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scientific and medical literature  
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# **Implementing a New Model for Scientific Publishing**

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**Director of Strategic Alliances and Development**  
**Public Library of Science**

**International Conference on Strategies and Policies on Open  
Access to Scientific Information**

**June 2005**  
**Beijing, China**



# **The Public Library of Science**

**A non-profit open-access advocacy and publishing organization committed to making the world's scientific and medical literature a public resource.**

**San Francisco, California, USA and  
Cambridge, UK**

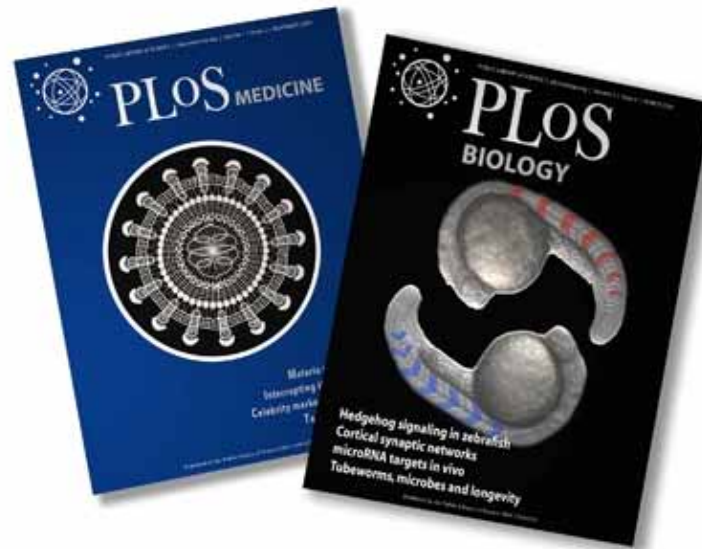
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PLoS Community Journals:  
Launching June '05

PLoS Flagship Journals  
*PLoS Biology*  
*PLoS Medicine*



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# The Role of the Scientific Journal

“First, to place before the general public the grand results of Scientific work and Scientific discovery; and to urge the claims of Science to a more general recognition in Education and daily life.

Secondly, to aid scientific men themselves, by giving early information of all advances made in any branch of natural knowledge throughout the world, and by affording them an opportunity of discussing the various scientific questions which arise from time to time”

*Nature, 4 Nov 1869*



# The Value of Biomedical Science to Society

- Human-focused mission – improve health
- Rapid transfer from new knowledge to new practice
- Need to shorten time from researcher to practitioner – remove barriers
- Global Importance

# What is open access?

- **Free, immediate access online**
- **Unrestricted distribution and re-use**
- **Author retains rights to attribution**
- **Papers are deposited in a public online archive such as PubMed Central**

*Bethesda Principles, April 2003*



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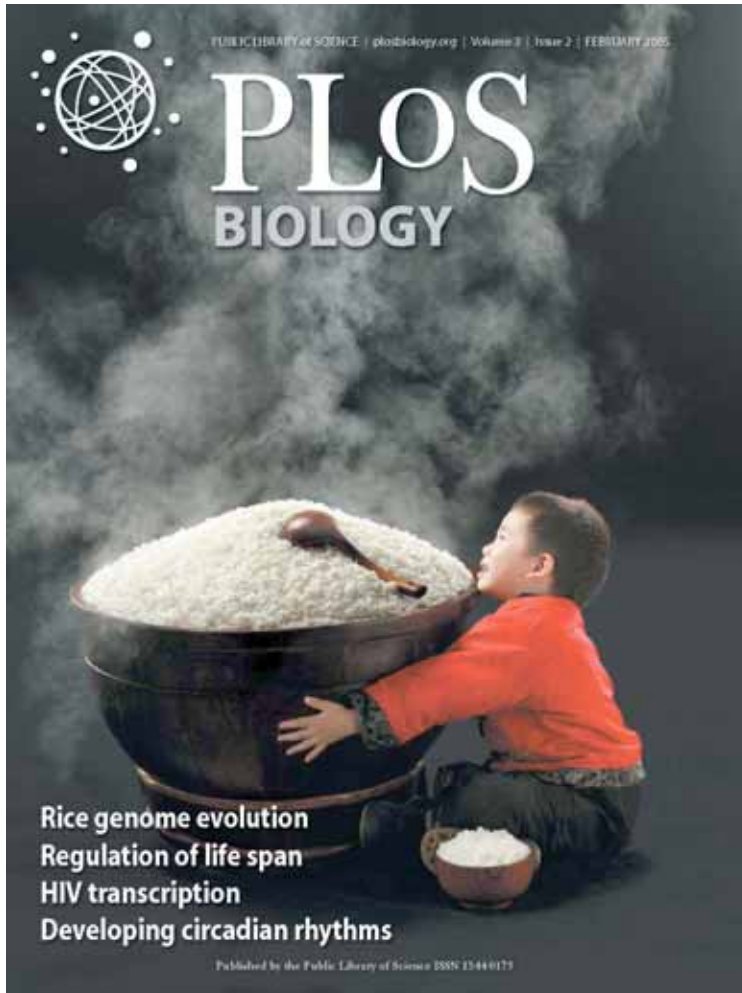
# Open Access Publishing

