

UNIVERSITA' DEGLI STUDI DI SASSARI
Coordinamento servizi bibliotecari

Accesso aperto e comunicazione scientifica

Giornata di studio
Sassari, 17 novembre 2008
Aula Magna dell'Università degli studi di Sassari, Piazza Università, 21

Open access e valutazione della ricerca scientifica

Quirico Migheli
Dipartimento di Protezione delle Piante
Università di Sassari
qmigheli@uniss.it

“If you have an apple and I have an apple and we exchange these apples then you and I will still each have one apple.

But if you have an idea and I have an idea and we exchange these ideas, then each of us will have two ideas.”

George Bernard Shaw

Il paradigma neo-liberista

- la scienza è un'attività *economicamente utile*
- la conoscenza diventa uno strumento per produrre *risultati*
- la ricerca deve essere assoggettata e orientata per soddisfare le esigenze del mercato

Autonomia universitaria e competizione tra Atenei

- **autonomia e darwinismo**
- **reclutamento: inbreeding vs eterosi**
- **andamento demografico e numerosità della popolazione studentesca**
- **crisi economica congiunturale**
- **aumento dei costi della ricerca scientifica**

Perché è necessario valutare la qualità della ricerca (scientifica)?

- **accesso a finanziamenti (FFO, progettualità)**
- **progressione di carriera del corpo docente**
- **reclutamento dei ricercatori**
- **attrattività per gli studenti**

Quale ricerca occorre valutare?

- **delle strutture (Consorzi, Atenei, Enti di ricerca, Facoltà, Istituti, Dipartimenti)**
- **dei gruppi di ricerca**
- **dei singoli ricercatori**

Perché si pubblica?

gli scrittori pubblicano per guadagnarsi da vivere

i ricercatori pubblicano per farsi pubblicità:

... stabilire contatti

... ottenere finanziamenti

... aumentare l'impatto sulla comunità scientifica

il sistema di "peer reviewing" è garanzia della qualità di quanto viene pubblicato

Towards writing the encyclopaedia of life: an introduction to DNA barcoding

**Vincent Savolainen^{1,*}, Robyn S. Cowan¹, Alfried P. Vogler^{2,3},
George K. Roderick⁴ and Richard Lane²**

¹*Jodrell Laboratory, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3DS, UK*

²*The Natural History Museum, Cromwell Road, London SW7 5BD, UK*

³*Division of Biology, Imperial College London, Silwood Park, Ascot SL5 7PY, UK*

⁴*Environmental Science, University of California, Berkeley, CA 94720-3114, USA*

An international consortium of major natural history museums, herbaria and other organizations has launched an ambitious project, the ‘Barcode of Life Initiative’, to promote a process enabling the rapid and inexpensive identification of the estimated 10 million species on Earth. DNA barcoding is a diagnostic technique in which short DNA sequence(s) can be used for species identification. The first international scientific conference on Barcoding of Life was held at the Natural History Museum in London in February 2005, and here we review the scientific challenges discussed during this conference and in previous publications. Although still controversial, the scientific benefits of DNA barcoding include: (i) enabling species identification, including any life stage or fragment, (ii) facilitating species discoveries based on cluster analyses of gene sequences (e.g. *cox1=COI*, in animals), (iii) promoting development of handheld DNA sequencing technology that can be applied in the field for biodiversity inventories and (iv) providing insight into the diversity of life.

JOURNAL OF NEGATIVE RESULTS

- ECOLOGY & EVOLUTIONARY BIOLOGY -

[HOME](#) [ABOUT](#) [LOG IN](#) [REGISTER](#) [SEARCH](#) [CURRENT](#) [ARCHIVES](#)

Home > Vol 5, No 1 (2008)

JOURNAL OF NEGATIVE RESULTS

The primary intention of Journal of Negative Results is to provide an online-medium for the publication of peer-reviewed, sound scientific work in ecology and evolutionary biology that may otherwise remain unknown. In recent years, the trend has been to publish only studies with 'significant' results and to ignore studies that seem uneventful. This may lead to a biased, perhaps untrue, representation of what exists in nature. By counter-balancing such selective reporting, JNR aims to expand the capacity for formulating generalizations. The work to be published in JNR will include studies that 1) test novel or established hypotheses/theories that yield negative or dissenting results, or 2) replicate work published previously (in either cognate or different systems). Short notes on studies in which the data are biologically interesting but lack statistical power are also welcome. JNR also intends to present the results of studies in a format suitable for formal meta-analysis. Research quality is of highest importance for JNR. Manuscripts will be assessed for publication on this basis - positive results or support for current scientific dogma are not essential.

'to do science is to search for repeated patterns' (MacArthur, 1972)

To advertise JNR at your institute, [download this advert pdf \(55k\)](#) or [this leaflet pdf \(176k\)](#)

Call for submissions.

Prospective Author: the Journal of Negative Results is now calling for submissions. Please follow the links below for instructions on how to prepare and submit your manuscripts electronically (click [HERE](#) to submit Online).

