Open Access: a funders perspective

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Conference:

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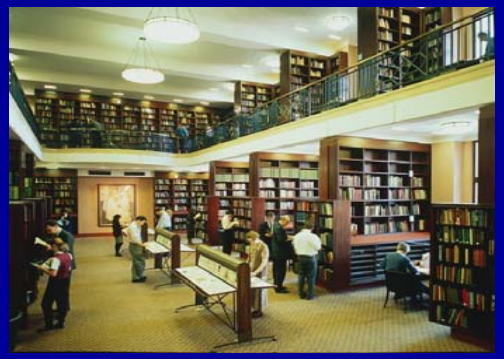
Overview

- Discuss why the Trust supports open access (OA)
- Provide a summary of the Trust's OA policy and discuss how grantees can comply with this policy
- Highlight what the Trust requires when it pays an OA fee
- Provide some data on publisher compliance with the Trust's OA policy
- Discuss the rationale behind establishing UK PMC
- Conclusion

The Wellcome Trust



- Largest charity in UK; second largest medical charity in the world
- Funds innovative biomedical research in the UK and internationally
- Currently spends around £500 million (7.78 billion HKD) per annum – supporting the brightest scientists with the best ideas
- Supports public debate about biomedical research and its impact on health and well-being
- Home of the Wellcome Library
- More information at: http://www.wellcome.ac.uk

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Why the Trust is supporting open access to the research literature

1. **To improve the quality of of research by maximising access to the research outputs**
   - *Access is still an issue – Recent exercise undertaken by the Trust showed that even researchers who has access to well-funded libraries still could not access between 10%-20% of Trust-funded research papers.*
   - *Research by BMC shows that 90% of NHS-funded research available online full text ; 30% immediately available to public; only 40% immediately available to NHS staff. See:* http://www.biomedcentral.com/openaccess/inquiry/refersubmission.pdf

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Access....

1: J Infect Dis. 2003 Oct 15;188(8):1239-44. Epub 2003 Sep 30. Related Articles, Links

The University of Chicago Press

Safety and immunogenicity of DNA/modified vaccinia virus ankara malaria vaccination in African adults.

Moorthy VS, Pinder M, Reece WH, Watkins K, Atabani S, Hannan C, Bojang K, McAdam KP, Schneider J, Gilbert S, Hill AV.

Medical Research Council Laboratories, Banjul, The Gambia.

The present
modified vac
DNA sequer
against Plasn
immunogenic
prior DNA I
malaria-expo
recombinant

Funded by the Wellcome Trust and MRC

Access Denied - Microsoft Internet Explorer

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Address http://www.journals.uchicago.edu/JID/journal/issues/v188n8/30690/30690.html Go

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Access to *The Journal of Infectious Diseases* is restricted to registered institutional and individual subscribers.

The User ID and password you entered were incorrect. Please note that User IDs and passwords are case-sensitive. (Journal subscribers' usernames begin with uppercase "UCP".)

You were asked for a User ID and password because your http request is from an IP address not recognized by this server as belonging to a registered institutional subscriber.

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Why the Trust is supporting open access to the research literature

1. To improve the quality of of research by maximising access to the research outputs
2. **To enable greater integration between the research literature and its underlying research data**
   - *Articles linked to gene and chemical compound datasets*
   - *Data mining and the semantic web - enables the extraction of new facts from the literature*