vs.

“Open Access Archiving”

...they are different...

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## Open Access Publishing:

### *PLoS Biology*

- Rice genomes compared
- Over 4400 full text downloads in less than three months
- Data, figures, and text fully reusable

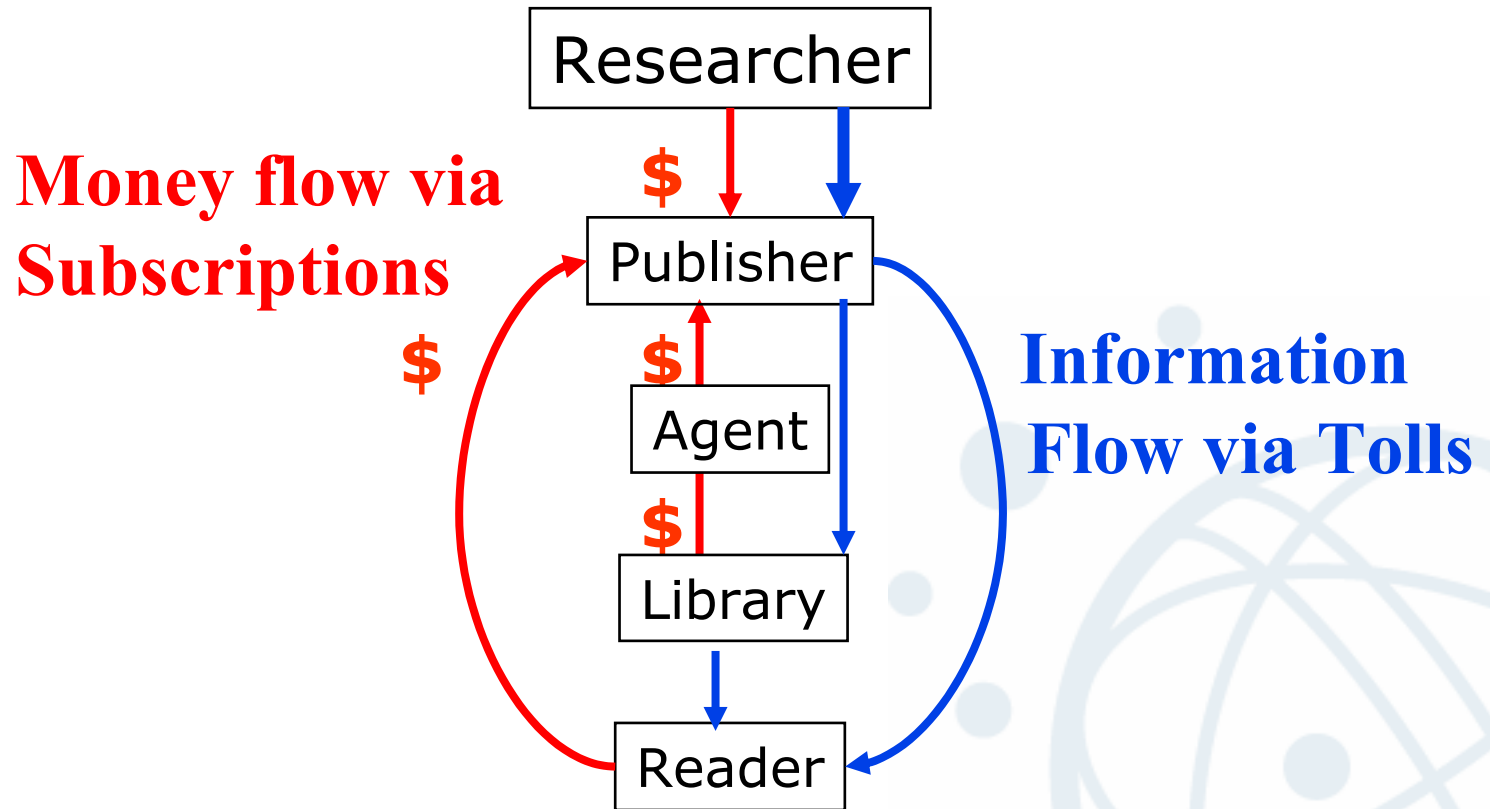
*Photo by Lei Xu and Fang Chen, Beijing Institute of Genomics. PLoS Biology, February 2005*