VOL 5, NO 1 (2008):

TABLE OF CONTENTS

ARTICLES

Failure to find the relationship between dispersal and spatial autocorrelation in species abundance

Volker Bahn

[ABSTRACT PDF](#)

Testing the reliability of pellet counts as an estimator of small rodent relative abundance in mature boreal forest

[ABSTRACT PDF](#)

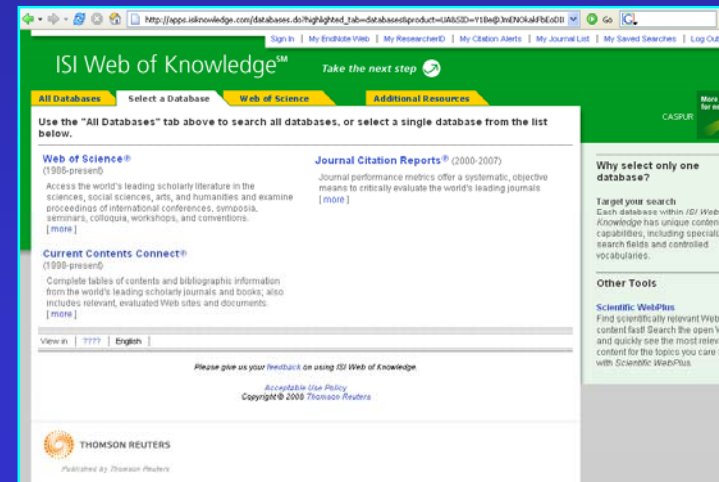
Perché si citano i lavori altrui?

- **sono stati letti**
- **sono considerati validi (*di solito*)**
- **sono considerati rilevanti per spiegare il proprio lavoro**
- **citare un articolo implica l'approvazione (*endorsement*) da parte dell'autore**

Le citazioni bibliografiche sono un indice dell'importanza e dell'influenza degli articoli e, indirettamente, dell'importanza dei loro autori e delle riviste in cui sono comparsi

ISI Science Citation Index (1964)

- 8.700 riviste su un totale di ~ 24.000
- Thomson ISI stima che un nucleo di circa 2.000 riviste copra l'85% degli articoli *pubblicati* e il 95% di quelli *citati*



The screenshot shows the ISI Web of Knowledge website. The browser address bar displays the URL: http://apps.isiknowledge.com/databases.do?highlight_tab=database&product=LIAS&ID=YI&@INFORM&@F&@O&@. The page header includes navigation links: Sign In, My Evaluate View, My ResearcherID, My Citation Alerts, My Journal List, My Saved Searches, and Log Out. The main content area is titled "ISI Web of Knowledge" and features a navigation bar with "All Databases", "Select a Database", "Web of Science", and "Additional Resources". Below this, there are three database options:

- Web of Science® (1900-present)**: Access the world's leading scholarly literature in the sciences, social sciences, arts, and humanities and examine proceedings of international conferences, symposia, seminars, colloquia, workshops, and conventions. [more]
- Journal Citation Reports® (2000-2007)**: Journal performance metrics offer a systematic, objective means to critically evaluate the world's leading journals. [more]
- Current Contents Connect® (1999-present)**: Complete tables of contents and bibliographic information from the world's leading scholarly journals and books; also includes relevant, evaluated Web sites and documents. [more]

At the bottom of the page, there is a footer with the Thomson Reuters logo and the text: "Please give us your feedback on using ISI Web of Knowledge. Acceptable Use Policy Copyright © 2008 Thomson Reuters".

Journal Summary List

[Journal Title Chang](#)

Journals from: search Full Journal Title for 'NATURE'

Sorted by: Journal Title [v] SORT AGAIN

Journals 1 - 1 (of 1)

Navigation icons: first, previous, [1], next, last

Page 1 of 1

MARK ALL UPDATE MARKED LIST

Ranking is based on your journal and sort selections.

Mark	Rank	Abbreviated Journal Title <i>(linked to journal information)</i>	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life
<input type="checkbox"/>	1	NATURE	0028-0836	417228	28.751	7.385	841	8.0

MARK ALL UPDATE MARKED LIST

Journals 1 - 1 (of 1)

Navigation icons: first, previous, [1], next, last

Page 1 of 1

[Acceptable Use Policy](#)

Copyright © 2008 [The Thomson Corporation](#).



L'impact factor è una misura della frequenza con cui un "articolo medio" di una rivista è stato citato dall'insieme della comunità scientifica in un particolare periodo

Problemi nell'uso dell'IF per valutare gli autori

- **variabilità nelle citazioni di articoli pubblicati sulla stessa rivista**
- **un autore con basso impatto trae beneficio dall'aver pubblicato su una rivista ad alto IF**
- **auto citazioni**
- **qualità o popolarità?**

occorrono indici alternativi per valutare la qualità degli autori

Citation impact

indica il numero di volte che un articolo viene citato

- **dopo esser stato pubblicato**
- **dopo esser stato letto**
- **dopo esser stato citato in altri manoscritti**
- **dopo che questi lavori siano stati pubblicati e recensiti**

*questo processo può durare da 2-3 mesi a oltre 10 anni
(emivita ~ 5 anni)*

All Databases

Select a Database

Web of Science

Additional Resources

Search | Cited Reference Search | Structure Search | Advanced Search | Search History | Marked List (0)

