



Gaining access to critical information - BioMed Central

MUNIN 2011

22nd November 2011

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Scope

- Open Access Growth
- BioMed Central
- Springer Open
- Enhanced Publications; trial publishing and the reporting bias
- Threaded publications



What does “Open Access” to scientific research mean?

- Universally available online without any barriers to access
- Creative Commons
 - Licensed to allow redistribution and reuse (as long as attribution is given)
- Permanently archived in multiple locations to ensure long term access
 - PubMed Central

Why Open Access?

- Enhances scholarly communication
- Research has more impact
- Increases the institutes and authors profile
- Readers get better access to funded research
- Improves visibility and impact of an institutions research
- No subscription barriers



Routes towards Open Access

- **Gold OA**

Publishing in an open access journal:

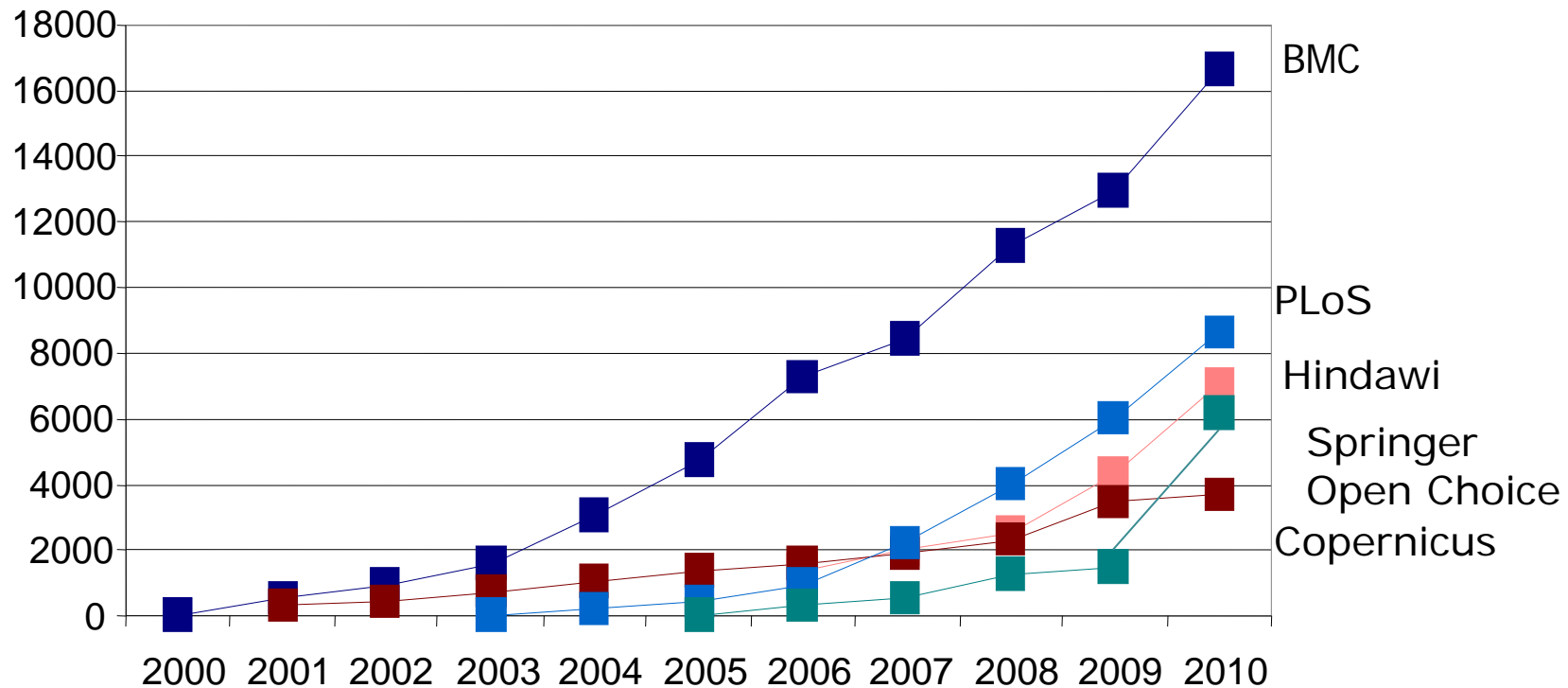
- Fully OA journals
e.g. BioMed Central, Public Library of Science *etc*
- Optional OA in traditional journals
(now offered by most major publishers)

