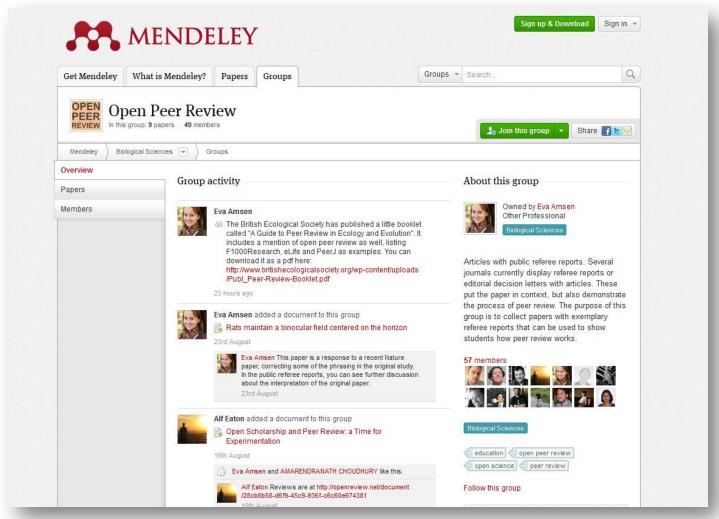


# BENEFITS OF TRANSPARENT REVIEW FOR AUTHORS AND READERS

- Visible discussion between referees and authors (and editors) puts paper in context.
- Authors can demonstrate that their paper was reviewed by top people in their field.
- Reduces bias amongst referees, and leads to more thoughtful referee reports.
- Educational aspect of open peer review



# USING OPEN REFEREE REPORTS AS EDUCATIONAL TOOL



http://bit.ly/OpenPeerReviewExamples

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F1000Trials

F1000Research

F1000 Posters

# BENEFITS FOR REVIEWERS

- Demonstrate experience as reviewer
- Shows reviewer's informed opinion of the work as a peer in the field, and where they thought it could be improved.
- Take credit for hard work



#### Christine Mummery

Department of Anatomy and Embryology, Leiden University Medical Center, Leiden, Netherlands Approved: 09 May 2014

Referees are named

Referee Report: 09 May 2014 (145)

doi: 10.5256/f1000research.4382.r4727

Referee report metrics

The authors describe their attempt to reproduce a study in which it was claimed that mild acid treatre sufficient to reprogramme postnatal splenocytes from a mouse expressing GFP in the oct4 locus to pluripotent stem cells. The authors followed a protocol that has recently become available as a technical undate original publication.

DOI for referee reports

They report obtaining no pluripotent stem cells expressing GFP driven over the same time period of days described in the original publication. They describe observation of some green fluorescence t attributed to autofluorescence rather than GFP since it coincided with PI positive dead cells. They confirmed the absence of oct4 expression by RT-PCR and also found no evidence for Nanog or Sox2, also markers of pluripotent stem cells.

The paper appears to be an authentic attempt to reproduce the original study, although the study might have had additional value with more controls: "failure to reproduce" studies need to be particularly well controlled.

Examples that could have been valuable to include are:

- For the claim of autofluorescence: the emission spectrum of the samples would broad spectrum not coincident with that of GFP.
- 2. The reprogramming efficiency of postnatal mouse splenocytes using more co the hands of the authors would have been useful as a comparison, idem the li
- There are no positive control samples (conventional mESC or miPSC) in the q pluripotency markers. This would have indicated the biological sensitivity of the
- 4. Although perhaps a sensitive issue, it might have been helpful if the authors have been helpful samples of cells (or their mRNA) from the original authors for simultaneous analysis.

Referee reports and other comments are visible to anyone.

In summary, this is a useful study as it is citable and confirms previous blog reports, but it could have been improved by more controls.

I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Competing Interests: No competing interests were disclosed.