Web of Science®

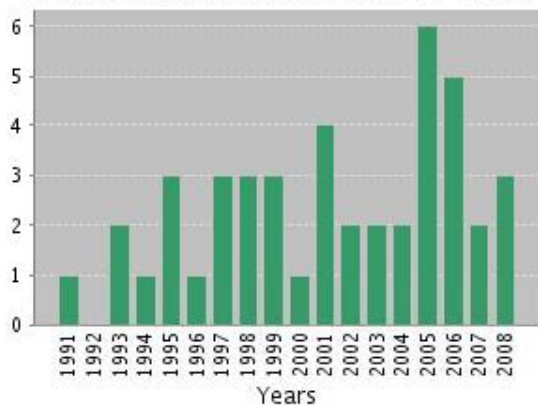
<< [Back to previous results list](#)

Citation Report

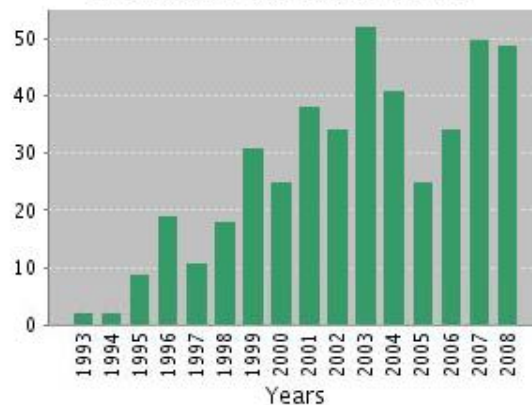
Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI, IC, CCR-EXPANDED.

This report reflects citations to source items indexed within Web of Science. Perform a Cited Reference Search to include citations to items not indexed within Web of Science.

Published Items in Each Year



Citations in Each Year



Results found: 44

Sum of the Times Cited [?]: 440

[View Citing Articles](#)
[View without self-citations](#)

Average Citations per Item [?]: 10.00

h-index [?]: 14

Results: 44

Page 1 of 5 [Go](#)

Sort by: Times Cited

Use the checkboxes to remove individual items from this Citation Report or restrict to items processed between 1986 and 2008 [Go](#)

2004	2005	2006	2007	2008	Total	Average Citations per Year
41	25	34	50	49	440	24.44
6	4	6	0	8	43	3.58

All Databases

Select a Database

Web of Science

Additional Resources

Search | Cited Reference Search | Structure Search | Advanced Search | Search History | Marked List (0)

Web of Science®

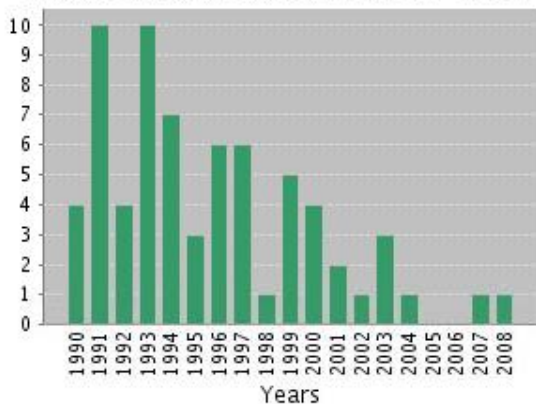
<< [Back to previous results list](#)

Citation Report

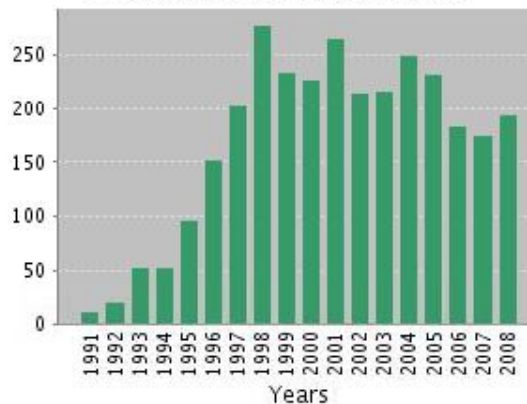
Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI, IC, CCR-EXPANDED.

This report reflects citations to source items indexed within Web of Science. Perform a Cited Reference Search to include citations to items not indexed within Web of Science.

Published Items in Each Year



Citations in Each Year



Results found: 69

Sum of the Times Cited [?]: 3,060

[View Citing Articles](#)
[View without self-citations](#)

Average Citations per Item [?]: 44.35

h-index [?]: 29

Results: 69

Page 1 of 7 [Go](#)

Sort by: Times Cited

Use the checkboxes to remove individual items from this Citation Report or restrict to items processed between 1986 and 2008 [Go](#)

1. Title: [RAGE and amyloid-beta peptide neurotoxicity in Alzheimer's disease](#)
 Author(s): Yan SD, Chen X, Fu J, et al.
 Source: **NATURE** Volume: 382 Issue: 6593 Pages: 685-691 Published: **AUG 22 1996**

2004	2005	2006	2007	2008	Total	Average Citations per Year
249	232	184	175	195	3,060	161.05
57	48	46	40	61	767	59.00

E' possibile avere indicazioni sulla qualità di un articolo con maggiore anticipo?