# The Economics of Scholarly Publishing

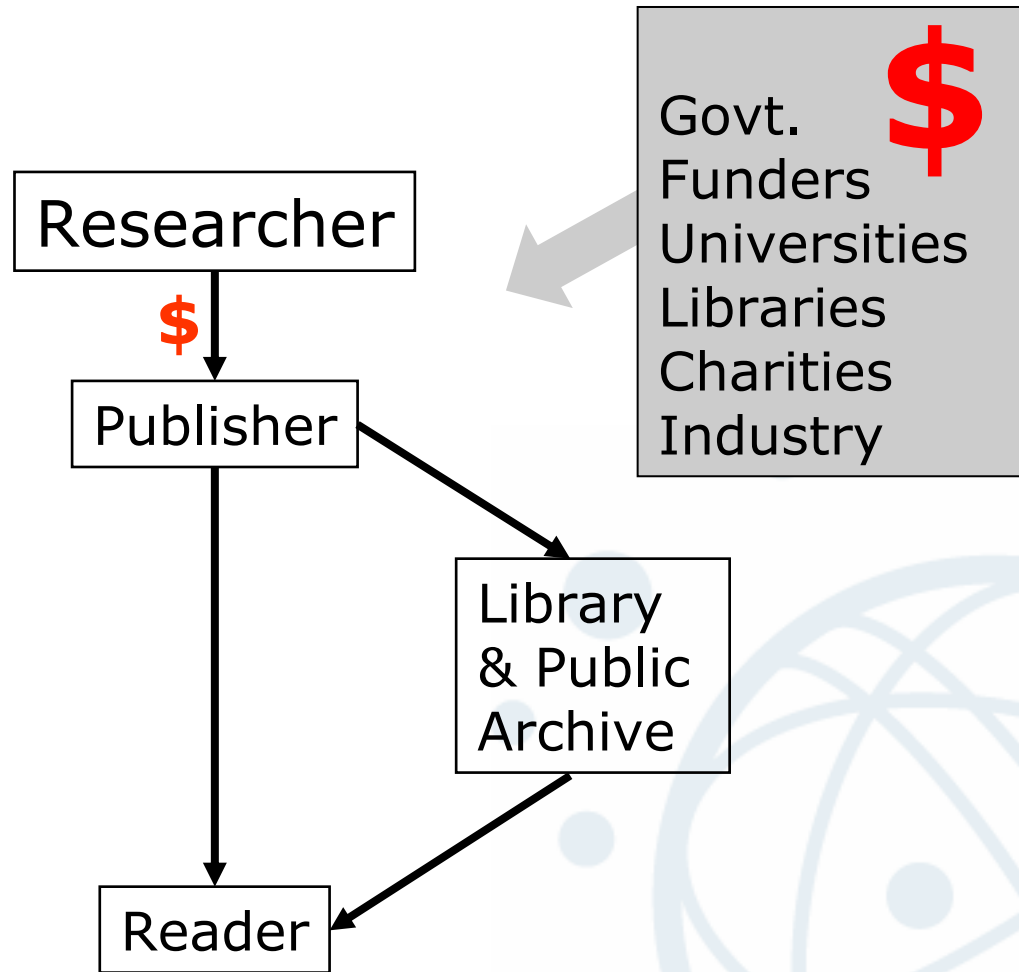
“The current market structure does not operate in the **long-term interests of the research community.**”

*The Wellcome Trust, the largest independent biomedical research funder in the world*

