Open access: a funder’s perspective

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The Wellcome Trust
r.terry@wellcome.ac.uk
http://www.wellcome.ac.uk/openaccess
One of the world’s largest medical research charities

Expenditure in 2003/04 of c £378 million

Supports more than 5,000 researchers at 400 locations in 42 different countries

Funding major initiatives in public engagement with science and SciArt projects

The UK’s leading supporter of research into the History of Medicine
1189 papers <100 able to be read without subscription
Why should open access publication be important to research funders?

• Just funding the research is a job only part done – a fundamental part of a funder’s mission is to ensure the widest possible dissemination and unrestricted access to that research.
Economic analysis of scientific research publishing
A report commissioned by the Wellcome Trust

Costs and business models in scientific research publishing
A report commissioned by the Wellcome Trust
Why don’t researchers know or care?

Publishers

£ Profit

Shareholders & Societies

Funders mission?

No money for peer review or to author

Researchers

Free

Libraries

Free

Gov / ngo funding

£

£

£

£
Publish in any journal but deposit a copy in an open access repository

What do research funders want:

• **Immediate access** - but can work with 6 months delay to allow market to adapt.

• **Long-term digital archive** – accurate, future-proof preservation

• **Searchable** – ‘under one roof’ subject based

• **Build on existing research practice** e.g. Medline

• **Added features**: - funders attribution, public engagement

• **Integration** - live links with other databases e.g. genes, proteins, citations

• **Strategy** – improve evaluation and impact

• **Sustainable quality peer-review system** - hybrid models as a transition
Two routes to improve access – two routes to improving research

• publish in an open access journal

• publish in any journal but deposit a copy in an open access repository
## Will OA publishing cost more?

<table>
<thead>
<tr>
<th>Cost element</th>
<th>Proportion of costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Refereeing</td>
<td>22%</td>
</tr>
<tr>
<td>2. Editorial and typesetting (i.e. from acceptance to first copy)</td>
<td>33%</td>
</tr>
<tr>
<td>3. Subscription management</td>
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<tr>
<td>4. Physical production and distribution (including postage)</td>
<td>23%</td>
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<tr>
<td>5. Sales and marketing</td>
<td>13%</td>
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<tr>
<td>6. Promotion to authors</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
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</table>

Whole system savings of 30%?

Estimated **costs** per article:
- $2,750 subscription
- $1,950 open access

Submission fee $175 publication drops to $550

Charges of $10,000++ include contribution of funds to overheads, surplus or profit
What will it cost funders?

Trust estimates: 1 – 2% of research budget

Journals with > 30 papers 1995 - 1999*

- University Press: 24%
- Commercial: 33%
- Society: 43%

*Source: ROD

Elsevier 10%
Portland Press 5%
CUP 5%
Blackwell 4%
OUP 4%
Nature 3%

Total Trust papers
n=16,646
in 1292 journals
The Wellcome Trust Grant condition

• Will provide Grant Holders with additional funding to cover the costs of open access publishing e.g. all OA journals + OUP, Springer, Blackwell(?)

• Requires electronic copies of all Trust-funded research papers that have been accepted for publication in a peer-reviewed journal to be deposited into PubMed Central (or UK PubMed Central once established).

• Note that this requirement will apply to all grants awarded after 1 October 2005 and, from 1 October 2006, to all grants regardless of award date.
Copyright and grant conditions

Researchers sign grant conditions before any copyright agreement so they can:

• (a) Grant a licence of their copyright to a journal instead of assigning e.g. Creative Commons

• (b) Sign a journal’s normal arrangements only on the condition that it be specifically agreed that deposition in PMC can take place. Insert Trust clause

• (c) Reconsider where to publish.
Trust copyright amendment

Notwithstanding any of the other provisions of this agreement, the journal acknowledges that the researcher will be entitled to deposit an electronic copy of the final, peer-reviewed manuscript into PubMed Central (PMC) (or UK PubMed Central (UKPMC) once established).