- **ISI Journal Impact Factor: 2 anni**
(soluzione di compromesso)
- **il numero dei download può essere utilizzato come indice dell'impatto sulla comunità scientifica?**
- **l'indice di download a breve termine può consentire di prevedere il Citation Index a medio termine di un articolo?**

Correlazione tra download e citazioni

due variabili x e y sono correlate se:

x influenza y

- y influenza x

- x e y si influenzano a vicenda

- una variabile esterna influenza sia x che y

citazioni e download potrebbero esser correlate in senso bidirezionale e ciclico:

- download → citazione

- citazione → download

Search Results

Metadata Citation Identifier

Authors' name(s)

Title or Abstract Keywords

Publication Title

Record Year between and

Rank matches by

Showing 1 - 10 of 68 found [1-10 in [BibTeX](#), [RSS](#), [Atom](#) | [25](#), [100](#) results per page] Query took 0.281 seconds

[Complex Extension of Quantum Mechanics](#) [[Abstract](#), [134 Cites](#), , [Pre-print PDF](#)]

4 [Bender, Carl M.](#); [Brody, Dorje C.](#); [Jones, Hugh F.](#) (2002-08-12) In *ERRATUM-IBID.* 92 119902 (2004)
It is shown that the standard formulation of quantum mechanics in terms of Hermitian Hamiltonians is overly restrictive. A consistent physical theory of quantum mechanics can be built on a complex Hamiltonian that is not Hermitian but satisfies the less restrictive and more physical condition of space- ...
Comment: 4 Pages, Version to appear in PRL

[Geometric Quantum Mechanics](#) [[Abstract](#), [66 Cites](#), , [Pre-print PDF](#)]

[Brody, Dorje C.](#); [Hughston, Lane P.](#) (1999-06-23) In *Journal of Geometry and Physics* 38 19 (2001)
The manifold of pure quantum states is a complex projective space endowed with the unitary-invariant geometry of Fubini and Study. According to the principles of geometric quantum mechanics, the detailed physical characteristics of a given quantum system can be represented by specific geometrical ...
Comment: 27 pages. Extended with additional material

[Must a Hamiltonian be Hermitian?](#) [[Abstract](#), [59 Cites](#), , [Pre-print PDF](#)]

[Bender, Carl M.](#); [Brody, Dorje C.](#); [Jones, Hugh F.](#) (2003-03-02) In *AM.J.PHYS.* 71 1095 (2003)
A consistent physical theory of quantum mechanics can be built on a complex Hamiltonian that is not Hermitian but instead satisfies the physical condition of space-time reflection symmetry (PT symmetry). Thus, there are infinitely many new Hamiltonians that one can construct that might explain exp ...
Comment: Revised version to appear in American Journal of Physics

[Extension of PT-Symmetric Quantum Mechanics to Quantum Field Theory with Cubic Interaction](#) [[Abstract](#), [40 Cites](#), , [Pre-print PDF](#)]

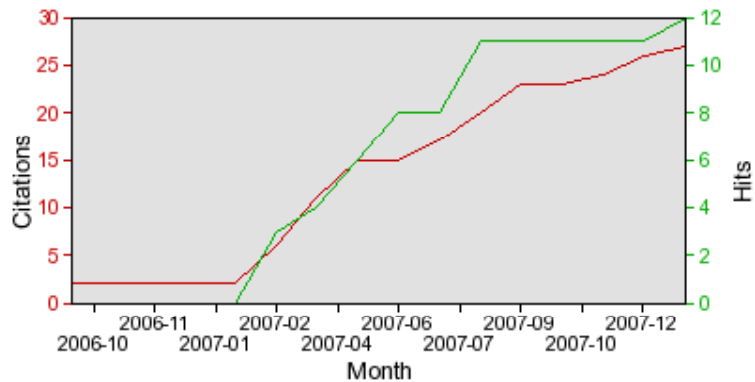
[Bender, Carl M.](#); [Brody, Dorje C.](#); [Jones, Hugh F.](#) (2004-08-02) In *ERRATUM-IBID.* 97 119901 (2004)

Full-text available from: [Cached PDF](#)
[Linked PDF \(experimental\)](#)
<http://arxiv.org/abs/hep-th/0703096>

Import record as: [BibTeX](#)

Citebase is currently only an experimental demonstration. Users are cautioned not to use it for academic evaluation yet. Citation coverage and analysis is [incomplete](#) and hit coverage and analysis is both [incomplete](#) and [noisy](#).

	Citations	Downloads
this article	27	12
authors (mean)	18.54	22.84



- [Citations](#)
- [Downloads](#)
- [Authors](#)
- [Cited by](#)
- [References](#)
- [Co-cited with](#)
- [Cites similar articles to](#)

Show the top 5 most cited articles that have been identified by Citebase as citing this article (to see all citing articles identified by Citebase follow the bottom link)

[quantum brachistochrone problem for non-Hermitian Hamiltonians](#) [[Abstract](#), [10 Cites](#), , [Pre-print PDF](#)]