# WORKING GROUP: PEER REVIEW IN ORCID





**PROGRAM** 

**UPDATES** 



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# ORCID & CASRAI Kick-off New Standards Project on 'Peer Review Services'

Posted by Asha Law on Mon, 2014-04-07 08:12

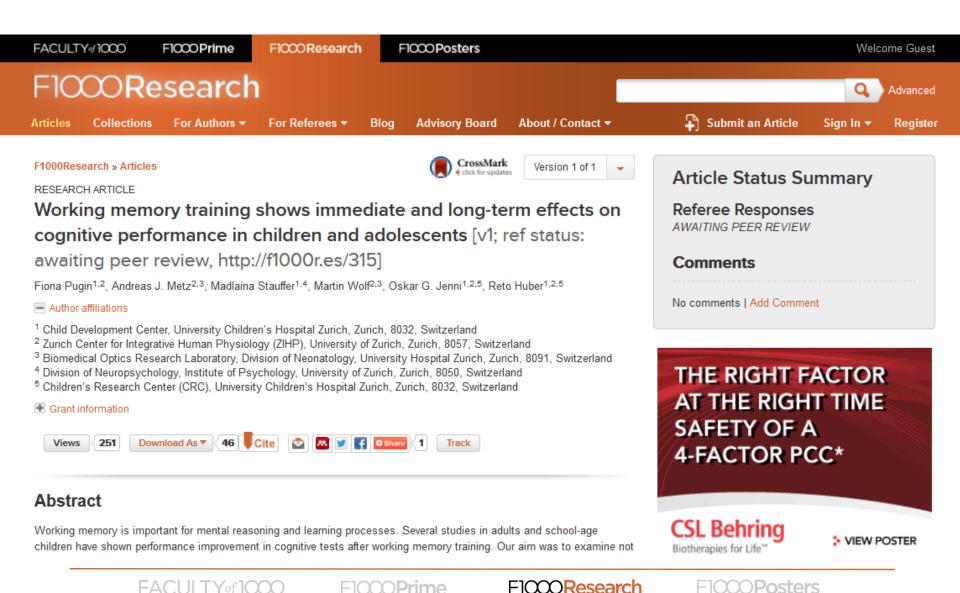
In addition to integrating ORCID identifiers into manuscript submission and grant application workflows, publishers and funders have been adding the identifiers into reviewer workflows. From this, a question arose as to how to acknowledge review activities in ORCID. To address this need, ORCID has asked CASRAI to facilitate a new standards project focusing on Peer Review Services Contributions. The participant-funded project is the first in a new program of International Projects being launched by CASRAI.

An international working group has been convened, with members representing associations, publishers, and funder organizations (see list below). The group is co-chaired by Rebecca Lawrence of F1000 Research and Laura Paglione of ORCID. Organizations serving on the working group are Autism Speaks, Denison University, Cambridge University Press, American Geophysical Union, Origin Editorial, University of Split, and Hypothes.is. Individual contributors by organization include:

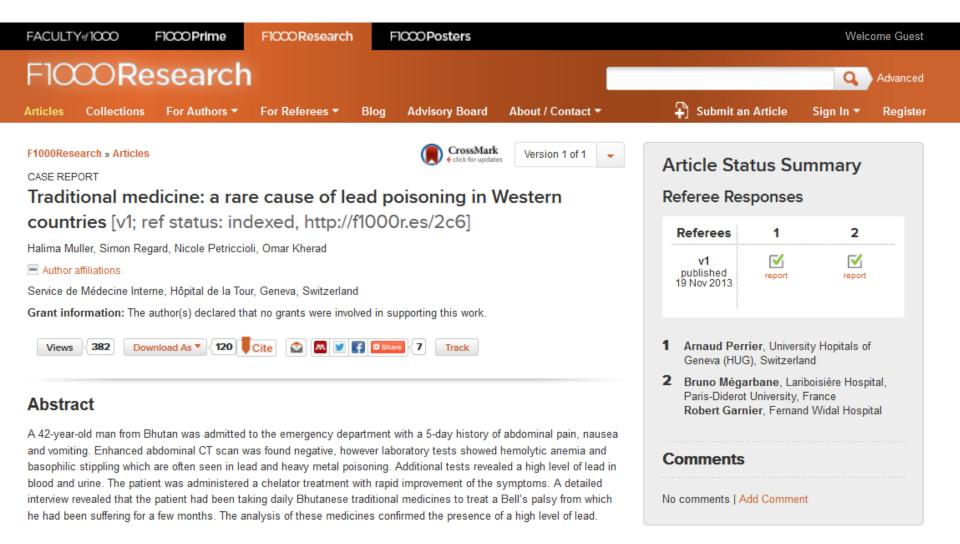
# POST-PUBLICATION PEER REVIEW AT F1000RESEARCH



