



# ***Free Access to Science?***

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Integrating the Life Sciences from Molecule to Organism



# About the APS

- **APS founded in 1887**
- **Currently has approximately 11,000 member**
- **Holds a large annual meeting and several small conferences**
- **APS publishes 14 journals – AJP started in 1898**
- **All journals online in 1996-1998 (HighWire)**
- **Available bundled or online or in print**
- **Content free 12 months after publication**
- **Legacy content scanned and online (1898-1996)**
- **Offers an extensive list of K-12 and minority programs**
- **PAESMEM Awardee - 2004**



# Journals of the APS

- ***American Journal of Physiology*, 1898**
- ***Physiological Reviews*, 1921**
- ***Journal of Applied Physiology*, 1948**
- ***Journal of Neurophysiology*, 1962**
- ***Physiological Genomics*, 1999**
- ***News in Physiological Sciences (Physiology)*, 1986**
- ***Advances in Physiological Education*, 1989**



# Journal Business Model

- **Subscription prices based on cost**
- **Unbundled (print, online, p+o) prices**
  - **1<sup>st</sup> copy cost + distribution method**
- **Author fees**
  - **Submission fees**
  - **Page charges**
  - **Color charges**
- **Reprint income**
- **Advertising (a trivial amount)**
  
- **Copyright retained by journal**



# Open Access

- **Budapest/Bethesda/Berlin declarations**
  - **Immediate free access**
  - **Posting in an open archive**
  - **No copyright restrictions on re-use (in public domain)**



# OA Publishers

- **BioMed Central**
- **Public Library of Sciences**
  
- **Who Pays? -- Business Model**
  - **Author-pays model**
  - **Subsidies: Institutional Membership Fees, Foundation Grants, other?**



# DC Principles Coalition



**Founded in response to the heated debate between those who advocate immediate unfettered online access to medical and scientific research findings and advocates of the current journal publishing system.**

- **Represents 65 societies and university presses**
  - **Over 600,000 individual members**
  - **Over 380 publications with 800,000 articles currently online and nearly 500,000 articles available for free**
- **[www.dcprinciples.org](http://www.dcprinciples.org)**



# DC Principles Coalition



- **Who Pays the Cost of Publication?**
  - **Institutional/Individual subscribers**
  - **Authors through page charges**
  - **Subsidized by research grants and institutional funds**
  - **Advertising**
  
- **Tax-payer subsidizes the research (does not pay for research)**



# Cost Comparison – APS vs PLoS

	<b>PLoS</b>	<b>APS</b>
<b>Peer Review, per accepted mss*</b>	200.00	40.00
<b>Copyediting and fig editing</b>	380.00	315.85
<b>Composition</b>	366.25	420.73
<b>Electronic file prep (not inc. hosting)</b>	111.00	49.29
<b>Cross ref deposits</b>	12.50	1.85
<b>Total</b>	<b>1,069.75</b>	<b>827.72</b>
<b>Total based on Actual costs, inc. all else</b>	<b>?</b>	<b>3,000.00</b>

**PLoS model does not include ed staff, overhead, marketing, internet hosting**

**\*cost/submitted article is \$20 for PLoS and APS – PLoS assumes 10% acceptance rate and APS assumes 50% acceptance rate**



# Comparison of Costs to Authors and Libraries

	<b>Au Fees</b>	<b>Subscription Fees</b>	<b>Membership Fees</b>
<b>APS</b>	\$280-2,500*	\$180-2,860	
<b>PLoS</b>	\$1,500		\$2,000-100,000****
<b>BioMedCentral</b>	\$525-1,500**	\$525-1,500**	\$1,612-\$8,060 \$525 x no. of articles submitted

- \*includes color charges
- \*\*waived with membership or discounted with subscription
- \*\*\*discounted 15% if institution is member
- \*\*\*\*gives aus at those institutions 10-75% discount on au fees



# Public Access

- **Enhancing Public Access to NIH-Funded Research**
  - **Voluntary program requesting authors to deposit peer-reviewed manuscripts in PMC**
  - **Flexible release as defined by the author – immediately to 12 months after final publication in a journal**
  - **Encourages authors to specify in copyright agreements that author retains right to provide manuscripts to PMC**



