How open access journals and repositories facilitate public access to publicly funded research

Marianne Josserand-Haska BioMed Central IATUL, June 2007



What does Open Access to scientific research mean?

- Universally available via the Internet, without any barriers to access
- Licensed so as to allow redistribution and reuse as long as attribution is given
- Permanently archived in an internationally recognized repository (*e.g.* PubMed Central)



What's wrong with the traditional subscription model?

- Restricted access to research is contrary to the interests of
 - the scientists/clinicians who do the research
 - -the funders who pay for it
 - -society as a whole, general public
- It is an historical artefact of the economics of print publishing



Benefits of Open Access

- Lack of subscription barriers ensures all researchers have access
- Articles are available to all aggregators, indexing services, search engines *etc.*
- Breaks down barriers between fields
- Public access to research promotes engagement with, and understanding of, science and medicine



Role of funders in Open Access

- More and more funders and have policies requiring funding recipients to deposit articles in a open access archive
- Wellcome Trust's lead has been followed by the majority of biomedical UK funders as part of UK PubMed Central
- European funders and research organizations have similar policies
- NIH policy (deposit *requested*, not required) is under review



Funding Agencies

Europe
Fonds voor Wetenschappelijk Onderzoek
Consiglio Nazionale delle Ricerche (Italy)
Fondazione Telethon (Italy)
Wellcome Trust (UK)
National Health Service (UK)
RCUK (UK)
Nederlandse Organisatie voor Wetenschappelijk Onderzoek (Netherlands)
Suomen Akatemia (Finland)
Swiss National Science Foundation (Switzerland)
Vetenskapsrådet (Sweden)
Fonds zur Forderung der wissenschaftlichen Forschung (Austria)
Centre National de la Recherche Scientifique (France)
Consejo Superior de Investigaciones Cientificas (Spain)
Danmarks Grundforskningsfond (Denmark)
Deutsche Forschungsgemeinschaft (Germany)
Health Research Board (Ireland)



Funding Agencies

North-America
Canadian Institutes of Health Research (Canada)
Howard Hughes Medical Institute (US)
National Institutes of Health (US)
National Science Foundation (US)
Rockefeller Foundation (US)

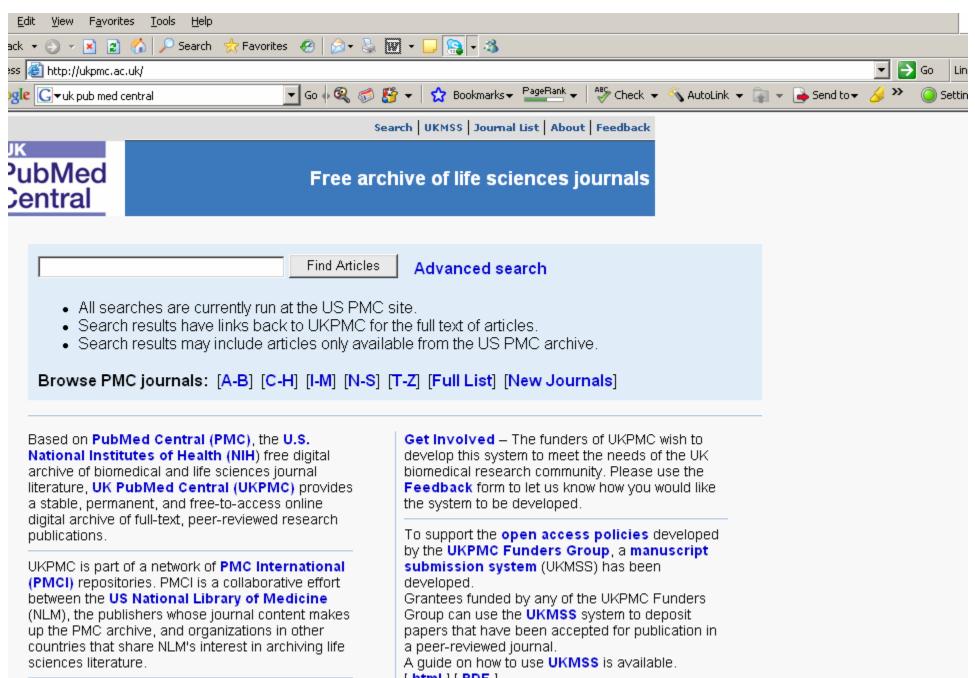
ROW

International Human Frontier Science Program Organization (International)

Israel Science Foundation (Israel)

South African Medical Research Council (South Africa)