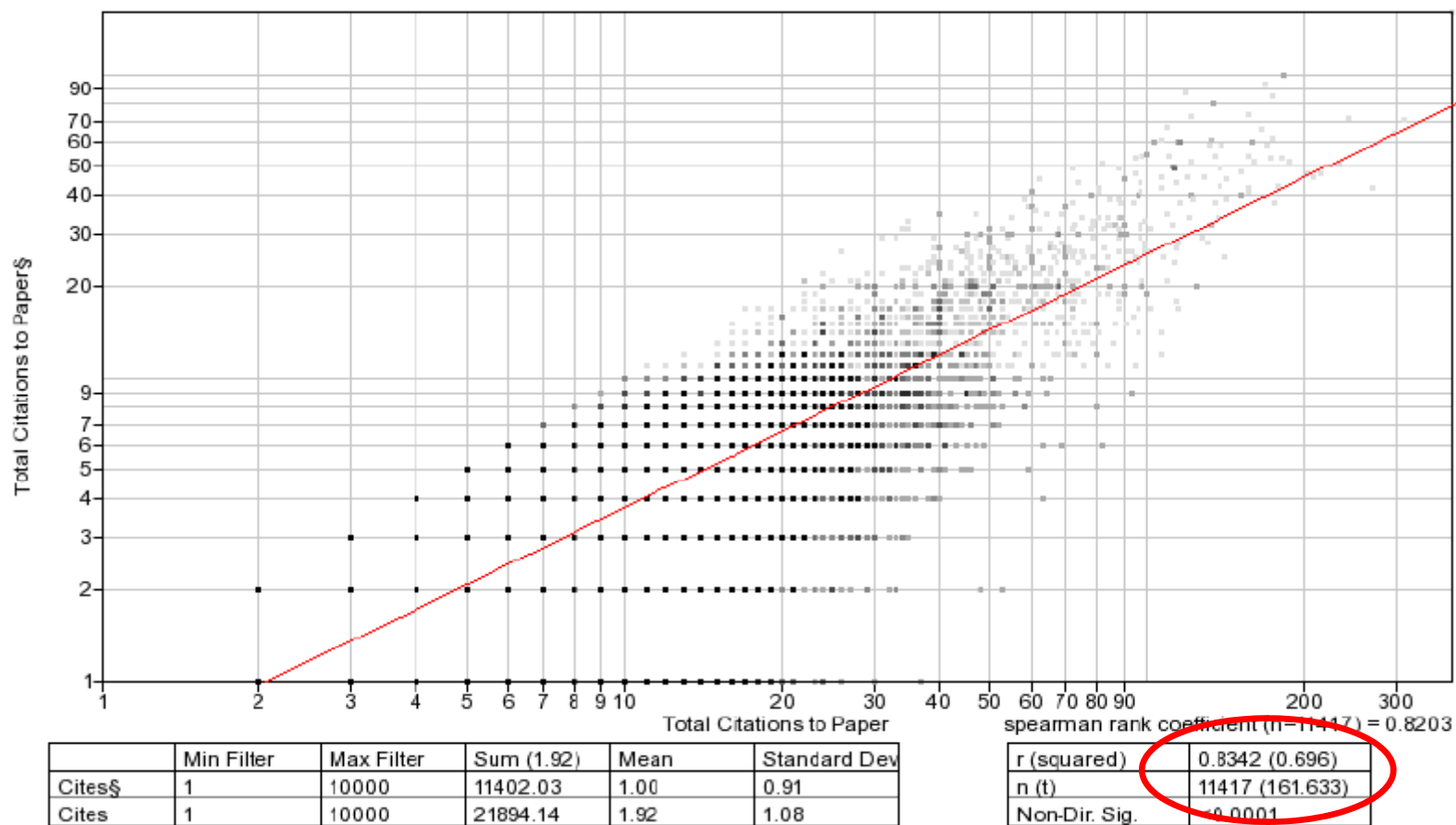


Figure 8.15: Correlation between papers' citation impact at six months and two years.