- **Green OA**

Depositing articles in an OA repository:

- | | |
|----------------------|------------------|
| Subject repositories | –DSpace |
| – PubMed Central | –Eprints |
| – UK PubMed Central | –Fedora |
| – ArXiv | –Open Repository |

Growth in OA 2000 - 2010

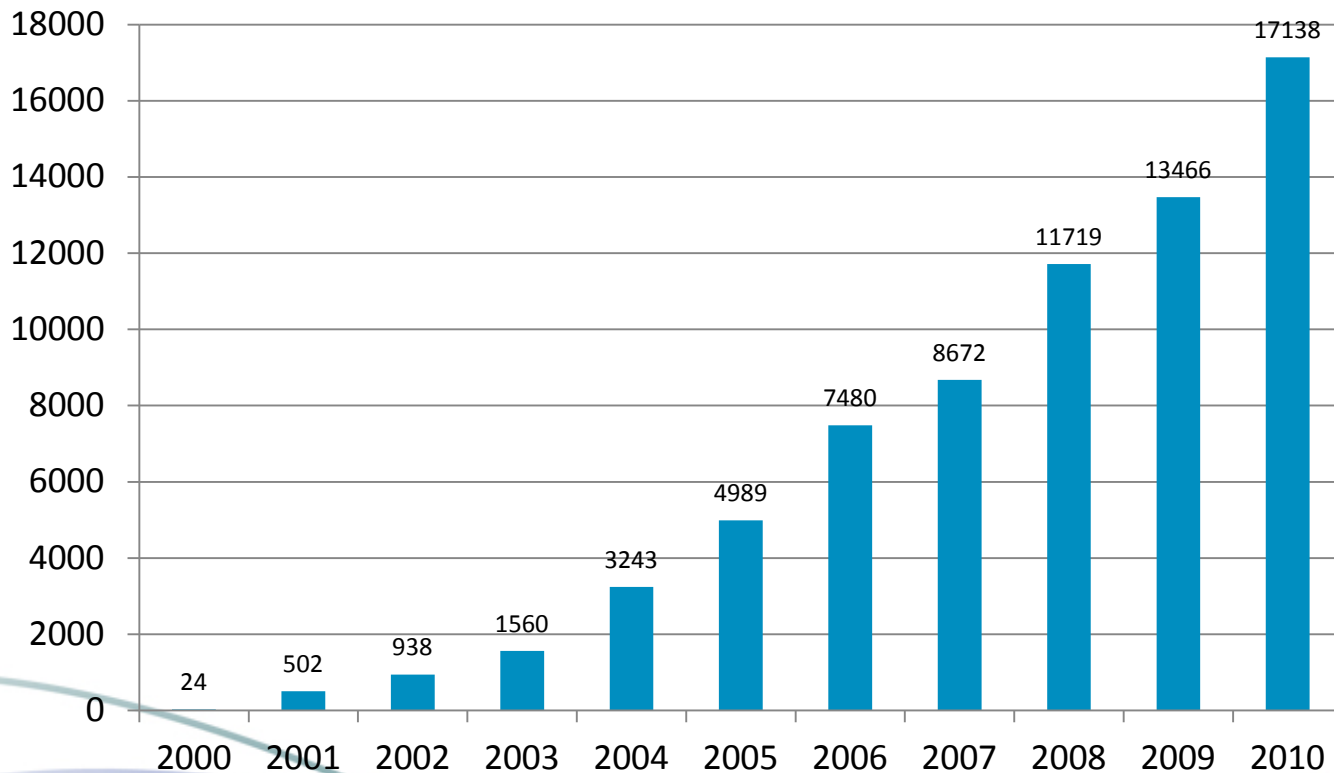