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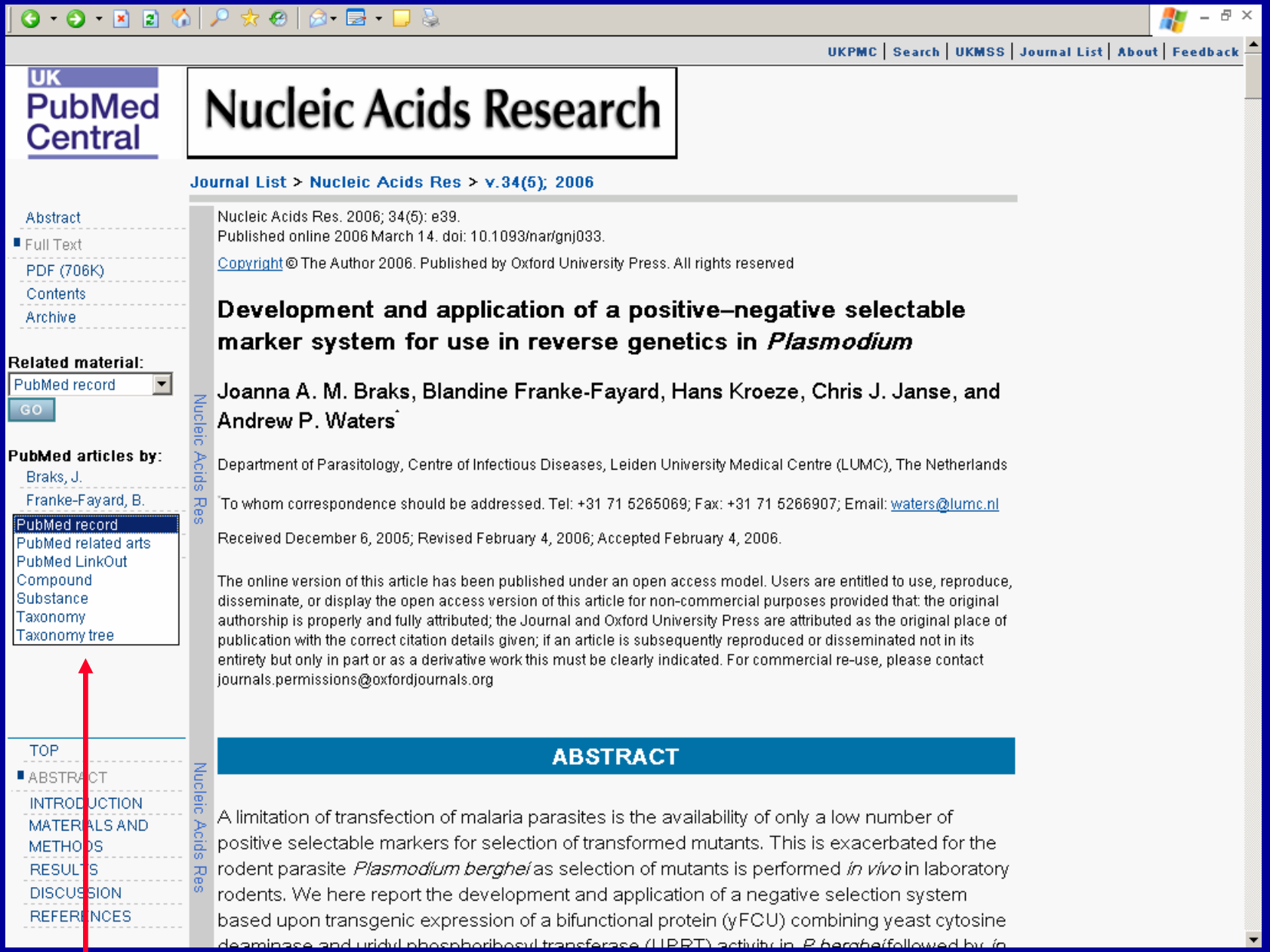

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Nucleic Acids Research

Journal List > Nucleic Acids Res > v.34(5); 2006

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Compound
Substance
Taxonomy
Taxonomy tree

TOP
ABSTRACT
INTRODUCTION
MATERIALS AND METHODS
RESULTS
DISCUSSION
REFERENCES

Nucleic Acids Res. 2006; 34(5): e39.
Published online 2006 March 14. doi: 10.1093/nar/gnj033.

Development and application of a positive–negative selectable marker system for use in reverse genetics in *Plasmodium*

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Department of Parasitology, Centre of Infectious Diseases, Leiden University Medical Centre (LUMC), The Netherlands

*To whom correspondence should be addressed. Tel: +31 71 5266069; Fax: +31 71 5266907; Email: waters@lumc.nl

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ABSTRACT

A limitation of transfection of malaria parasites is the availability of only a low number of positive selectable markers for selection of transformed mutants. This is exacerbated for the rodent parasite *Plasmodium berghei* as selection of mutants is performed *in vivo* in laboratory rodents. We here report the development and application of a negative selection system based upon transgenic expression of a bifunctional protein (yFCU) combining yeast cytosine deaminase and uridyl phosphoribosyl transferase (UPRT) activity in *P. berghei* followed by *in*

Programmatic linking of text to data

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NCBI

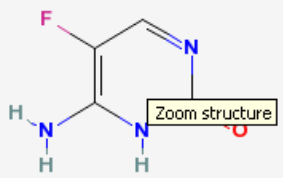
PubChem

National Library of Medicine NLM

HOME | SEARCH | SITE MAP | PubMed | Entrez | Structure | GenBank | PubChem | Help

