UNIVERSITY OF BRADFORD
MAKING KNOWLEDGE WORK

Research metrics

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University of Bradford

Metrics

- What are they?
- What can we use them for?
- What are the criticisms?
- What are the alternatives?

Metrics

- Metrics
  - Use statistical measures
    - Citations
    - Accesses to online versions
    - Funding
    - Web 2.0

Metrics - What do we measure?

- Metrics for
  - authors
  - articles
  - journals
    - but often used as a **proxy** for other measures
  - institutions or part thereof
- There are **many, many metrics** out there!

Citation metrics – data sources

- Web of Knowledge (Thomson Reuters)
  - Web of Science
- Scopus (Elsevier)
- Google Scholar

Web of Science - Impact factors

- The most famous research metric
- Attempts to measure the importance of journals
- Rationale – the number of citations received by a paper is an indicator of its quality
- Thomson/Reuters Journal Citation Reports
  - http://wok.mimas.ac.uk
  - Under Journal Citation Reports
- Science and Social Science versions
- Annual update

What are Impact Factors?

- Calculation
  - Number of citations in current year to papers published in previous 2 years

    divided by
  - number of papers published in the previous two years
  - Citations retrieved almost entirely from journals
    - Occasionally conferences
    - Not books

British Journal of Dermatology

- Citations in 2009 to items published in 2007 and 2008 = 2905
- Number of items published in 2007 and 2008 = 682

- IF = 2905/682 = 4.260

Journal Summary List

Journal Title Changes

Journals from: search Full Journal Title for 'BRITISH JOURNAL OF DERMATOLOGY'

Sorted by: Journal Title SORT AGAIN

Journals 1 - 1 (of 1) [1] Page 1 of 1

MARK ALL UPDATE MARKED LIST

Ranking is based on your journal and sort selections.

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						*Eigenfactor*™ Metrics	
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	*Eigenfactor*™ Score	*Article Influence*™ Score
☐	1	BRIT J DERMATOL	0007-0963	17207	4.260	3.955	0.727	373	7.4	0.03732	1.044

MARK ALL UPDATE MARKED LIST

Journals 1 - 1 (of 1) [1] Page 1 of 1

JCR – Rank in category

- Rank in Subject Category
  - Compares journals in similar subjects
- Choose Subject Category, then rank by Impact factor
- An important measure!

WELCOME HELP

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Journal Summary List

Journal Title Changes

Journals from: subject categories DERMATOLOGY VIEW CATEGORY SUMMARY LIST

Sorted by: Impact Factor SORT AGAIN

Journals 1 - 20 (of 48) [1 | 2 | 3] Page 1 of 3

MARK ALL UPDATE MARKED LIST

Ranking is based on your journal and sort selections.

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						Eigenfactor™ Metrics	
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor™ Score	Article Influence™ Score
☐	1	J INVEST DERMATOL	0022-202X	20245	5.543	5.001	1.781	269	7.6	0.05127	1.606
☐	2	ARCH DERMATOL	0003-987X	11875	4.760	3.803	0.750	152	>10.0	0.01885	1.090
☐	3	PIGM CELL MELANOMA R	1755-1471	2362	4.344	4.106	0.673	55	6.1	0.00773	1.361
☐	4	BRIT J DERMATOL	0007-0963	17207	4.260	3.955	0.727	373	7.4	0.03732	1.044
☐	5	J AM ACAD DERMATOL	0190-9622	17472	4.105	3.699	0.653	251	8.2	0.03424	0.972
☐	6	J DERMATOL SCI	0923-1811	2173	3.713	3.423	0.636	88	5.0	0.00770	1.031
☐	7	CONTACT DERMATITIS	0105-1873	5413	3.635	3.653	0.500	82	9.2	0.00667	0.673

Journal Summary List

Journal Title Changes

Journals from: subject categories BIOCHEMISTRY & MOLECULAR BIOLOGY VIEW CATEGORY SUMMARY LIST

Sorted by: Impact Factor SORT AGAIN

Journals 1 - 20 (of 283) [1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10] Page 1 of 15

MARK ALL UPDATE MARKED LIST

Ranking is based on your journal and sort selections.