Presented by Mark Patterson, PLoS, at the SOAP Symposium, Berlin, January 2011

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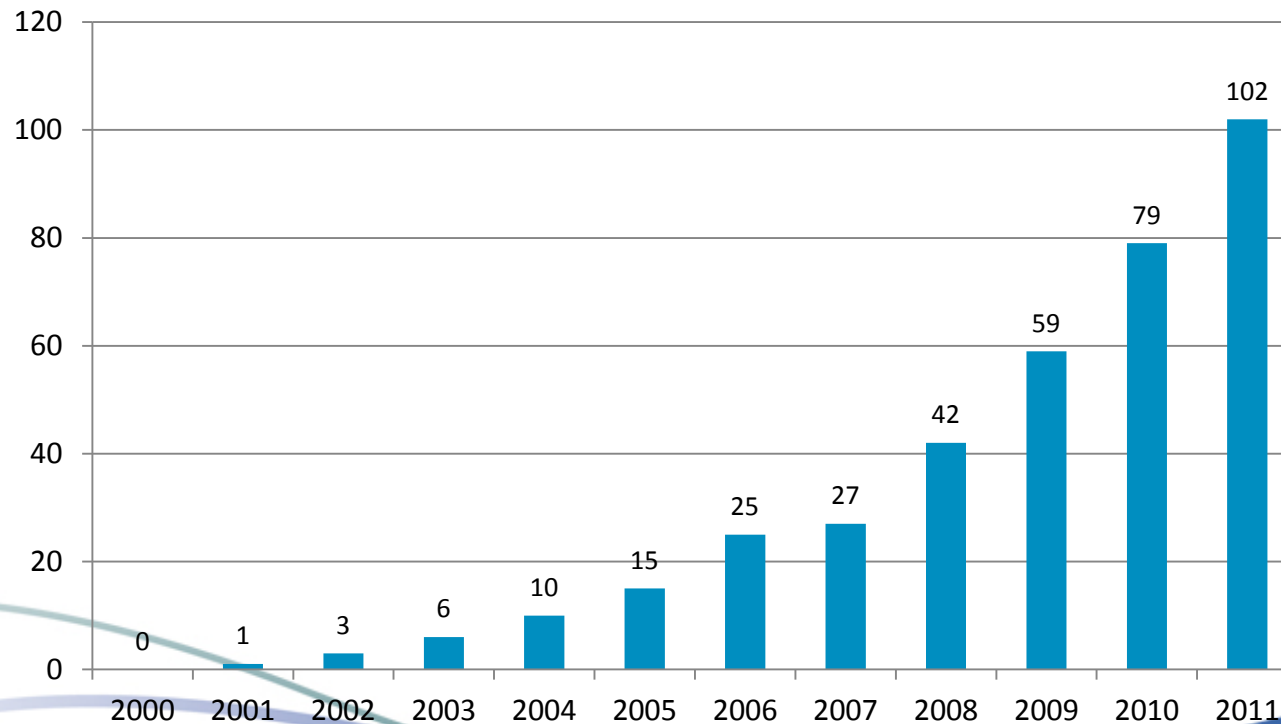
- Pioneered open access publishing model
- Launched first open access journal in 2000
- Now publishes >230 OA titles
- Creative Commons license
- Costs covered by 'article processing charge' (APC)