Search PubChem Compound GO

Compound Summary:



CID: 3366

BioActivity: Summary
Inactive: 99 Links
Inconclusive: 2 Links

NLM Toxicology: Link

Substances:
All: 36 Links
Same: 26 Links
Mixture: 10 Links

Related Compounds:
Same, Connectivity: 2 Links

Similar Compounds: 5 Links

Structure Search

Mesh | Synonyms | Properties | Descriptors | Category | Exports

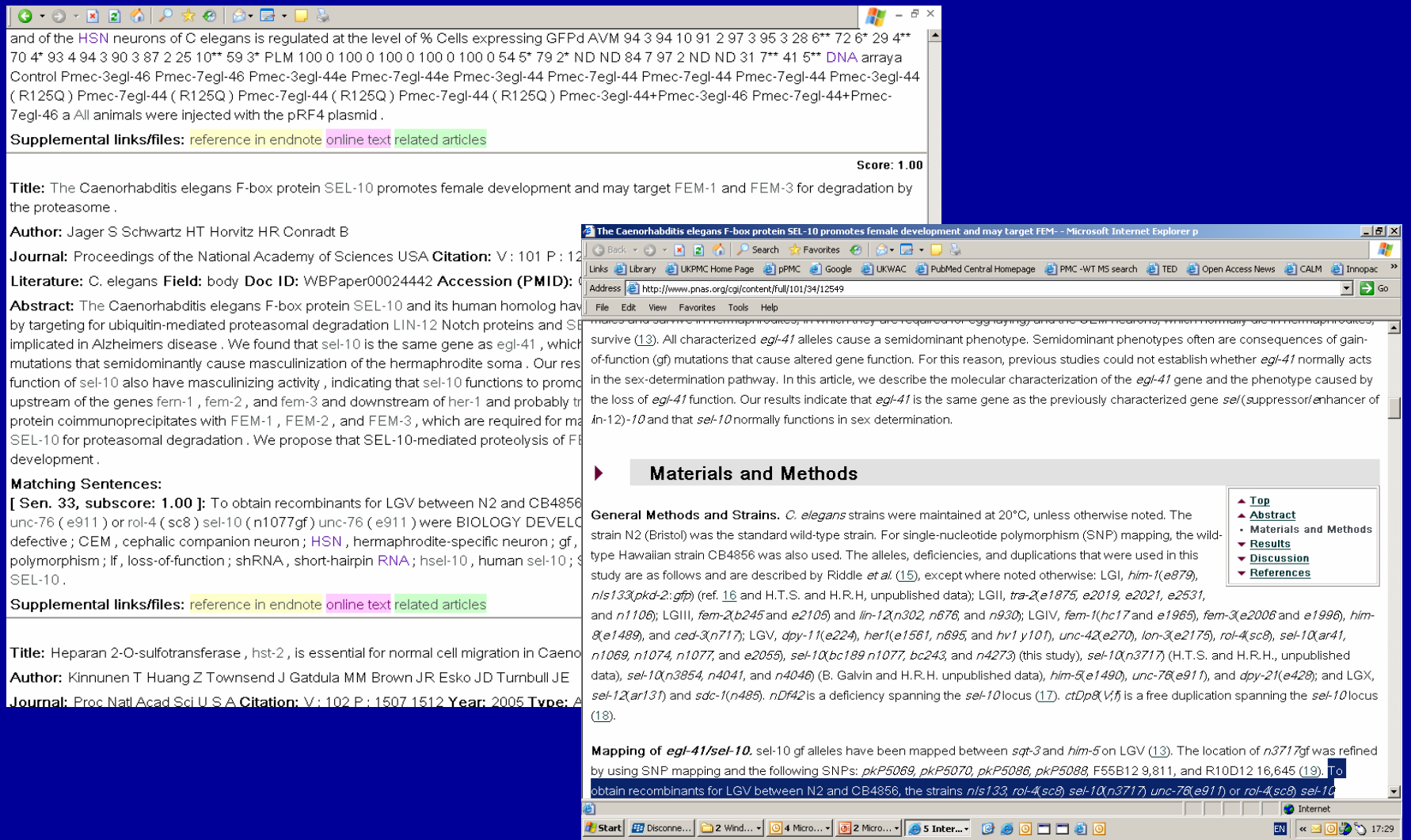
Medical Subject Annotations: (Total:1)

Flucytosine
A fluorinated cytosine analog that is used as an antifungal agent.

