

# The E-journals Revolution: An Academic Research Perspective

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# Outline

- Personal Background
- Impact on Undergraduate Students
- Impact on Post Graduate Students
  - Information Gathering
- Impact on Research Scientists
  - Publications
- Impact on Academic Institutions and Funding Agencies
- Conclusions

# Personal Background

- Undergraduate and Master's Degrees (Biology) in 1993 and 1996
- D.Phil., Zoology, 2003
- Natural Sciences Tutor/Lecturer 2004-2008
- Post-doctoral Researcher 2003-2008
- Scientific Manager 2008-Present

**\*\*My Scientific Career Spans the 'Old School' Approach and the E-journals Revolution from Student to Manager**



# Impact of E-journals on Undergraduate Students

Thoughts From the Dark Ages and My Teaching Experience

# Impact of E-Journals on Undergraduate Students

- Prior to the advent of institutional subscriptions to e-journals, the starting point for students was secondary source material (primarily text books)
- Textbook reference sections then led to primary literature and library searches on specific topics.
- Now students can access primary sources with a quick PubMed or Google scholar search and have the .pdf files in minutes.



**\*\*End Result: Students are Reading and Using More Primary Source Material Earlier in Their Career**



# Impact of E-journals on Post-Graduate Students

Reflections on the Difference Between Writing My Lit Review  
and Compiling My Thesis 3 Years Later

# Impact on Post Graduate Students

- The first step in any graduate degree is a literature review
  - Identify gaps in knowledge to inform research plans.
  - Gain background knowledge of proposed research
- Web based searches and electronic journals really speed up this process!!
- Gateway sites (PubMed, Google Scholar, etc...) are invaluable.
- Ability to read the abstract prior to 'going to get' the paper
- Links to related references and the work of co-authors.



# Impact on Post Graduate Students

- Ease of cataloguing references on CD's, DVDs, hard drives. No scanning required.
- Ease of compiling and exporting lists of references (complete with links to .pdfs on publishers sites) to reference management programs and professional/personal websites.
- Ease of sharing documents ('hey, have you seen this?').
- Ease of regularly browsing journals of interest.



# Impact of E-journals on Research Scientists

Publication Experiences

# Impact on Research Scientists

- Prior to the advent of e-journals, 3 months was an acceptable 'turn-around' time for a journal.
- In 2001, on-line publication within a month of submission seemed remarkably fast!

REPORTS

## **Recent Origin of *Plasmodium falciparum* from a Single Progenitor**

Sarah K. Volkman,<sup>1,2\*</sup> Alyssa E. Barry,<sup>1,3\*</sup> Emily J. Lyons,<sup>1,3</sup>  
Kaare M. Nielsen,<sup>1,4,5</sup> Susan M. Thomas,<sup>1,2</sup> Mehee Choi,<sup>1,4</sup>  
Seema S. Thakore,<sup>1,2</sup> Karen P. Day,<sup>1,3</sup> Dyann F. Wirth,<sup>1†</sup>  
Daniel L. Hartl<sup>1,4</sup>

Science, 20 July 2001, 293:482-484

# Impact on Research Scientists

- In 2009, submission to fast-track review and on-line publication in 7 days!!!

## **Pandemic Potential of a Strain of Influenza A (H1N1): Early Findings**

Christophe Fraser,<sup>1\*</sup> Christl A. Donnelly,<sup>1\*</sup> Simon Cauchemez,<sup>1</sup> William P. Hanage,<sup>1</sup> Maria D. Van Kerkhove,<sup>1</sup> T. Déirdre Hollingsworth,<sup>1</sup> Jamie Griffin,<sup>1</sup> Rebecca F. Baggaley,<sup>1</sup> Helen E. Jenkins,<sup>1</sup> Emily J. Lyons,<sup>1</sup> Thibaut Jombart,<sup>1</sup> Wes R. Hinsley,<sup>1</sup> Nicholas C. Grassly,<sup>1</sup> Francois Balloux,<sup>1</sup> Azra C. Ghani,<sup>1</sup> Neil M. Ferguson<sup>1†</sup>;

Andrew Rambaut,<sup>2</sup> Oliver G. Pybus<sup>3</sup>;

Hugo Lopez-Gatell,<sup>4</sup> Celia M. Alpuche-Aranda,<sup>5</sup> Ietza Bojorquez Chapela,<sup>4</sup> Ethel Palacios Zavala<sup>4</sup>;

Dulce Ma. Espejo Guevara<sup>6</sup>;

Francesco Checchi,<sup>7</sup> Erika Garcia,<sup>7</sup> Stephane Hugonnet,<sup>7</sup> Cathy Roth<sup>7</sup>

The WHO Rapid Pandemic Assessment Collaboration‡

**\*\* Allows Scientists to ‘Weigh In’ on Current Issues in a Rigorous Way**



# Impact on Research Scientists

- The e-journal revolution has allowed for the expansion and creation of more specialist journals.
- On-line only journals (e.g. PLOS One) are less costly to run. No page charges etc... for researchers.
- Ease of CV and website maintenance through automatic publication updates with links.



# Impact of E-Journals on Academic Institutions and Funding Agencies

My Experience as a Scientific Manager



## Impact on Institutions and Funding Agencies

- E-journals allow for more effective promotion of research undertaken at a university and/or funded by an organisation.
  - Web links and press releases that are relevant to current issues. Look what we do! Look what we funded!
  - Closer links with media outlets
- Fast turn around time can put pressure on the Press Office!
- Scientific results are more easily accessed by the general public

# Conclusions

- E-journals have had a tremendous impact on research scientists, the institutions that house them and the agencies that fund them.
- Students access primary material at an earlier stage in their careers and continue to utilise on-line resources throughout their development as scientists.
- E-journals facilitate the ‘conversation’ amongst scientists and those interested in science.
- Quick on-line publication gives researchers a voice more rigorous than simply talking to the press.
- Academic institutions and funding agencies benefit from the increased accessibility of the work their scientists publish. Promotion to the public is easier.