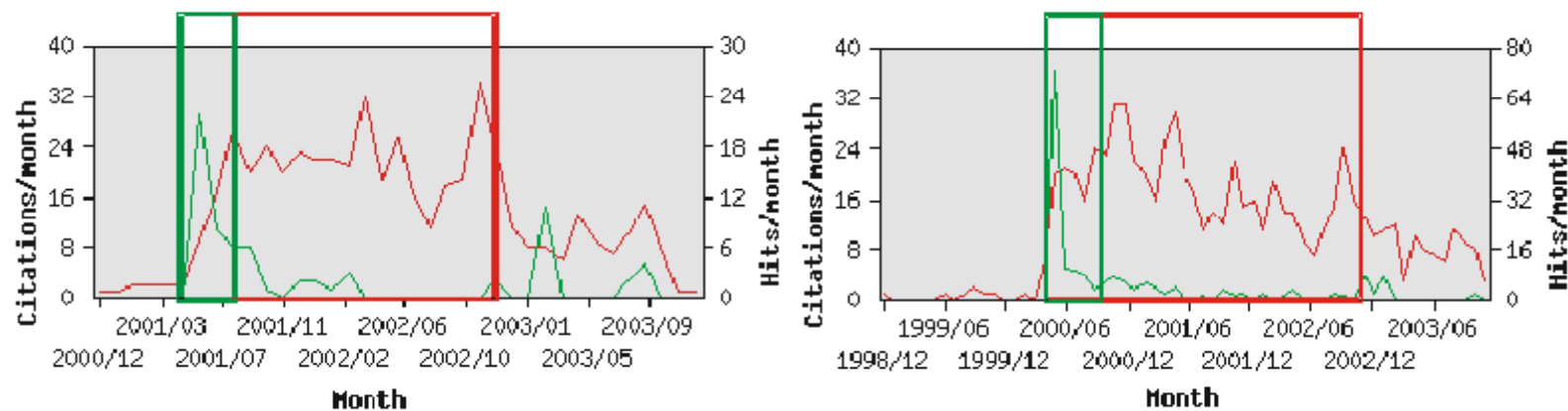
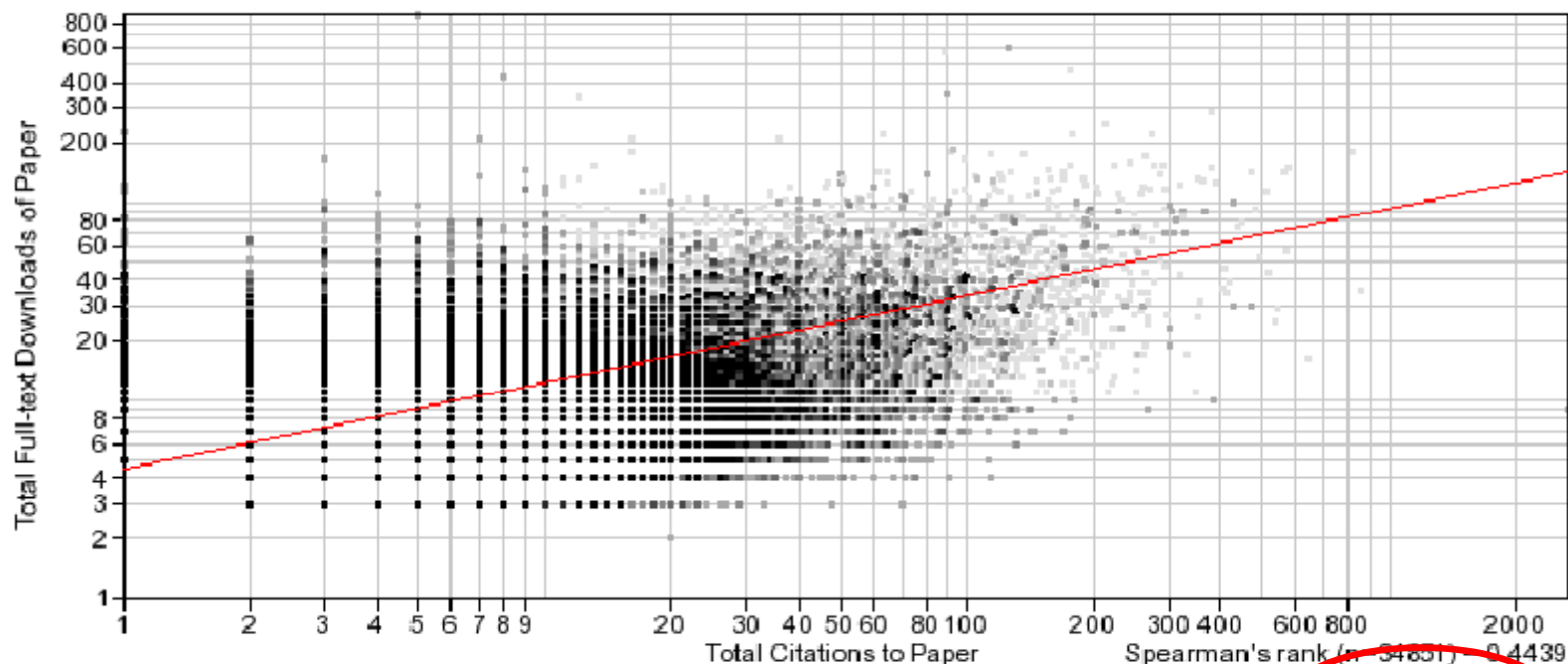


Figure 8.12: Example download and citation windows used for prediction calculations.



Spearman's rank (n = 34831) = 0.4439

	Min Filter	Max Filter	Sum (0.81)	Mean	Standard Dev
Downloads	1	10000	440599	14.47	15.94
Cites	1	10000	542001	17.80	34.61

r (squared)	0.4401 (0.194)
n (t)	30454 (85.529)
Non-Dir. Sig.	<0.0001

L'indice di download a breve termine (max 6 mesi) consente di prevedere il Citation Index a medio-lungo termine