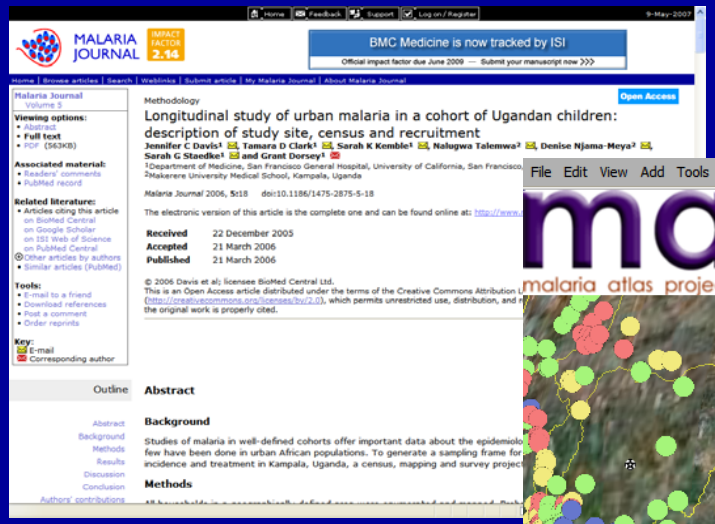
Show MeSH Tree Structure

New resources from mining the literature: textpresso

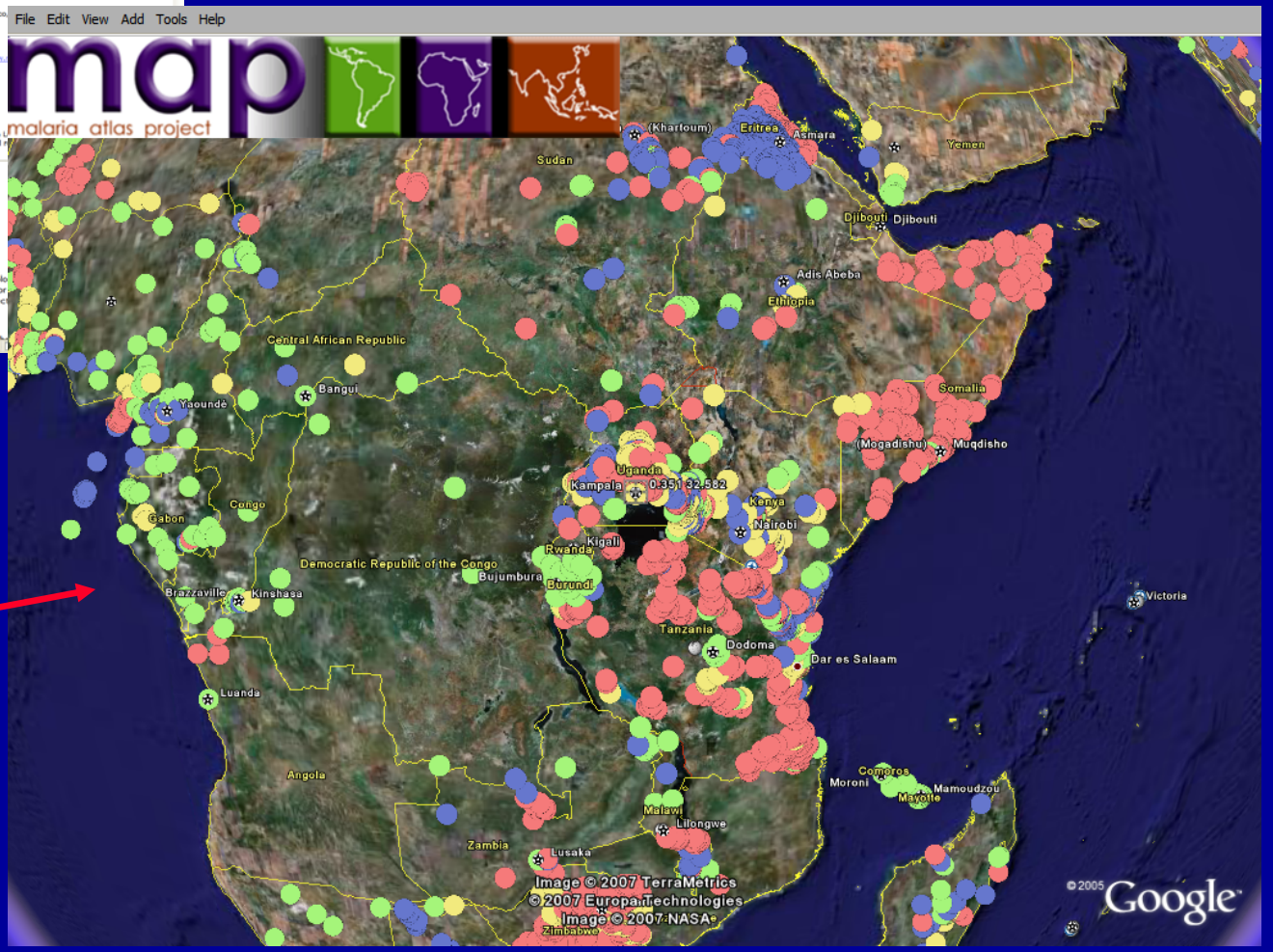
- Textpresso new text-mining system for scientific literature