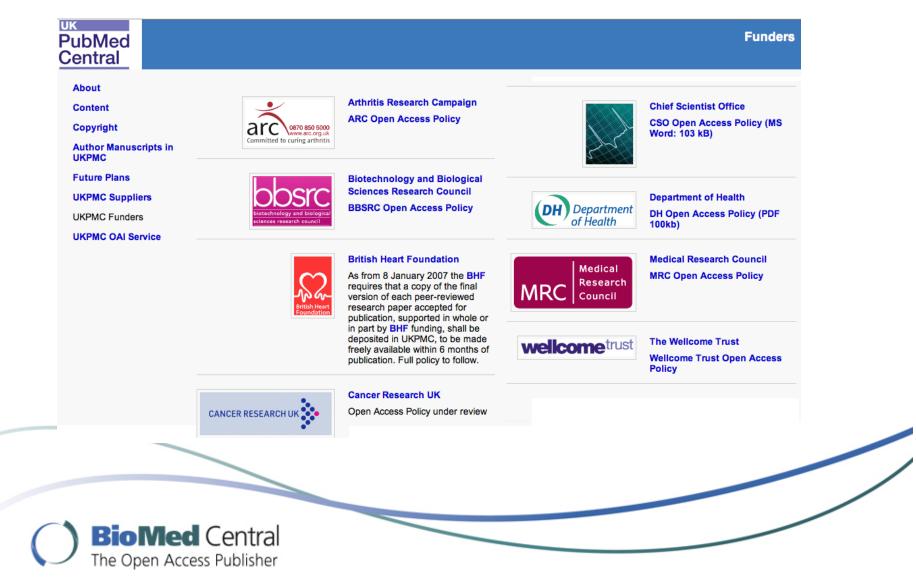


The UKPMC Funders Group, a mix of governmental and charitable research funders in the United Kingdom, are funding the set-up.

[html][PDF]

UKPMC includes an OAI service that provides XML of the full-text of Open Access Articles, functions

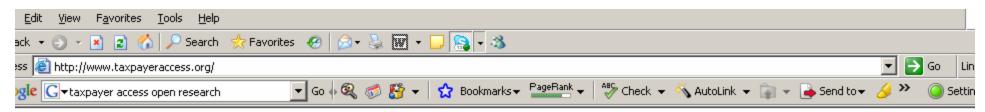
UK PubMed Central funders



Government

- House of Commons S&T committee
 report Published November 2004
- CURES Act introduced in US Senate December 05
- European Commission Report
 Published April 06





birds of a

feather

THE ALLIANCE FOR TAXPAYER ACCESS



Action

Watch for opportunities or recent progress involving:

- Federal Research Public Access Act
- <u>NIH</u>
- <u>U.S. Congress</u>
- Cures 499H-1
- You
- <u>Students</u>

A diverse and growing alliance of organizations representing taxpayers, patients, physicians, researchers, and institutions that support open public access to taxpayer-funded research.

media

member

Statement of Principles:

- American taxpayers are entitled to open access on the Internet to the peer-reviewed scientific articles on research funded by the U.S. Government.
- Widespread access to the information contained in these articles is an essential, inseparable component of our nation's investment in science.
- This and other scientific information should be shared in costeffective ways that take advantage of the Internet, stimulate further discovery and innovation, and advance the translation of this knowledge into public benefits.
- Enhanced access to and expanded sharing of information will lead to usage by millions of scientists, professionals, and individuals, and will deliver an accelerated return on the taxpayers' investment.

Give More REACH to Your RESEARCH. SUPPORT THE PUBLIC ACCESS ACT.

SPARC 🕻

Add this button to your Web site to inform researchers about how taxpayer access can help expand their impact on the scholarly world.

What is "Taxpayer Access"?

Access to scientific and medical publications has lagged behind the wide reach of the Internet into U.S. homes and

Routes towards Open Access

Gold OA

Publishing in an open access journal

- Fully OA journals
 e.g. BioMed Central, Public Library of Science *etc*
- Optional OA in traditional journals (now offered by most major publishers)
- Green OA

Depositing articles in an OA repository

Subject repositories

- PubMed Central
- UK PubMed Central
- ArXiV

Institutional repositories

- -DSpace
- -Eprints
- -Fedora
- -Open Repository



OA journals and OA repositories are complementary

- Repositories are vital but are not a complete solution
- Dependence on subscription journals means
 - Embargo period (to preserve subscriptions)
 - Version in repository is not the 'official' one
 - Extra work for authors to deposit
- OA journals allow *full* and *immediate* access to official version, and deposit on behalf of author



Gold route Open access journals case study: BioMed Central



About BioMed Central

- Largest publisher of peer-reviewed open access journals
- Launched first open access journal in 2000
- Now publishes >170 OA titles
- >25,000 peer reviewed OA articles published
- All research articles published under Creative Commons licence
- Costs covered by 'article processing charge' (APC)



Journals published by BioMed Central

- 60 BMC-series journals
 - run by an in-house editorial team
 - cover all areas of Biology and Medicine
 - e.g. BMC Cell Biology, BMC Genomics, BMC Cancer
 - Flagship titles: BMC Biology and BMC Medicine
- 100 independent journals
 - run by external groups of scientists
 - often fill interdisciplinary niches *e.g. Malaria Journal*
- Hybrid journals (OA research + subscription content)
 - e.g. Arthritis Research & Therapy, Genome Biology



Article-processing charges who pays?

