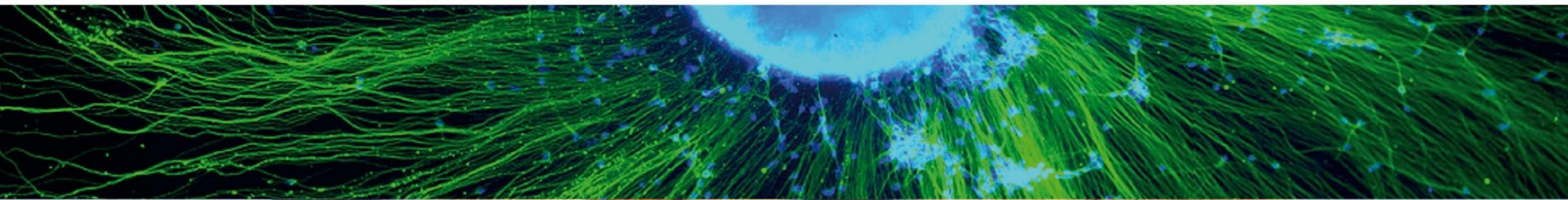




European Science Foundation



ESF-EMRC Science Policy Briefing

« Open Access in Biomedical Research »

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Open Access: where are we today in biomedical research?

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Highlights

- Importance of OA in the biomedical research field
- Current problems to access health literature
- Barriers to full OA implementation
- The publishing business environment
- Institutional repositories

OA specificity in biomedical research

CHARACTERISTICS

- Importance of **peer review**
- **Readership 'half-life'** of biomedical papers = **6-12 month**
- Journal subscriptions vs **financial constraints in public sector**

NEW DEVELOPMENTS

- **OA spread in the field**
- **PubMed**
- **PMC**
- **PMC International:** a network of digital archives
- **Big push by funders** for researchers to deliver their papers through open repositories

Problems to access health literature

- **Paywalls are the main barrier** – links with the predominant publishing business model
- Researchers are finding ever more difficult to access the literature:
 - 35% of a 2006 survey respondents said they experienced some difficulty in getting access to all the articles they need (*"Journals and scientific productivity. A case study in immunology and microbiology"*, 2006.
<http://www.homepages.ucl.ac.uk/~uczciro/prcwhitepaper.pdf>)
- **The need for more open data:** issues to consider
- Limited access to current research outputs has a **negative impact on innovation projects**
- The case of developing countries

Barriers to OA in biomedical research - 1

- **RESEARCHERS**

Lack of OA understanding and awareness of OA publishing options
 Reluctance to self-archiving
 Low compliance rate when OA publishing funds available

- **PUBLISHERS OA POLICIES**

Incomplete/ambiguous info as regards OA options
 Submission procedures for OA papers unclear

- **COST OF OA PUBLISHING**

Too expensive APCs: \$1,000 - \$5,000 (ca. €760 to €3,800) per paper
 Amongst full OA journals, biomedical titles attract the highest Article Processing Charges (APCs), \$1,500-2,000 (ca. €1,130-1,500)
 Hybrid journals usually charge an even higher APC rate (up to \$5,000 for Cell , £200 per page for The Lancet)
 The effect of funders OA mandates

Barriers to OA in biomedical research - 2

- **OA MANDATE FUNDERS**

A growing number of OA directives, mandates, policies

Little harmonization amongst them

Lack of awareness by researchers

- **REACTIONS BY SOME SUBSCRIPTION BASED PUBLISHERS**

US Research Works Act

Their income revenues perceived under threat

The imposition of new restrictions: separate self-archiving policies, embargo periods, APCs, libraries commitment to retaining subscriptions etc.

Publishing business model - 1

- Peculiarities of the market: **controlled by a few and high profitability** of STM journals
- A business model based on **price increases beyond inflation rates and bundling system**
- **Most journal publishing revenues are generated from:**
 - **academic library subscriptions (68-75% of total revenue)**
 - corporate subscriptions (15-17%),
 - advertising (4%),
 - membership fees and personal subscriptions (3%),
 - various author-side payments (3%)

Publishing business model - 2

- **Rise of Internet:** new publishing initiatives
- **Subscription based publishers and this new environment:** hybrid journals, full OA titles, acquisition of OA publishers, collaboration to comply with OA mandates
- OA publishing and **implications for copyright and publishing licenses**
- Role and attitude of scientific societies towards OA

Green OA: the repositories approach - 1

- **Repositories** are commonly divided into **3 categories**:
 - national repositories,
 - Institutional Repositories (IRs),
 - domain/disciplinary repositories
- **Benefits** for research institutions and universities to set up IRs:
 - provide OA to a wide variety of activity outputs;
 - organise institutional and scientific material for analysis and internal management purposes;
 - store and preserve digital assets;
 - enhance online visibility of institution and researchers
 - CRIS development

Green OA: the repositories approach - 2

- **Costs of IRs:**
 - DSpace@MIT: annual running costs = \$285,000 (ca. €215,000)
 - PEER report = \$8,600 (ca. €6,500)-\$500,000 (ca. €377,000)
 - NIH: current costs of PMC administration = \$3.5 to 4 million (ca. €2.6 million) *per annum*

- **Feeding IRs:**
 - automated ways
 - spontaneous self-archiving (around 15% of content)
 - institutional staff (e.g. librarians) to assist authors in their deposits
 - higher self-archiving rates by institutions with green OA mandates

Green OA: the repositories approach - 3

- **65% of main scientific publishers formally allow some form of self-archiving** (Sherpa/RoMEO analyses as of 16 March 2012: <http://www.sherpa.ac.uk/romeo/statistics>)
- But..there are subscription-based **publishers no longer willing to allow self-deposit unless there is a firm commitment from institutions to maintain their subscription budget.**
- And..**growing interest in including OA clauses in e-resources licenses** on the side of departments responsible for conducting licensing negotiations
- More **OA policy harmonisation** and **wider aggregation efforts** needed

Some issues for discussion

- What role for publishers in this new environment?
- The way ahead for research funders and performing institutions with OA mandates?
- How to best reconcile gold OA and green OA/ gratis and OA outputs in the biomedical field?



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