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						*Eigenfactor*™ Metrics	
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	*Eigenfactor*™ Score	*Article Influence*™ Score
☐	1	CELL	0092-8674	153972	31.152	32.628	6.825	359	8.7	0.69859	20.124
☐	2	ANNU REV BIOCHEM	0066-4154	17607	29.875	33.510	4.257	35	10.0	0.06227	19.302
☐	3	NAT MED	1078-8956	49928	27.136	27.991	5.143	154	6.6	0.19383	12.254
☐	4	ANNU REV BIOPH BIOM	1056-8700	4585	18.955	18.367		0	9.4	0.01741	10.588
☐	5	NAT CHEM BIOL	1552-4450	5101	16.058	16.738	3.472	123	2.7	0.04860	8.370

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Journal Summary List

Journal Title Changes

Journals from: subject categories ENGINEERING, INDUSTRIAL VIEW CATEGORY SUMMARY LIST

Sorted by: Impact Factor SORT AGAIN

Journals 1 - 20 (of 37) [1 | 2] Page 1 of 2

MARK ALL UPDATE MARKED LIST

Ranking is based on your journal and sort selections.

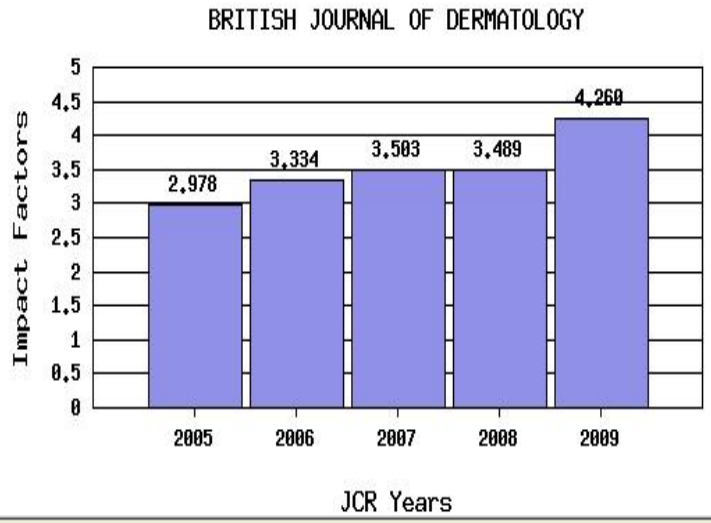
Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						*Eigenfactor*™ Metrics	
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	*Eigenfactor*™ Score	*Article Influence*™ Score
☐	1	TECHNOVATION	0166-4972	1747	2.466	2.126	0.306	72	5.0	0.00375	0.386
☐	2	COMPUT OPER RES	0305-0548	5033	2.116	2.443	0.351	271	5.9	0.01778	0.846
☐	3	INT J PROD ECON	0925-5273	6120	2.068	2.736	0.355	321	5.9	0.01361	0.595
☐	4	RELIAB ENG SYST SAFE	0951-8320	3890	1.908	2.305	0.340	200	6.9	0.00938	0.645
☐	5	IEEE T IND INFORM	1551-3203	287	1.614	2.487	0.077	39	3.5	0.00123	0.525
☐	6	CIRP ANN-MANUF TECHN	0007-8506	4183	1.603	1.725	0.074	136	>10.0	0.00649	0.434
☐	7	IND MANAGE DATA SYST	0263-								

Currency of impact factors

- Impact factor trends
  - On full data screen, click on **Trends**
  - Gives a graph of Impact Factors over the last five years
  - Easy to spot anomalies
- 5-year impact factors
  - Number of citations in current year to papers published in previous 5 years
  - divided by
  - number of papers published in the previous 5 years

Impact Factor Trend Graph: BRITISH JOURNAL OF DERMATOLOGY

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.