Manuscripts deposited with PMC (or UKPMC) may be made freely available to the public, via the Internet, within 6 months of the official date of final publication in the journal.
Portable PubMed Central – UK PMC

To develop a PubMed Central portal in the UK that will create a stable, permanent digital archive of peer-reviewed biomedical research publications* that is accessible for free via the Internet.

*Dept. of Health, MRC, BBSRC, JISC, Cancer Research – UK, British Heart Foundation, Arthritis Research Campaign, Wellcome Trust, AMRC.

Mirror the data from USA, Japan, France… collaboration and competition.
How will UK PMC work

<table>
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<tr>
<th>Author</th>
<th>NCBI (NLM)</th>
<th>Conversion Vendor</th>
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<td>Available 6 months after publication</td>
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</table>

Source: David Lipman, Director, National Centre for Biotechnology Information, NLM, USA
UKPMC – quality, consistency, integrate data & literature

There are three types of errors that PubMed Central deal with:

1. **Structural Errors** do not conform to the ruleset (DTD) that they were written for e.g. XML tags are wrong: `<surname>Jones</snm>`

2. **Content Errors** formula, tables, paragraphs, special characters (Greek characters or symbols) are not correct.

3. **Consistency Errors** tagged in one style suddenly switches e.g. For the first 5 years of content, Journal X has been tagging dates like:
   `<date>10-12-2004</date>` (m-d-y)

   Then, this date appears in content:
   `<date>14-12-2004</date>` (this must be d-m-y)

4. Integrate the literature with the data
It’s all about the data …
Fig 2.

Whole-body images of carbon-11 distribution in one of the non-smokers and one of the smokers. These subjects were scanned with L-[11C]deprenyl, and scanning was started at 25-min post-radiotracer injection. Red is the highest radiotracer concentration on the color scale, and images are scaled so that they can be compared directly.

Source: David Lipman, Director, National Centre for Biotechnology Information, NLM, USA
Link to imaging agent in PubChem through MeSH

Source: David Lipman,
Director, National Centre
for Biotechnology
Information, NLM, USA
Links between sequence and related proteins

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</table>
The funders are now involved...the market place has changed

Berlin Declaration - 129 signatories from all over the world

NIH               RCUK
UK PubMed Central group

DH               British Heart Foundation    CR-UK
MRC       BBSRC    Arthritis Research Campaign
The Internet is changing the market place…
…and greater (free) access can have unpredicted positive impacts

Radio (1930s) and gramophone sales

Televised football and increased crowd attendance

Video and increased cinema audiences

iPOD and individual music track sales
Opposition to innovation is not new….

• The 1850 Public Libraries Act was the first of a series of Acts enabling local councils to provide free public libraries funded by a levy of a ½ d rate.

• widely opposed in Parliament by the Conservatives, who were alarmed by the cost implications of the scheme, and the social transformation it might effect.

“..Speak to people in the medical profession, and they will say the last thing they want are people who may have illnesses reading this information, marching into surgeries and asking things. We need to be careful with this very, very high-level information.”

Oral evidence to House of Commons inquiry, March 1st 2004, John Jarvis (Managing Director, Wiley Europe)
...of course not all opposition is entirely complimentary

Making a pig’s ear of an unscientific free-for-all

Réné Olivieri, Chief Executive, Blackwell Publishing Ltd.  THES 19/08/05
Funding the Way to Open Access

Robert Terry

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Abbreviations: UKPMC, United Kingdom PubMed Central


Imagine this scenario. You're the director of one of the world's largest medical research charities, and you receive notification from one of your funded investigators in Africa reporting some exciting progress toward the development of a vaccine for malaria. The work has just been published, so you log onto the Web to do a quick keyword search, and a link to the article is brought up on your screen.

Then imagine the frustration when you click on the link to read the message, “Access Denied—access to this journal is restricted to registered institutional and individual subscribers.”
How to deposit a Wellcome Trust paper in PubMed Central

http://www.wellcome.Submission of a paper.uk/ukpmc/submissionexample.html