- Authors may pay out of grant funds
- Some funders provide a central fund for open access publishing costs
- Institutions may cover costs centrally, on behalf of their authors, via BioMed Central Institutional Membership
- Some titles cover costs themselves



Institutional Membership

Supporter Membership Institution pays a flat fee, authors pay a discounted Article Processing Charge

Prepay Membership Institution covers cost of publication centrally, at a discounted rate



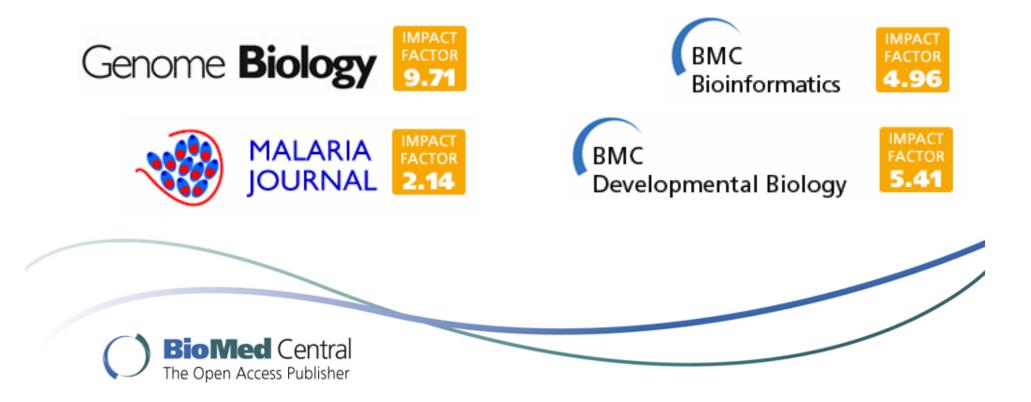
BioMed Central Finances

- Average face-value of Article Processing Charge: ~£750
- Realized income per article, after discounts and waivers: ~£600
- Based on current trends, we expect to be able to announce break-even before the end of 2007

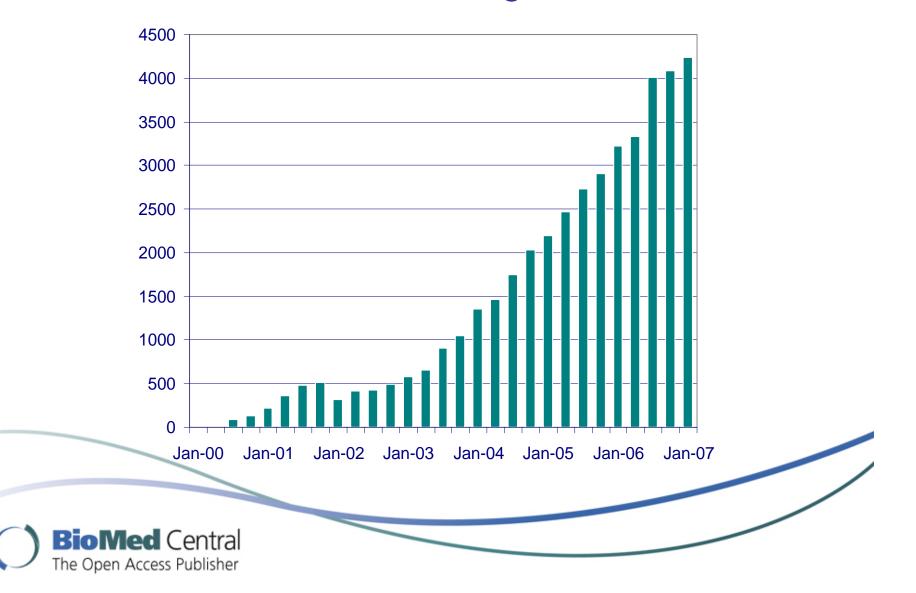


High impact journals

Some examples of BioMed Central journals that have already achieved excellent Impact Factors for their fields



Quarterly article submissions to BioMed Central OA journals



BioMed Central (publisher) + PubMed Central (repository)

- All articles published with BioMed Central are deposited with PubMed Central
- 24,500 articles deposited so far
- 520,000 users per month access BioMed Central content on PubMed Central



Data ingestors

- BioMed Central encourages re-use and re-distribution of articles
- Various organisations ingest our articles
- Ingest can be via 'push' or 'pull'





*Open*DOAR

Directory of Open Access Repositories

Home | Find | Suggest | Tools | FAQ | About | Contact Us

Search or Browse for Repositories

Search
Any Subject Area Any Content Type Filter
Iceland (1) Any Language Any Software
Summaries 💌 20 💌 per page. Sort by: Repository Name 💌 New Query
To search the contents of the repositories listed in OpenDOAR, please see our trial search page.