New resources from mining the literature: Malaria Atlas Map



Data mined from the research literature



"Mashed-up" with Google earth

Why the Trust is supporting open access to the research literature

1. To improve the quality of of research by maximising access to the research outputs
2. To enable greater integration between the research literature and its underlying research data
3. Evaluation purposes
   > Is the £500m research spend funding making a difference?

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Evaluation

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Why the Trust is supporting open access to the research literature

1. To improve the quality of of research by maximising access to the research outputs
2. To enable greater integration between the research literature and its underlying research data
3. Evaluation purposes - is our funding making a difference?
4. Long-term preservation
   - *All current articles in PMC are marked-up in XML - future-proofing the record of medicine*
   - *Open archive – around 2 million unique IP addresses access PMC every month – 10m page views; errors quickly spotted*

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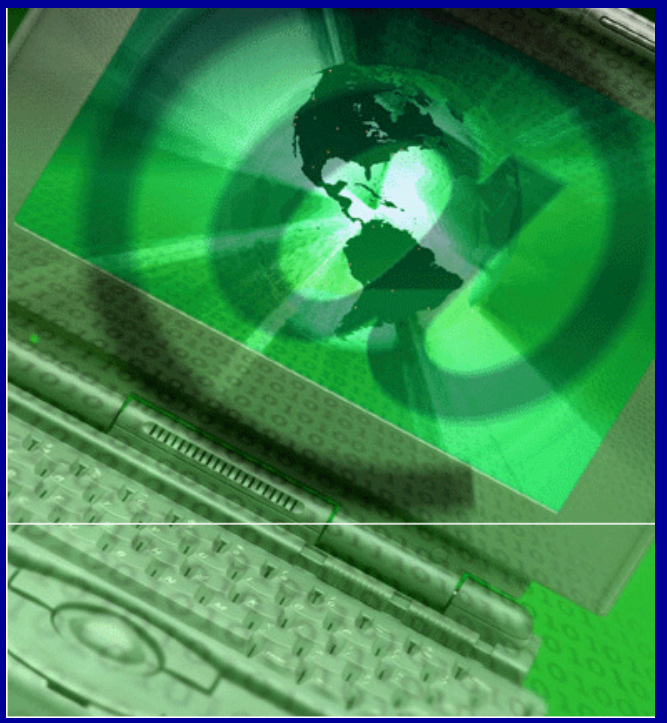
OA at the Wellcome Trust: policy

All research papers – funded in whole or in part by the Wellcome Trust – must be made freely accessible from the PubMed Central and UKPMC repositories as soon as possible, and in any event within six months of the journal publisher's official date of final publication



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How do WT grantees comply?

- Compliance can be achieved by following one of two routes:
- Route 1
  - *Publish in OA/hybrid journal [preferred route]*
- Route 2
  - *Publish anywhere - but self-archive a version of the author manuscript (must include all changes that arise from the peer-review process) and make that available from PMC/UKPMC within 6 months*
- If a publisher offers neither route then
  - *Author can make revision to the journals copyright statement – boilerplate language provided – and see if the publisher will accept this*
  - *Look for an alternative publisher*

What does the Trust require when it pays an OA fee?