Open Access articles published in BioMed Central journals



BioMed Central journals with impact factors

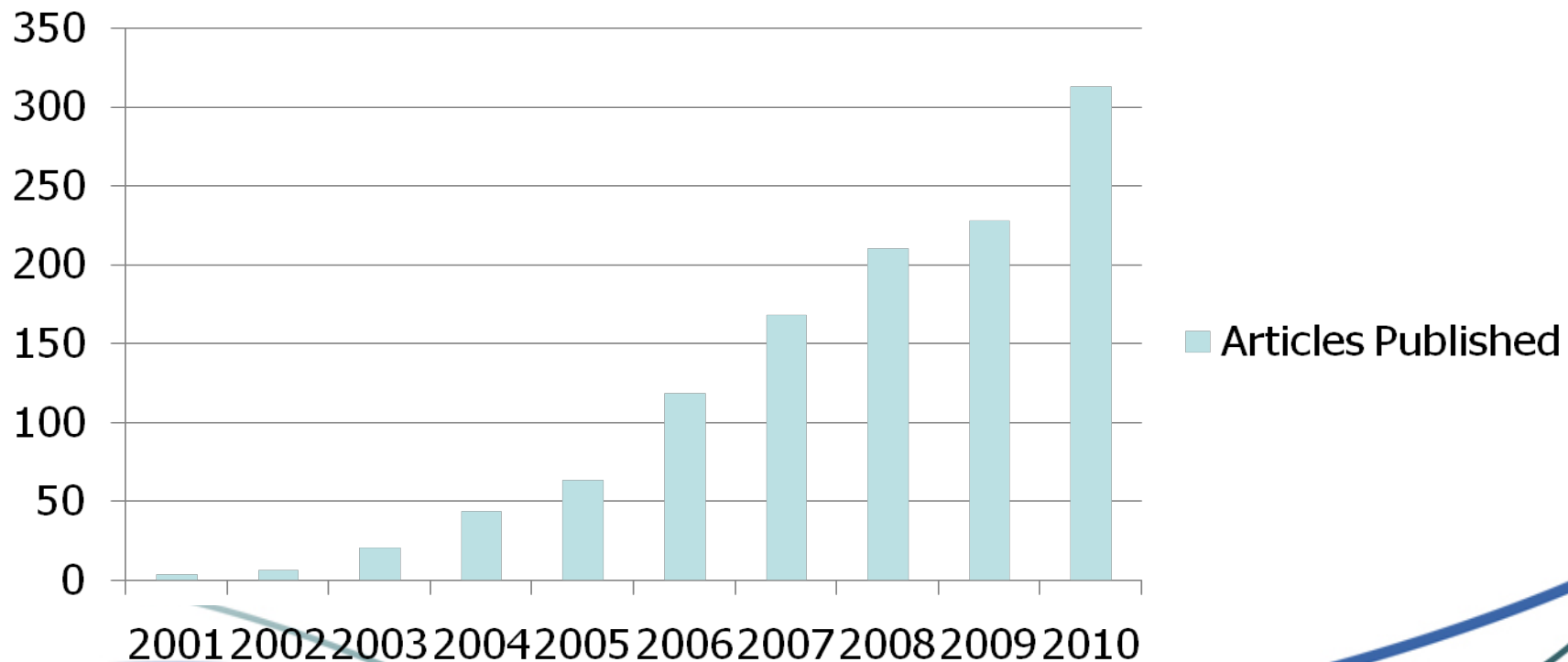
Open access model proven to be fully compatible with high quality