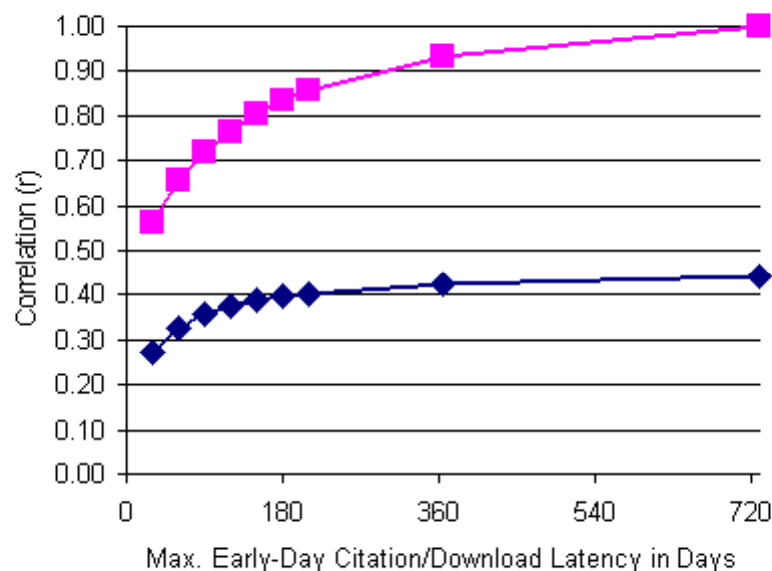


Figure 8.13: The predictive power of downloads reaches an asymptote at 6 months.

Open Access e valutazione della ricerca scientifica

la modalità “Open Access” può influenzare l’impatto di un articolo/rivista e, indirettamente, l’impatto degli autori?

qual è l’immediata conseguenza dell’OA su un articolo?

l’aumento del numero dei download ha un effetto sull’impatto dell’articolo?

Open Access e valutazione della ricerca scientifica

la modalità “Open Access” può influenzare l’impatto di un articolo/rivista e, indirettamente, l’impatto degli autori?

qual è l’immediata conseguenza dell’OA su un articolo?

l’aumento del numero dei download ha un effetto sull’impatto dell’articolo?

Quick Search

Go!

BioMed Central
PubMed Central
BioMed

SUBMIT A
MANUSCRIPT

submit now for full PDF

journals A-Z

subject areas

gateways

log

Chemistry Central

PhysicsMath Central

1000 Biology

1000 Medicine

Current Controlled
Trials

Open Repository

Primers in Biology

PoplesArchive

The Scientist

Image
Library

Starting an
independent, open
access journal

BioMed Central: Most viewed articles in past 30 days [more info]

Figures given indicate the abstract, full text and PDF accesses on BioMed Central for each article, over the last 30 days. All research articles are also available via the PubMed Central archive, so the total number of accesses to each article is significantly higher. Lists of [most-viewed articles in the past year](#) and [all time most-viewed articles](#) are also available

[more](#)

- 41. Review** **Open Access** **Highly accessed**
Accesses: 1721
Apple phytochemicals and their health benefits
Jeanelle Boyer, Rui Hai Liu
Nutrition Journal 2004, **3**:5 (12 May 2004)
[Abstract] [Full Text] [PDF] [PubMed] [Related articles]
- 42. Research** **Open Access** **Highly accessed**
Accesses: 1682
Management of bleeding following major trauma: a European guideline
Donat R Spahn, Vladimir Cerny, Timothy J Coats, Jacques Duranteau, Enrique Fernández-Mondéjar, Giovanni Gordini, Philip F Stahel, Beverley J Hunt, Radko Komadina, Edmund Neugebauer, Yves Ozier, Louis Riddez, Arthur Schultz, Jean-Louis Vincent, Rolf Rossaint
Critical Care 2007, **11**:R17 (15 February 2007)
[Abstract] [Full text] [PDF] [PubMed] [Related articles] [Cited on BioMed Central]
- 43. Minireview** **Free**
Accesses: 1679
Observing bacteria through the lens of social evolution
Carey D Nadell, Bonnie L Bassler, Simon A Levin
Journal of Biology 2008, **7**:27 (30 September 2008)
[Abstract] [Full text] [PDF] [PubMed] [Related articles]
- 44. Research** **Open Access** **Highly accessed**
Accesses: 1666
The importance of human resources management in health care: a global context
Stefane M Kabene, Carole Orchard, John M Howard, Mark A Soriano, Raymond Leduc
Human Resources for Health 2006, **4**:20 (27 July 2006)
[Abstract] [Full Text] [PDF] [PubMed] [Related articles]
- 45. Review** **Open Access** **Highly accessed**
Accesses: 1661
The impact of prescribed psychotropics on youth
Shaheen E Lakhani, Gareth E Hagger-Johnson
Clinical Practice and Epidemiology in Mental Health 2007, **3**:21 (20 October 2007)

Put up a
Poster
Click here!



Put up a
Poster
Click here!



MOST RECENT

MOST VIEWED

[Brain IGF-1 Receptors Control Mammalian Growth and Lifespan through a Neuroendocrine Mechanism](#)

[REST Regulates Distinct Transcriptional Networks in Embryonic and Neural Stem Cells](#)
[Structural Homeostasis: Compensatory Adjustments of Dendritic Arbor Geometry in Response to Variations of Synaptic Input](#)

[Evolutionary Plasticity of Polycomb/Trithorax Response Elements in *Drosophila* Species](#)
[Survival of Migrating Salmon Smolts in Large Rivers With and Without Dams](#)

[VIEW ALL](#) | [GET RSS](#)

Weekly Editors' Picks

PLoS Biology at 5: The Future Is Open Access



Five years after PLoS Biology launched, the publishing landscape has changed radically. How much have PLoS and PLoS Biology contributed to this change, and what does the future hold for open access?