- Mandatory requirements
  - *Deposit, on behalf of the author, the **final version of the article** - in PMC, where it must be made **freely available at the time of publication**.*
  - *Permit these articles to be **freely accessed and re-used**, subject to agreed limits (for example, the commercial rights to the article would most likely continue to reside with the publisher).*
  - *Allow such articles to be mirrored to PMC International repositories, such as UKPMC.*
  - *Deposit the article in XML, along with high-resolution images used in the article.*
  - *Sign PMC Selective Deposit Agreement*
- Desirable requirements
  - *Deposit the publisher PDF version of the article in PMC.*
  - *Make the article freely available on the publisher website at the time of publication*

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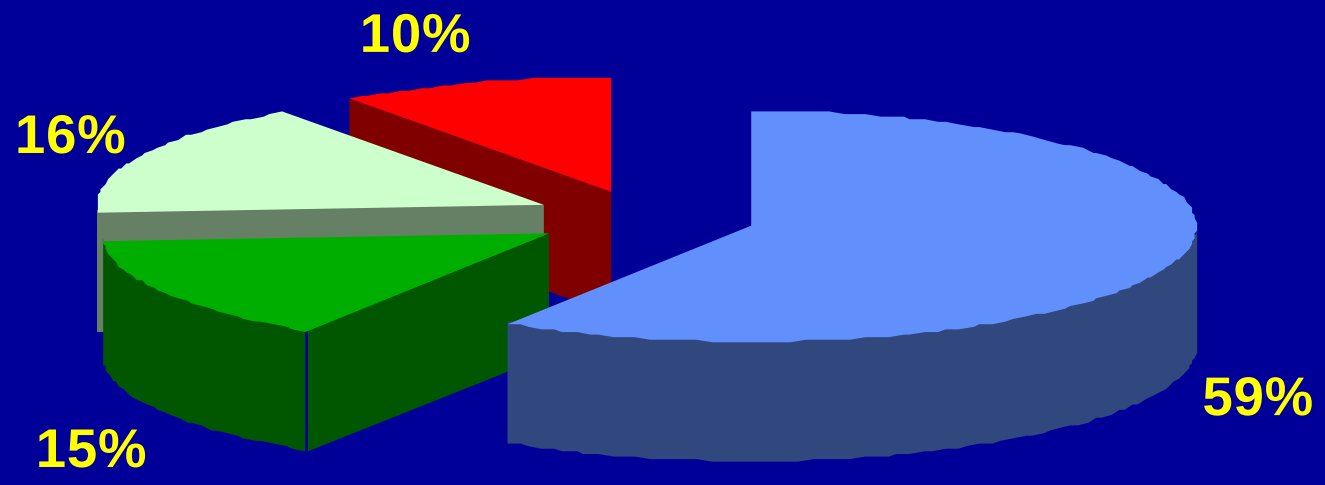
Publishers response to the Wellcome grant conditions

- Significant number of commercial and not-for-profit publishers now offer an OA option that is fully compliant with the Trust's requirements (e.g. PLoS, BMC, Springer, Elsevier, OUP, CUP, BMJPG, Sage, Taylor & Francis)
- Other publishers allow the author to self archive a version of the final article and make that available within 6 months (e.g. Nature, AAAS, AMA, Am. Physiological Assoc)
- However, some publishers have policies that do not allow Wellcome-funded authors to publish in these titles
  - *High profile publishers that do not offer a WT-compliant policy include the American Association of Immunologists, and the American Association for Cancer Research*