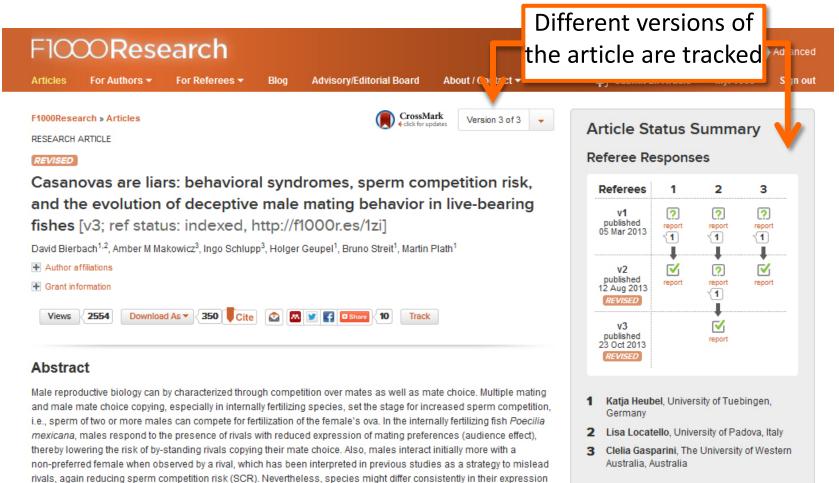
### F1000RESEARCH ARTICLE



### F1000RESEARCH ARTICLE



# **VERSIONS**







of aggressive and reproductive behaviors, possibly due to varying levels of SCR. In the current study, we present a unique data set comprising ten poeciliid species (in two cases including multiple populations) and ask whether species

can be characterized through consistent differences in the expression of aggression, sexual activity and changes in mate choice under increased SCR. We found consistent species-specific differences in aggressive behavior, sexual

activity as well as in the level of misleading behavior, while decreased preference expression under increased SCR was a general feature of all but one species examined. Furthermore, mean sexual activity correlated positively with the

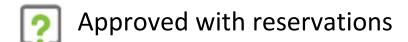


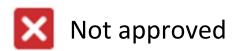
Comments

No comments | Add Comment

# REFEREE SCORES







Articles with sufficient positive evaluations are indexed in PubMed, Scopus, and Embase.





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Minimal requirements for indexing

# **Article Status Summary**

#### Referee Responses



- Katja Heubel, University of Tuebingen, Germany
- 2 Lisa Locatello, University of Padova, Italy
- 3 Clelia Gasparini, The University of Western Australia, Australia



## PUBMED INDEXES VERSIONS THAT PASS PEER REVIEW



### CITING F1000RESEARCH PAPERS

Citations to F1000Research papers point to a particular version.

Example citation:

Spence J, Titov N, Johnston L *et al.* (2013) Internet-delivered *eye movement* desensitization and reprocessing (iEMDR): an open trial [v2; ref status: indexed, <a href="http://f1000r.es/zr">http://f1000r.es/zr</a>] *F1000Research* 2013, **2**:79 (doi: 10.12688/f1000research.2-79.v2)

• If a paper has been updated since it was cited, and readers land on an outdated version of an article, a pop-up message on the article page makes readers aware that there is a newer version:



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Biotechnology

Cancer Biology

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Cardiovascular Disorders

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Developmental Biology

Diabetes & Endocrinology

Ecology

Evolutionary Biology

Gastroenterology & Hepatology

Gastrointestinal Biology

Genomics & Genetics

Hematology

Immunology

Infectious Diseases

Metabolic & Endocrine Science

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Physiology

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Public Health &

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#### All Articles

320 results displayed.



