

A conversation with Jane Hunter and Rebecca Lawrence on 03/15/13

Participants

- Jane Hunter — Managing Director, Faculty of 1000 (F1000)
- Rebecca Lawrence — Publisher, *F1000Research*
- Alexander Berger — Senior Research Analyst, GiveWell

Note: This set of notes was compiled by GiveWell and gives an overview of the major points made by Jane Hunter and Rebecca Lawrence.

Summary

Faculty of 1000 (F1000) runs F1000Prime, a post-publication review service in biomedicine, and recently launched *F1000Research*, a new open access journal that has several novel aspects:

- Articles are published without delay
- Peer review is post-publication, public, and reviewers are named
- Data must be deposited publicly
- Non-traditional research outputs (e.g. data) are published

We spoke with F1000 Managing Director Jane Hunter and *F1000Research* Publisher Rebecca Lawrence to learn more about F1000 and their new journal.

Background on Faculty of 1000

Vitek Tracz is a serial entrepreneur in the scientific, technical and medical (STM) publication industry. Vitek Tracz founded and owns Faculty of 1000 (F1000). He has worked in open access publishing in the past: he founded BioMed Central, which was one of the first open access scientific publishers. BioMed Central was successful, and was purchased by Springer in 2008.

F1000Prime

F1000Prime is a service that does post-publication peer reviews of biology and medicine articles. F1000Prime filters the very large number of articles for the ones that are of greatest significance. It helps scientists identify good science both in their area of specialty and on the periphery of what they work on. Some alternative metrics (altmetrics) incorporate F1000Prime's recommendations.

When F1000 started (in 2002), F1000Prime was the first product, and the reviewers consisted of 1,000 top researchers in a variety of fields of biology. Coverage of

medicine was added in 2006. Since then, its group of reviewers has expanded to 5,000 Faculty Members, who are assisted by 5,000 Associates.

F1000Posters and F1000Trials

F1000 also runs F1000Posters, which is a free open-access repository for posters and slide presentations.

F1000 is starting a new subscription product called F1000Trials, which is a comprehensive listing and review service for trials published in 300 top medical journals.

New open access journal *F1000Research*

F1000 has launched a new open access journal, *F1000Research*.

The new journal is novel in several ways:

- Papers are published immediately upon submission (following an in-house review).
- Peer review is conducted post-publication and openly (i.e. reviewers are named) with PubMed indexing papers that pass peer review (i.e. two 'Approved', or two 'Approved with Reservations' plus one 'Approved' peer reviews are submitted).
- Papers are evaluated based on whether they're methodologically solid rather than whether they report on groundbreaking findings.
- Authors are required to deposit the data for their papers.
- The journal accepts submissions of research outputs other than papers (e.g. datasets, negative/null findings) for publication.

Problems with scientific publishing that F1000Research is working to help solve

There are several big problems with standard scientific publication, which *F1000Research* is working to help solve:

1. Greatly delayed publication due to the peer review process. Publications usually take 6 months to 1 year to be published after submission, sometimes even more.
2. Secret peer review, which is sometimes performed by scientists who are competing with the authors of the paper for academic credit, and who therefore have a conflict of interest.
3. The absence of a requirement that authors publish the data sets that they used to write their papers. The fact that data is infrequently published makes it hard for others to replicate the underlying research.
4. Most journals only publish papers that report on interesting findings. Very

few journals publish papers that find no effect, or papers that report on replications. If such findings were published, it would save other researchers time and eliminate some redundancy.

F1000Research's funding model

F1000Research makes its revenue from author processing charges, which are between \$250 and \$1000 and depend on the type of work submitted.

Incentives for researchers to publish in F1000Research

The main incentive for authors to publish in *F1000Research* is that the time to publication is very short, and that its peer review occurs much more quickly than the peer review at other journals. Sometimes papers that *F1000Research* receives are published within 24 hours of acceptance and reviewed within as little as two days (current averages are 7 days to publication and 14 days to two referee reports).

Some other incentives for authors to publish in *F1000Research* are that:

- Some funders require that researchers publish the research that they fund in open access journals.
- Some scientists like it when those who review their papers are openly named, as it can help them avoid wasting a lot of time responding to biased reviews from unknown people.
- Some scientists appreciate the opportunity to publish updates to their work, and this is a service that *F1000Research* offers.

Incentives for researchers to referee for F1000Research

The main incentive for researchers to referee for *F1000Research* is that they can receive credit for the time and effort spent on refereeing an article, rather than their review being completely hidden as it is traditionally. Additionally, they do not have to waste time trying to assess novelty or likely impact. It also reduces total referee effort by averting the practice of articles being passed from journal to journal.

F1000Research's progress to date

F1000Research launched in January and has published 175 papers so far, though the pace is increasing.

The use of data deposited with F1000Research

The data sets that *F1000Research* receives are posted to figshare, which tracks the number of times a data set is viewed, the number of times that it's downloaded, and

the number of times that it's shared. The data sets for many *F1000Research* publications are being downloaded several hundred times, fairly soon after they are published.

F1000Research is not aware of any examples of the data from its publications having been reused in other papers yet. However, they know of two cases in which authors of datasets received significant interest from other researchers in collaborating on further work.

The future of F1000Research's publication model

F1000Research's publication model (of immediate publication and post-publication peer review) is currently uncommon, even though there seem to be many authors who are interested in publishing under this model. If the model takes off, *F1000Research* will face competition, since there's nothing to stop a competitor from changing to this model.

It would be good for science if *F1000Research's* model of publication became standard practice. *F1000Research* anticipates that aside from a few prestigious publications like *Nature*, *Science*, and *Cell*, most journals will soon face pressure to evolve.

There are some indications that others expect that *F1000Research* will be successful. For example, Scopus, which is a bibliographic database which indexes publications, generally does not index publications from journals that are less than two years old, but has already started to include *F1000Research* papers in its database.

People for GiveWell to talk to

- *Liz Allen* — The Head of Evaluation at the Wellcome Trust.
- *Michael Eisen* — A genomics/genetics researcher at UC Berkeley. Michael Eisen is a strong advocate of open access scientific publishing.
- *Jonathan Eisen* — An evolutionary biologist at UC Davis. Jonathan Eisen is a strong advocate of open access scientific publishing in the life sciences, and in 2011, he was awarded the Benjamin Franklin Award (Bioinformatics) for his work in this area.
- *Erica van Oort* — A Program Officer at ZonMw, which is the Netherlands Organisation for Health Research and Development. ZonMw funds a program that subsidizes graduate students to publish well executed studies that find neutral or negative results.
- *Ben Goldacre* — A physician, academic and science writer who authored the books *Bad Medicine* and *Bad Pharma*.
- *Ruairidh Milne* — The Head of the NIHR Evaluation, Trials and Studies Coordinating Centre (NETSCC).
- *Malcolm MacLeod* — Coordinator of the Collaborative Approach to Meta

Analysis and Review of Animal Data from Experimental Studies (CAMARADES). CAMARADES works to advance education about systematic reviews in animal studies

- *Shai Silberberg* — A Program Director at the National Institute of Neurological Disorders and Stroke (NINDS). NINDS is interested in improving reporting guidelines for research.
- *(NC3R) —National Centre for the Replacement, Refinement and Reduction of Animals in Research*. This organization created the ARRIVE (Animal Research: Reporting *In Vivo* Experiments) guidelines, which are designed to facilitate the reproducibility of animal studies.

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