Biomedical publishers: compliance with Wellcome OA policy



Source = RoMEO database

WT compliant policy
Active discussion
No policy
Non-compliant

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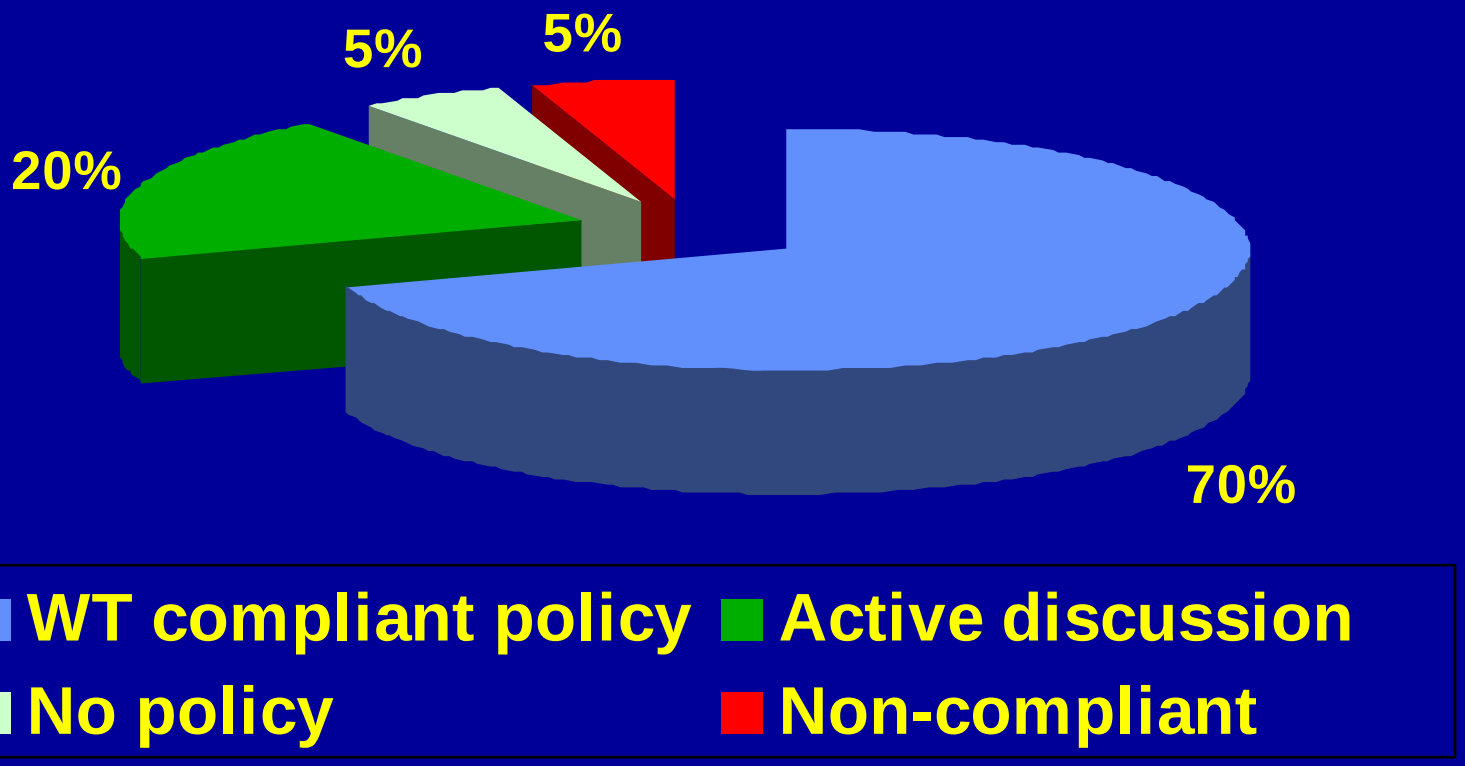
PubMed 4000 - compliance with Wellcome OA policy

PubMed 4000 study analysed papers indexed by PubMed, and attributed to WT funding, and looked to see if these were published in journals that had a WT-compliant policy



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Are Wellcome grantee's adhering to the mandate?

- Too early to tell. Policy has only been fully implemented since October 2006
  - *Pragmatic approach. If papers were "in process" before 1st October, - and the journal that accepted the paper is now deemed non-compliant – the Trust does not expect the researcher to withdraw a manuscript.*
  - *Obviously, all new papers, submitted for publication after Oct 2006, should only be submitted to "WT-compliant" journals*
- Some encouraging signs….
  - *In the first 3 months of running UKPMC 250 author manuscripts were deposited and completed*
  - *Elsevier have deposited 35 papers within the past month*
- ..but more advocacy and awareness required
  - *Only 22% of OA funds made available to UK universities in the year 05-06 has been claimed.*