Result 1 of 1.

Page: << Previous 1 Next >>

Hirsla (Landspítali University Hospital Research Archive)

Organisation: Landspítali University Hospital, Iceland

- **Description:** This site is an institutional repository for materials produced by the scholars working at the University Hospital. It is notable that the vast majority of materials listed on this site are metadata (bibliographic) only, and that full-text items are a small subset of the whole. The site is well supported with guidance material for users. The interface is in English. An RSS feed is available.
 - Software: Open Repository

Size: 560 items (2007-03-02)

- Subjects: Health and Medicine
- Content: Publications; References; Unpublished
- Languages: English; Icelandic
 - **Policies:** Metadata re-use permitted for not-for-profit purposes; Re-use of full data items permitted for not-forprofit purposes; Content policies defined; Submission policies defined; Preservation policies defined

Green route Open access repositories case study: Open Repository



What is Open Repository?

- A hosted repository service
- Based on DSpace
- Operated by BioMed Central



Open Repository offers:

- Fully functional repository ready for use
- Customized web front end
- All server maintenance and back ups
- All major DSpace functionality
- Additional BMC functionality
- Training and support
- And all this for...



COST

...From US \$13, 500 for the first year (or £7,500 or €11,025)

One off set-up fee + 1yr maintenance



Open Repository Datafeeds

- Use OAI-PMH to feed metadata from PubMed Central into submission workflow
- Define email stems and institution names in config
- Scheduled task runs 'pull'
- XSLT transformation into Dublin Core for ingest
- Transformed metadata submitted to 'hidden' collection workflow
- Administrators assign item to collection



Datafeeds Workflow

Title:	Lipid phosphate phosphatases dimerise, but this interaction is not required for in vivo activity				
Authors:	Burnett, Camilla Makridou, Panagiota Hewlett, Lindsay Howard, Ken				
Issue Date:	16-Jan-2004				
Publisher:	BioMed Central				
Citation:	BMC Biochemistry 2004 5:2				
Abstract:	Background Lipid phosphate phosphatases (LPPs) are integral membrane p modifying or attenuating their activities. Wunen, a Drosophila LPP homolo migration and survival during embryogenesis. It has been hypothesised th hexamers. We were interested in exploring this possibility, to confirm whe required for either in vitro or in vivo activity. Results We present evidence thirty-five C-terminal amino-acids and depend upon the presence of an ir Wunen in Drosophila embryos results in perturbation of germ cell migration observed th	oue, has been shown to play a pivotal Choose. (<i>BioMed Central</i> e Editorial Importer	role in primordial germ cell (PGC)		
ISSN:	1471-2091	Middlesex House			
DOI:	10.1186/1471-2091-5-2	Department of Infection			
Additional Link:	http://www.biomedcentral.com/1471-2091/5/2	Centre for Virology Department of Medicine			
	Files in This Item: There are no files associated wi	Centre for Intensive Care Medicine Centre for Respiratory Research Faculty of Life Sciences Centre for Physiology tNational Cancer Institute Center for Bioinformatics Office of the Scientific Director BioMed Central Test Molecular Structure and Function			
Select the Collection for the item to be placed in after acceptance.		Choose			
Move to the start of the collection's workflow.		Move to Workflow			
Archive directly into the Collection, skipping any workflow steps.		Archive			
Delete Item.		Delete			
Select this option to correct, amend or otherwise edit the item's metadata.		Edit Metadata			
If you wish to l	eave this task for now, and return to your "My Open Repository", use this option.	Do Later			
To return the ta	sk to the pool so that another user can perform the task, use this option.	Return Task to Pool			



How is open access changing research practice?

- Making research more global
- Speeds the pace of discovery
- Rise of e-science
- Online publishing allows large data sets, colour images, movies to be published



How is open access changing science reporting?

- Makes results of research freely accessible to the public:
- Blogs, RSS feeds, news articles lead straight the full text of the original research
- Journalists have ready access to articles outside the traditional top titles

More than 8700 journalists, writers and editors are registered with BioMed Central



THANK YOU!

Marianne Josserand Sales Manager BioMed Central Ltd

<u>Marianne@biomedcentral.com</u> +44 (0) 207 631 9990