#### RESEARCH ARTICLE



#### REVISED

JSim, an open-source modeling system for data analysis [v2] ref

status: indexed, http://f1000r.es/39h]

PUBLISHED: 12 MAY 2014

Authors: Erik Butterworth, Bartholomew E. Jardine, Gary M. Raymond, Maxwell L. Neal, James B.

Bassingthwaighte

Referees: Steven Niederer; David Nickerson

F1000Research 2014, 2:288 (doi: 10.12688/f1000research.2-288.v2)

Referee responses (2)



#### RESEARCH ARTICLE



#### REVISED

Short- and long-term habituation of auditory event-related potentials in the rat [v2; ref status: indexed, http://f1000r.es/3dv]

PUBLISHED: 01 MAY 2014

Authors: Kestutis Gurevicius, Arto Lipponen, Rimante Minkeviciene, Heikki Tanila

Referees: James Knierim; Timm Rosburg; Colin Lever

F1000Research 2014, 2:182 (doi: 10.12688/f1000research.2-182.v2)

Referee responses 3



#### SHORT RESEARCH ARTICLE



Modulation of gene expression in guinea pig paraflocculus after

#### **Highly Accessed Articles**

#### RESEARCH ARTICLE



Transient acid treatment cannot induce neonatal somatic cells to become pluripotent stem cells [v1; ref status: approved 1, http://f1000r.es/3dq]

PUBLISHED: 08 May 2014

Mei Kuen Tang, Lok Man Lo, Wen Ting Shi et al

F1000Research 2014, 3:102

Referee responses 1 Article Comments 2

#### OPINION ARTICLE



Data publication consensus and controversies [v1; ref status: approved with reservations 1, http://f1000r.es/3aq1

PUBLISHED: 23 Apr 2014 John Kratz, Carly Strasser

F1000Research 2014, 3:94

Referee responses 1 Article Comments 4

#### REVIEW



Why do proteins aggregate? "Intrinsically insoluble proteins" and "dark mediators" revealed by studies on "insoluble proteins" solubilized in pure water [v1; ref status: indexed, http://f1000r.es/z0]

PUBLISHED: 22 Mar 2013 Jianxing Song

F1000Research 2013, 2:94 Referee responses \ 3



Raleigh Convention Center North Carolina, June 20-24, 2014

### LIVING ARTICLES

Authors of an *F1000Research* paper can always update their paper, even after it has been indexed

REVISED

Authors responded to referee or community feedback and amended their article resulting in a new version.

UPDATE

Authors updated the article following minor developments. (For example, papers about software can be updated when the software itself is updated.)



F1000 Poste

# **GENERAL INFORMATION**



### ARTICLE TYPES ACCEPTED BY F1000RESEARCH

- Research Articles
  - Incl. Null/negative findings and replication/refutation findings
- Data Notes
  - A dataset (or set of datasets) together with the associated methods/protocol
- Case Reports
- Method Articles
- Clinical Practice Articles
- Software Tools
- Observation Articles
- Research Notes
- Correspondence
- Opinion Articles
- Study Protocols
- Reviews
- Systematic Reviews



# WHY PUBLISH WITH F1000RESEARCH?

## Speed of publication

- Post-publication peer review means your article can be published within a week.
- •Transparent peer review reduces bias and improves quality of reviews
- Revise or update your article after publication
  - Newer versions of the paper are linked to previous versions.
- Help the wider scientific community by sharing data
- Get credit for a wider range of work
  - •Short research articles, data articles, observations, replications, refutations, or negative results are hard to publish elsewhere



# ARTICLE PROCESSING CHARGES

Article type	APC
Data Notes; Case Reports; Correspondence	US \$250
Clinical Practice Articles; Software Tools; Observation Articles; Opinion Articles; Research Notes	US \$500
Research Articles; Method Articles; Study Protocols; Reviews; Systematic Reviews	US \$1000

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