# Public Access to the Scientific Literature

## *NIH's Plans vs. the DC Principles Reality*

Actions Needed to Implement NIH's Manuscript Distribution Plan	Access to Final Articles Currently Provided by Not- for-Profit Publishers
<p>□ <b>To do:</b> Build and test new software for PubMed Central to receive, process, and archive manuscripts.</p>	<p><b>Done.</b> Starting in 1995, Stanford's HighWire Press created the software for not-for-profit journals to publish on-line. These journals now offer electronic manuscript submission, peer review, and publication</p>
<p>□ <b>To do:</b> Begin archiving NIH funded research. NIH funded researchers publish about 60,000 articles annually. This represents 10 percent of the 600,000 articles indexed by MEDLINE.</p>	<p><b>Done.</b> Not-for-profit publishers archive <i>all</i> articles, whether NIH funded or not. More than 1.7 million articles are available on line at HighWire Press. (<a href="http://www.highwire.org">www.highwire.org</a>). <b>HighWire journals publish 50% of the articles NIH funds.</b></p>



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<p>□ <b>To do:</b> Create the software so the public can find and retrieve manuscripts.</p>	<p><b>Done.</b> Easy access to journal articles has been part of HighWire's online publishing from the beginning. Google searches the full text of HighWire articles. NIH's MEDLINE provides links from abstracts to the full text of articles.</p>
<p>□ <b>To do:</b> Provide the public with free access to the <i>unedited manuscript</i> within 12 months of publication without disrupting journal operations.</p>	<p><b>Done.</b> Many not-for-profit publishers already provide free public access to <i>final articles</i> within 12 months of publication. Publishers select the waiting period depending upon what they need to support their operations.</p>



# Public Access to the Scientific Literature

## *NIH's Plans vs. the DC Principles Reality*

<b>Actions Needed to Implement NIH's Manuscript Distribution Plan</b>	<b>Access to Final Articles Currently Provided by Not- for-Profit Publishers</b>
<p>□ <b>Estimated cost:</b> \$2.5-\$4 million per year to build and maintain. <b>Final cost:</b> Unknown.</p>	<p><b>Cost:</b> System in place at no cost to the public.</p>
<b>What PubMed Central Won't Do</b>	<b>What Not-for-Profit Publishers Do</b>
<p>□ It won't offer the public easy-to-understand information on their health.</p> <p><b><i>MedlinePlus is the NIH website with the health information most people want.</i></b></p>	<p>Journals provide commentaries to help patients interpret significant findings.</p> <p><i>PatientInform</i> is a new website that will help patients find disease-related information in both for-profit and not-for-profit journals.</p>



# Potential Economic Impact on Publishers

- NIH claims that the Policy “...is not expected to supersede any private sector publication activity or create competition with publishers.”
- On this basis, NIH claims that it does not need to undertake a cost-comparison under OMB Circular A-76.
- However, the Policy will have an economic impact on publishers
  - Publishers may have to shift their revenue model from a subscription to an author pays model
  - Publishers may incur additional cost if they decide to help authors to fulfill their NIH obligation



# Public Access Could Cause Harm - Examples

## ➤ *Celera Genomics* –

No longer selling subscriptions to Celera genomic database due to competition with NIH Human Genome database

## ➤ *Oxford University Press* –

For those journals offering free back archives after six months, the average attrition rate from 2002-2003 was 6.1%. At 12 months it was 2% and at 24 months 2.4%.



# Problems with the NIH Rule

- **NIH program will supplant existing and successful private efforts**
- **It will divert NIH funds from biomedical research**
- **It risks harm to the not-for-profit publishers that publish the bulk of NIH funded research**
- **It will confuse readers by providing them with two different versions of the same article**
- **It will burden grantee authors with parallel submission and revision of their manuscripts by PMC and the journal**



# Conclusions

- ***APS and many DC Principles Coalition members are opposed to a government-mandated timetable for public access.***
- ***NIH does not have to expand PubMed Central to have a “comprehensive searchable electronic resource of NIH-funded research results”.***
- ***NIH can leverage publishers’ existing efforts by expanding links to journals as presently done with MedLine LinkOuts.***



# Thank You!

➤ **For additional information:**

**[www.the-aps.org](http://www.the-aps.org)**

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