Norwegian open access activity

□

2001 - 2010

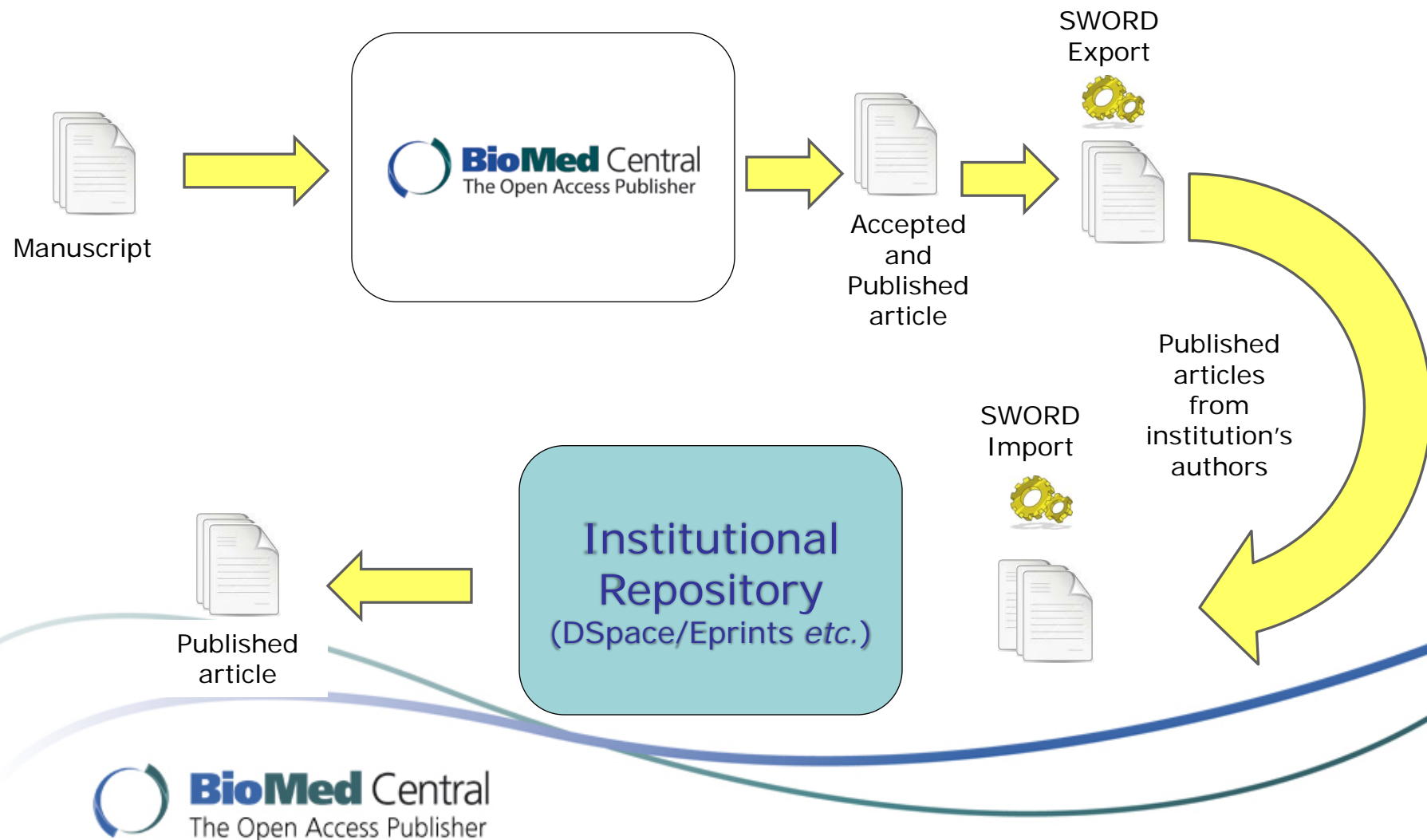




BioMed Central Members

- 384 Members in 42 countries worldwide
- 4 Members in Norway – University of Bergen, University Library of Tromso, Norwegian Air Ambulance Foundation & Norwegian Inst. Public Health.
- Benefits of Membership
 - Increase in research output
 - Researchers' fees paid for in full or discounted
 - Cost-effective
 - Showcase of institution's research

Automated Deposit to IR via SWORD



Acquisition of BioMed Central in 2008



BioMed Central
The Open Access Publisher

*“Springer is now the
world’s largest open
access publisher”*

Peter Suber in October 2008



BioMed Central
The Open Access Publisher

SpringerOpen[®]

What is SpringerOpen[®]



- Open access journals covering all disciplines
- Creative Commons
- 53 journals already, 11 already have impact factors
- Administered by BioMed Central
- No subscriptions, article processing fees instead (800 – 1,250 EUR)
 - Paid by the author (via research grant, library, institutional OA fund, ...)
 - Paid by a member institution
 - Waivers (economic hardship)