[Read the article.](#) [Write a response.](#)

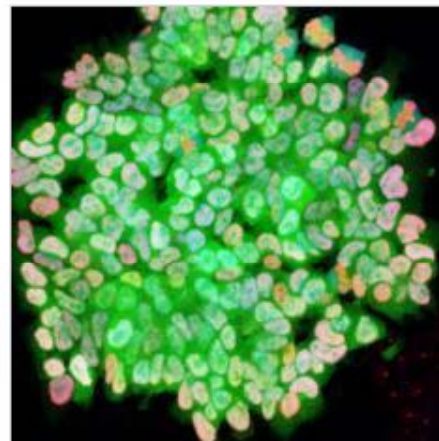
Is Bayh-Dole Good for Developing Countries? Lessons from the US Experience



The US Bayh-Dole Act encourages university patenting of inventions arising from publicly funded research. Lessons from three decades of US experience serve as a cautionary tale for those countries that may choose to emulate Bayh-Dole.

[Read the article.](#) [Write a response.](#)

October 2008 Issue



PLoS Biology is a peer-reviewed open-access journal featuring research articles of exceptional significance in all areas of biological science, from molecules to ecosystems.



Blogging Competition

We are pleased to announce two winners



Ed Board Member

Sally Temple receives MacArthur "Genius Award"



make your research known

Record
your research

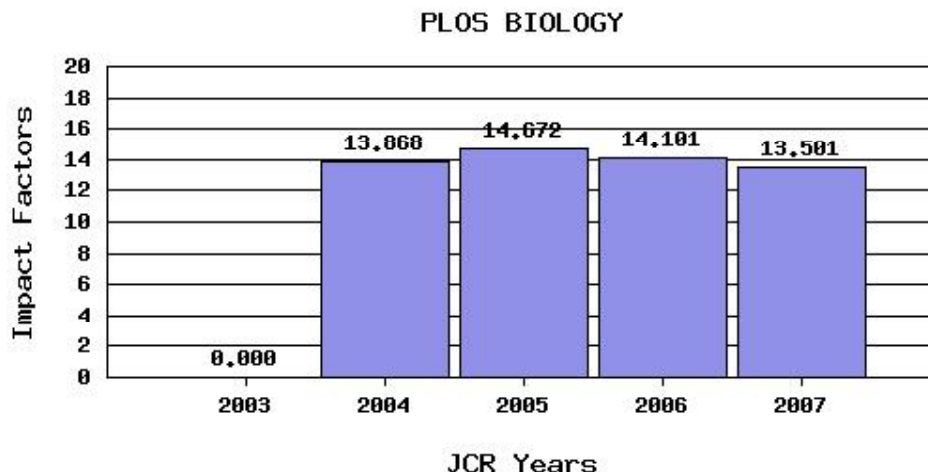
Upload
your videos

Share
your work
with the world



Impact Factor Trend Graph: PLOS BIOLOGY

Click on the "Return to Journal" button to view the full journal information.



**Impact Factor -- see below for calculations*

The journal impact factor is a measure of the frequency with which the "average article" in a journal has been cited in a particular year. The impact factor will help you evaluate a journal's relative importance, especially when you compare it to others in the same field. For more bibliometric data and information on this and other journal titles click on the "Return to Journal" button.

NOTE: Title changes and coverage changes may result in no impact factor for one or more years in the above graph.

2007 Impact Factor

Cites in 2007 to articles published in: 2006 = 2180 Number of articles published in: 2006 = 192
 2005 = 2802 2005 = 177
 Sum: 4982 Sum: 369

Calculation: $\frac{\text{Cites to recent articles}}{\text{Number of recent articles}} = \frac{4982}{369} = 13.501$

Effetti dell'Open Access sulla incisività (impatto) della ricerca nella comunità scientifica e nella società

- nascita di riviste “OA” (es. PLoS) con elevato IF**
- stimolo per le riviste tradizionali a passare alla modalità OA (totale o parziale)**
- aumento del numero dei potenziali lettori (dei download, delle citazioni, dell'IF) ...**

Effetti dell'Open Access sulla incisività (impatto) della ricerca nella comunità scientifica e nella società

- ... incremento delle iniziative quali archivi istituzionali, Citeseer, arXive, e-print**
- miglioramento della percezione della scienza da parte del pubblico non specializzato**
- forte impulso alla comunicazione scientifica**

Evoluzione dell'Open Access: scenari possibili

- il processo OA sarà infine generalizzato (doi)
- i benefici (download e citation index) derivanti dall'OA tenderanno ad annullarsi
- si tornerà alla situazione pre-OA: la qualità influenzerà maggiormente l'impatto delle riviste e degli articoli/autori

i costi dell'OA non possono gravare solo sugli autori virtuosi (che pubblicano di più!)

*“Se il discorrere circa un problema difficile fosse come il portar pesi, dove molti cavalli porteranno più sacca di grano che un caval solo, io acconsentirei che i molti discorsi facessero più che uno solo;
ma il discorrere è come il correre, e non come il portare, ed un caval barbero solo correrà più che cento frisoni”*

Galileo Galilei, Il Saggiatore, 1623