# The Traditional Publishing System



# The Open Access Model: One Time Author-Side Payments

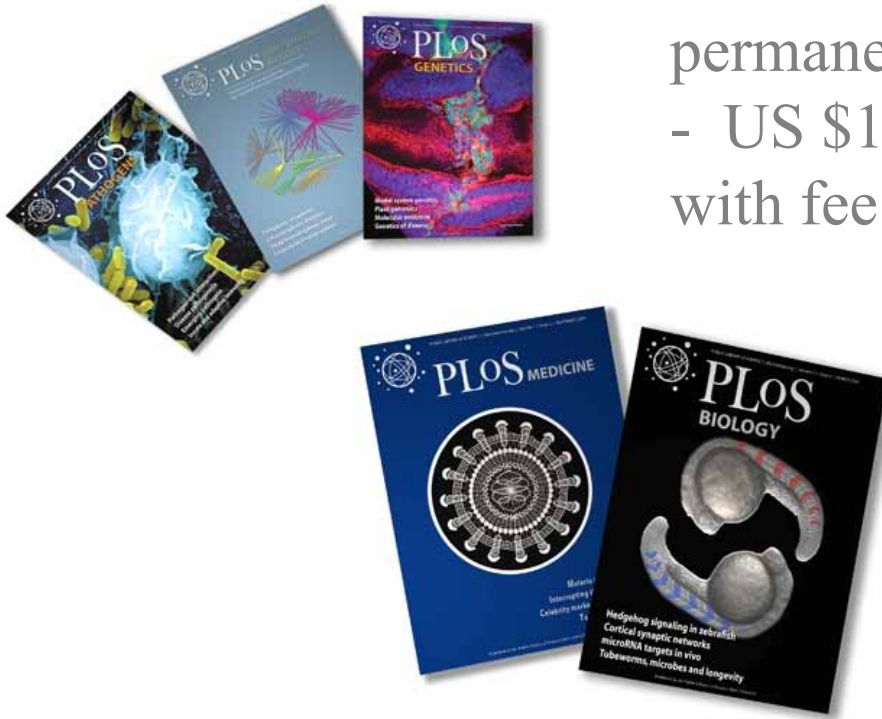


# Who Benefits from Open Access?

- **Authors**
  - access to the largest possible audience
- **Readers**
  - access to the entire body of literature
- **Publishers**
  - widest dissemination of the articles they publish
- **Funders**
  - highest impact for their investment
- **Universities**
  - increased visibility for their scholarship

# PLOS Journals Features

- Freely available to anyone, anywhere via the Internet
- Rigorously, rapidly peer reviewed
- Archived immediately and permanently in PubMedCentral
- US \$1500 publication charge – with fee waiver upon request



# Myths of Open Access

- Quality
  - stringent peer review
- Fairness
  - fee waiver policy
- Impact Factor
  - challenge for any new journal
- “Openness”
  - open vs. free access - copyright

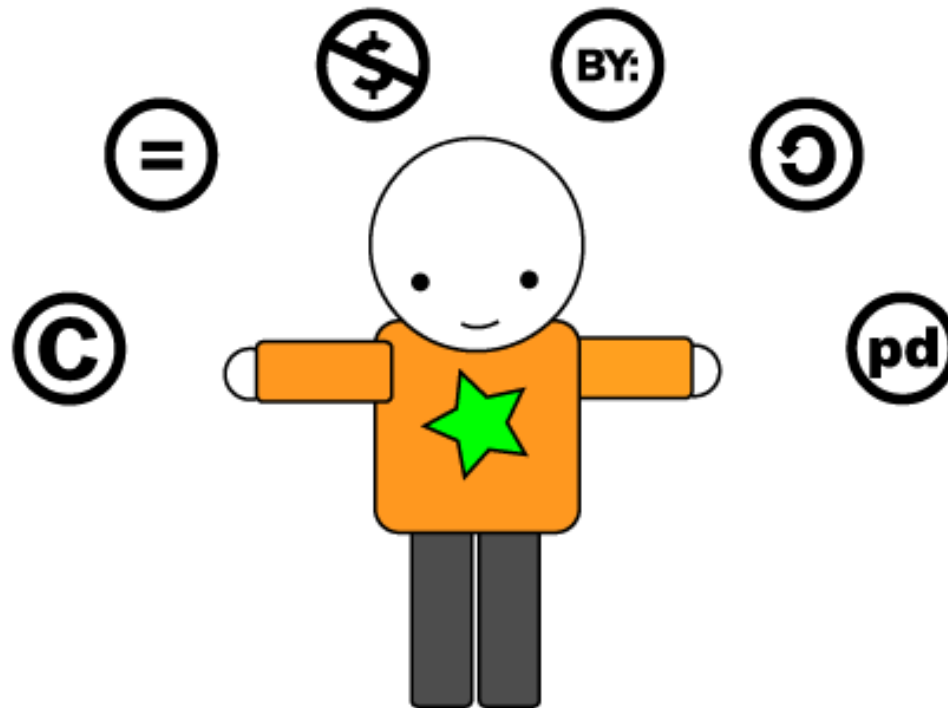
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“...the utility of research articles will be limited solely by the imagination of those that are inspired by the possibilities—rather than by legal constraints.”