 **Applied Nanoscience**
a SpringerOpen Journal


 **The Journal of Headache and Pain**
a SpringerOpen Journal

 **AMB Express**
a SpringerOpen Journal

 **Photonic Sensors**
a SpringerOpen Journal

 **Health Economics Review**
a SpringerOpen Journal

 **Annals of Intensive Care**
a SpringerOpen Journal

 **International Journal of Emergency Medicine**
a SpringerOpen Journal

 **Bulletin of Mathematical Sciences**
a SpringerOpen Journal

 **EJNMMI Research**
a SpringerOpen Journal

 **Psychology of Well-Being**
a SpringerOpen Journal

 **Applied Water Science**
a SpringerOpen Journal

 **Security Informatics**
a SpringerOpen Journal

 **Journal of Mathematics in Industry**
a SpringerOpen Journal

 **Journal of Orthopedics and Traumatology**
a SpringerOpen Journal

 **The Journal of Headache and Pain**
a SpringerOpen Journal

 **Strategies in Trauma and Limb Reconstruction**
a SpringerOpen Journal

 **Journal of Remanufacturing**
a SpringerOpen Journal

 **Environmental Sciences Europe**
a SpringerOpen Journal

 **Planetary Science**
a SpringerOpen Journal

 **The Journal of Mathematical Neuroscience**
a SpringerOpen Journal

 **3 Biotech**
a SpringerOpen Journal

 **Poiesis & Praxis**
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 **Organic and Medicinal Chemistry Letters**
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The screenshot shows the SpringerOpen website homepage. At the top left is the SpringerOpen logo. To its right is a search bar with the text "Search SpringerOpen" and a "GO" button. Below the search bar is a navigation menu with links for "Home", "Journals", "Articles", "About SpringerOpen", and "My SpringerOpen". The main content area is divided into several sections: "Welcome SpringerOpen Authors" with a brief description of open access; "SpringerOpen journals" with a list of "Latest journals open for submission" including "Organic and Medicinal Chemistry Letters", "Planetary Science", and "Psychology of Well-Being"; "Articles" with a "Latest" tab selected, showing a "Nano Express" article about ultraviolet photodetectors and a "Nano Review" article about electronic and magnetic properties of $\text{SnO}_2/\text{CrO}_2$ thin superlattices; "Twitter updates" with three tweets about open access policies and journal submissions; "Libraries" with a "Learn more" button; "Submit a manuscript" with a "Submit" button; "Email alerts" with a "Sign up" button and an email address input field; and a "Register" button at the bottom right. The Springer logo is in the top right corner.

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New ways of making research available

Current Controlled Trials

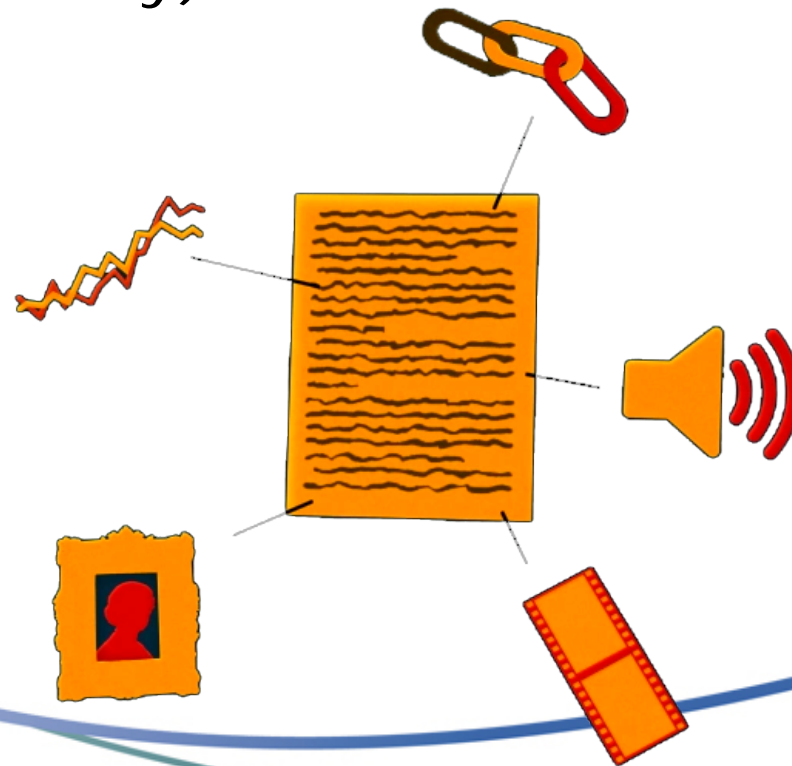
An online publisher dedicated to trial registration, hosting and trial information.

Special journals

Trials, Journals of Medical Case Reports, BMC Research Notes

Enhanced Publications (EP)

An enhanced publication is a scholarly publication – usually a full text – that has been enhanced with additional (supplementary) materials

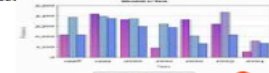


Enhanced Publications

Publications combined with research data

- Improve interpretation, reproduction and verification
- Promote available data
- Browseable network of related items

demonstrate their results and helps their peers to verify these results. It also makes other researchers aware of the availability of these resources, which may lead to their reuse, saving other researchers the work of e.g. recollecting research data. They also enable creating indirect links between different publications that are possibly related. The Internet provides an infrastructure to publish text with visualizations, animations, research data, etc. Woutersen-Windouwer and Brandsma (2008) indicated several initiatives for publishing enhanced publications on the web, but showed that these initiatives are not easily applicable: they don't fit into existing repository systems, there is little scientific awarding for the additional efforts required for this type of publication and archives do not know how to ingest this material. More generic solutions are needed to overcome these issues.