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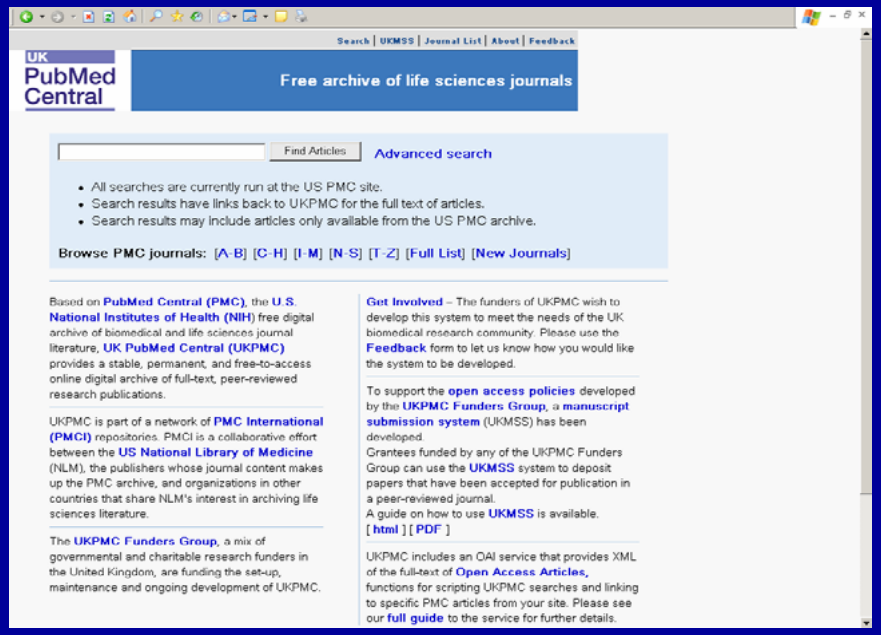
Total cost of paying for OA?

- Just funding the research is a job only part done – a fundamental part of our mission is to ensure the widest possible dissemination and unrestricted access to that research
- Trust estimates that providing OA to all the research papers it helps fund will cost between 1%-2% of its annual research budget.
  - *Approx 4000 original research papers published every year. If every single one of those papers was published as an open access article, with an average cost of £1650 per article, the total cost to the Trust would be £6.64 million; just over 1% of our annual research budget.*
  - *Trust is rarely the sole funder of a research team, and more than 80% of papers that acknowledge our support also acknowledge the support of one or more other funders. In time these costs will be spread throughout the research budget and fall below the figure estimated here.*

UKPubMed Central



- Objective is to create a stable, permanent and free-to-access online digital archive of the full-text, peer reviewed research publications (and datasets) that arise from research funded by the UKPMC Funders Group
- 8 UK biomedical research funding organisations have joined the UKPMC Funders Group
- Estimated that around 90% of the biomedical research that is funded in the UK comes from the UKPMC funders

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UKPMC Funders Group

Funder	Mandate?	Max embargo	OA – Article Processing Charges (APC)?
arc	✓	6 mo.	Will pay APC's via grants.
BBSRC	✓	ASAP	Will pay APC's via grants.
BHF	✓	6 mo.	Will pay APC's via additional funds
CSO (Scot)	✓	6 mo.	APC can be paid from grant funds, but will not be specifically allocated.
CR-UK	✓	6 mo.	APC costs to be met from existing grants/lab budget allocations.
Dept Health	✓	6 mo.	Will pay APC's via grants.
MRC	✓	6 mo.	Will pay APC's via grants.
Wellcome Trust	✓	6 mo.	Will pay APC's via additional funds.

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Why establish UK version of PMC?

- Provides the infrastructure to enable Wellcome grantees (and others within the UKPMC Funders Group) to comply with their grant conditions
- A UK version of PMC will benefit the Trust, its partners and the UK research community in a number ways:
  - *UK-focussed services - evaluation of funding; development of new metrics that could feed into a future RAE*
  - *Local ingestion of UK documents e.g. NICE guidelines, MRC reports*
  - *Enhanced functionality - integration with grants systems, text mining services with other open data sources*
  - *Long term preservation of the record of medicine becomes a shared responsibility*
  - *Helps to ensure that the OA principles espoused by the Trust become a reality in the UK*

UKPMC – systems and services

- Systems
  - *A UK-hosted mirror of PMC*
  - *A manuscript submission and tracking system for UKPMC grantees*
- Services
  - *Robust, secure and scaleable infrastructure*
  - *Manuscript conversion facilities*
  - *Helpdesk*
  - *Communications and marketing*
  - *R&D*
- Contract to run and develop UKPMC services has been awarded to a consortium led by the British Library is association with University of Manchester and European Bioinformatics Institute
- UKPMC went live in January 2007 – see http://ukpmc.ac.uk

Conclusion

- They way original research papers are disseminated and made available is changing.
  - *Funders are demanding more; publishers are responding to this need*
- In the UK, biomedical research funders have agreed a common approach to OA, and now have the infrastructure in place (UKPMC) to help realise our objectives.
- Dissemination costs are research costs
- “Ensuring that the outputs of research are freely available to all is the best way to maximise their utility.” Sir John Sulston, 2006 .