“Whose Copy? Whose Rights?”  
Gass, Doyle, & Kennison  
*PLoS Biology*, July 2004

# Open Access and Copyright

*CREATIVE COMMONS WANTS TO HELP DEFINE THE SPECTRUM OF POSSIBILITIES BETWEEN FULL COPYRIGHT -- ALL RIGHTS RESERVED -- AND THE PUBLIC DOMAIN -- NO RIGHTS RESERVED. OUR LICENSES HELP YOU RETAIN YOUR COPYRIGHT WHILE ALLOWING CERTAIN USES OF YOUR WORK. THEY HELP YOU OFFER YOUR CREATIVE WORK WITH SOME RIGHTS RESERVED.*



## Signs of Change.....

- Scientific Societies – *PLoS Computational Biology* to be published with the ISCB
- Hybrid Journals – PNAS, Springer, Oxford University Press, Blackwell, Company of Biologists
- Funders allowing payment of open access publication charges as part of research costs – Wellcome Trust, HHMI, Research Councils UK, DDCF
- Universities providing guidelines and incentives for authors



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## NIH Public Access Policy

“The research supported by the National Institutes of Health (NIH) is essential to improving human health. **Public access** to this research is vital – today and for generations to come.”

*From a letter from NIH Director Zerhouni to grantees,  
February 3rd, 2005*

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# More and more authors care about improving access to their papers...

“Faced with the option of submitting to an open-access or closed-access journal, we now wonder whether it is ethical for us to opt for closed access on the grounds of impact factor or preferred specialist audience.”

-- Costello and Osrin in *The Lancet*

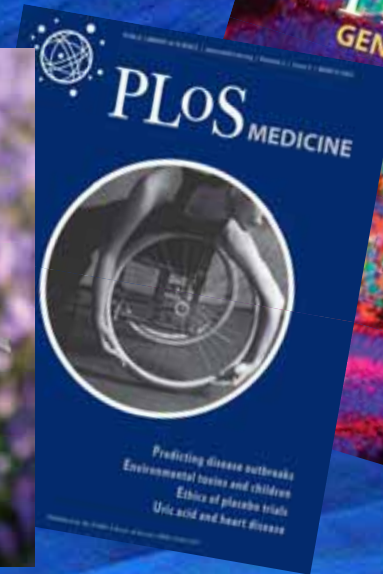
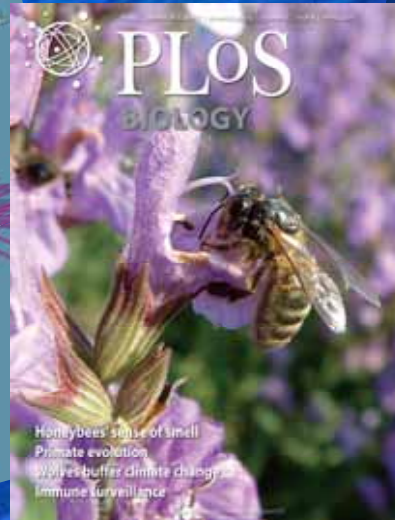
# Global Perspectives on Open Access

- United Nations: WSIS, WIPO, UNDP, IUCN
- Budapest / Berlin / Bethesda Declarations
- Policy-Makers: UK House of Commons, European Union, US Congress
- Funding Agencies: Research Councils UK / Max Planck Society / CNRS / NIH / many others
- Libraries / Universities

# Building a Public Library of Science

- Demonstrate sustainability of open access business model for different journals
- Partner with other organizations to generate more open access journals
- Make the content truly accessible –text-mining, interpretations, portals
- Advocate on the policy level with funding agencies, policy-makers, universities, publishers, etc.

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