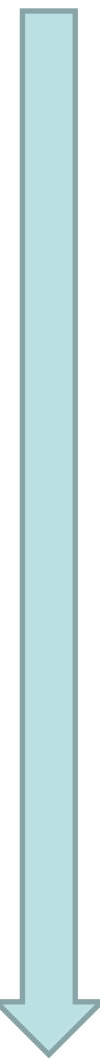
Data Archiving and Networked Services (DANS) is an institute of both the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organization for Scientific Research (NWO). DANS is responsible for archiving research data from the humanities and social sciences, keeping these data accessible and

	C	D	E	F	G	H
06/23/05	21	02	05	Lot: 0950052	00	Lcc: IAIMR 0000
06/27/2005	0.07	0.13	0.0026	-0.003	0.0036	0.0047
06/27/2005	0.07	0.22	0.0014	-0.0034	0.0033	0.0055
06/27/2005	0.07	0.32	0.0032	-0.0038	0.0016	-0.0018
06/27/2005	0.07	0.39	0.0027	-0.0029	0.0039	0.0019
06/27/2005	0.07	0.59	0.0028	-0.0038	0.0022	0.0012
06/27/2005	0.08	0.08	0.0012	-0.0045	0.0022	0.0021
06/27/2005	0.08	0.15	0.004	-0.0019	0.0036	0.0103
06/27/2005	0.08	0.24	0.0031	-0.0029	0.0034	0.0038
06/27/2005	0.08	0.30	0.0031	-0.0028	0.0036	0.0092
06/27/2005	0.08	0.37	0.0030	-0.0031	0.0034	0.0092

Overview of Trial Publishing Sequence



Low transparency



Potential for bias

High transparency

Trial registration

Protocol publication

Protocol amendments

Methodology articles

First report of trial findings

Medical case reports/ADRs

Secondary analysis

Longer-term follow-up

Research updates

Lessons learned

Systematic review and meta-analysis

Data publication, deposition and sharing





Challenges

Publication bias

Articles reporting results favoring the medical intervention being studied (i.e. positive rather than negative results) are more likely to be published

Visibility/ transparency

Access to research data needs to be improved

Usability and connectivity

Data sets and publications related to the same trial (e.g. trial registration, study protocol, results) need to be more interconnected

Avoiding reporting bias

BMJ 2010;341:c4737 doi:10.1136/bmj.c4737 (Published 12 October 2010)

Cite this as: BMJ 2010;341:c4737

Research

Reboxetine for acute treatment of major depression: systematic review and meta-analysis of published and unpublished placebo and selective serotonin reuptake inhibitor controlled trials



OPEN ACCESS

Dirk Eyding, project manager¹, **Monika Lelgemann**, senior researcher², **Ulrich Grouven**, statistician^{3, 4}, **Martin Härter**, head of department of medical psychology⁵, **Mandy Kromp**, statistician³, **Thomas Kaiser**, head of department of drug assessment³, **Michaela F Kerekes**, data manager³, **Martin Gerken**, researcher⁶, **Beate Wieseler**, deputy head of department of drug assessment³

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October 2010:
Reboxetine is “overall
an ineffective and
potentially harmful
antidepressant”

Addressing reporting bias



BioMed Central's journal *BMC Research notes* offers home for such publications.

=> Scope: scientifically sound research in Biology and Medicine; data sets, small scale clinical studies, reports of confirmatory or negative results



Introducing threaded publications

In their 1999 article in *The Lancet*, Altman and Chalmers wrote:

“Electronic publication of a protocol could be simply the first element in a sequence of 'threaded' electronic publications, which continues with reports of the resulting research (published in sufficient detail to meet some of the criticisms of less detailed reports published in print journals), followed by deposition of the complete data set.”



What BioMed Central is doing

- **Technology** (improved linking of content)
- **Journals and article types**
Such as Trials, Systematic Reviews, Journal of Medical Case Reports and BMC Research Notes
- **Financial incentives**
APC discounts when publishing more than one element of a thread in one of our journals or registering a trial with CCT.



Conclusions

- More reliable, transparent, unbiased research
- All scientifically sound research can be published
- We can better serve the health of patients with transparency
- Threaded publications are already working at BioMed Central - Call to action for other publishers...
- Innovation in science communication requires a combined effort from all stakeholders



Summary

- Maximizes research visibility
- OA supported by authors, funders, institutions & governments - part of the mainstream
- Quality journals
- Successful business model
 - liberal stance on author rights
 - open minded & collaborative approach
 - strong & continued support for sustainable Open Access

Thank you

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