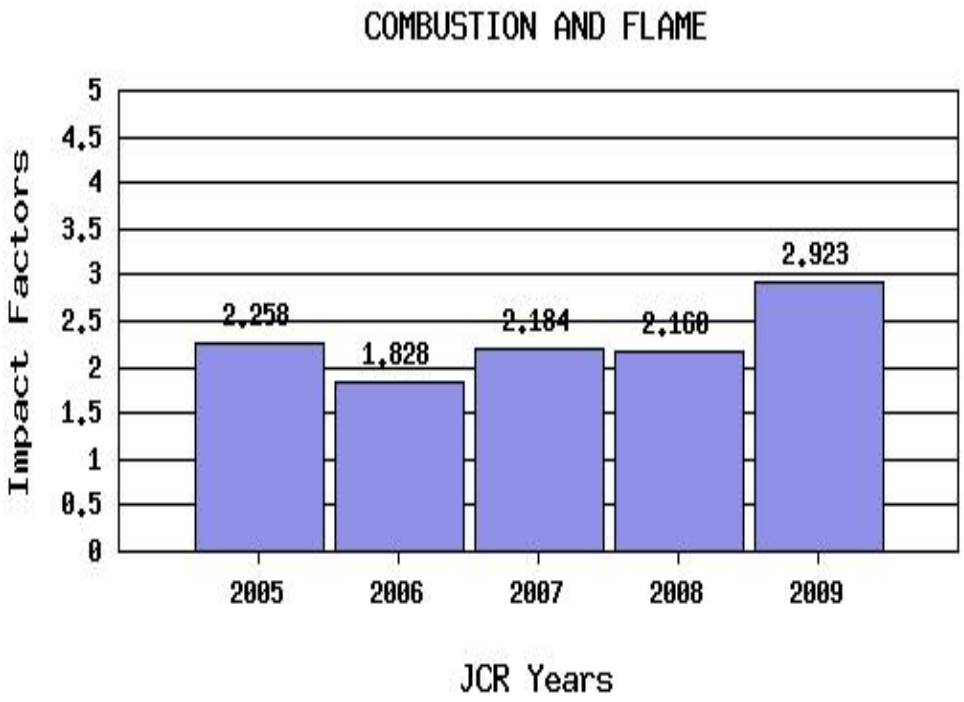
2009 Impact Factor

Cites in 2009 to articles published in:	2008 = 1251	Number of articles published in:	2008 = 330
	2007 = 1654		2007 = 352
	Sum: 2905		Sum: 682

Calculation: Cites to recent articles 2905 = **4.260**
Number of recent articles 682

Impact Factor Trend Graph: COMBUSTION AND FLAME

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.

What is a ‘good’ impact factor in science?

- **Highest** impact factor for 2009 is 87.925
  - CA – A Cancer Journal for Clinicians
- **Median** impact factor for 2009 is 1.286
  - 3 journals tied, including Journal of Classification
- **Lowest** impact factor for 2009 is **0**
  - 10 journals tied

What is a 'good' impact factor in social science?

- Highest impact factor for 2009 is 22.75 (Annual Review of Psychology)
- Median impact factor for 2009 is 0.875 (American Business Law Journal and 3 others)
- Lowest impact factor in 2009 is 0 (Shared by 14 journals)

Why do impact factors vary by discipline?

- In subject areas with low impact factors, citations are missed
  - Smaller number of journals indexed
  - Publication in non-journal sources
  - Just not as many publications out there!
- In life sciences
  - Largely journal-based literature
  - Well covered by ISI

Criticisms of the Impact Factor

- Self-citation
  - JCR now provides Impact Factor without self-cites, but the ‘main’ Impact Factor (which appears in the table) still includes them
- Reviews tend to be heavily cited
  - Review journals top rankings
- One controversial/wrong paper may be cited heavily and artificially inflate metrics
- Variation between subjects

Eigenfactor

- Aims to ‘rank journals as Google ranks Web sites’
- http://eigenfactor.org/
  - Details of algorithm
  - 1995-2008 Eigenfactor scores
- WoK
  - 2007+ - Eigenfactor scores
- Eliminates self-citations
- Citations from highly-cited journals ranked more highly
- Not transparent
- ‘Difficult’ numbers

Journal Summary List

Journal Title Changes

Journals from: subject categories BIOCHEMISTRY & MOLECULAR BIOLOGY VIEW CATEGORY SUMMARY LIST

Sorted by: Impact Factor SORT AGAIN

Journals 1 - 20 (of 283) [1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10] Page 1 of 15

MARK ALL UPDATE MARKED LIST

Ranking is based on your journal and sort selections.

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						*Eigenfactor*™ Metrics	
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	*Eigenfactor*™ Score	*Article Influence*™ Score
☐	1	CELL	0092-8674	153972	31.152	32.628	6.825	359	8.7	0.69859	20.124
☐	2	ANNU REV BIOCHEM	0066-4154	17607	29.875	33.510	4.257	35	10.0	0.06227	19.302
☐	3	NAT MED	1078-8956	49928	27.136	27.991	5.143	154	6.6	0.19383	12.254
☐	4	ANNU REV BIOPH BIOM	1056-8700	4585	18.955	18.367		0	9.4	0.01741	10.588
☐	5	NAT CHEM BIOL	1552-4450	5101	16.058	16.738	3.472	123	2.7	0.04860	8.370

WELCOME HELP

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Journal Summary List

Journal Title Changes

Journals from: subject categories BIOCHEMISTRY & MOLECULAR BIOLOGY VIEW CATEGORY SUMMARY LIST

Sorted by: Eigenfactor(TM) Score SORT AGAIN

Journals 1 - 20 (of 283) [1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10] Page 1 of 15

MARK ALL UPDATE MARKED LIST

Ranking is based on your journal and sort selections.

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						*Eigenfactor*™ Metrics	
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	*Eigenfactor*™ Score	*Article Influence*™ Score
☐	1	J BIOL CHEM	0021-9258	406606	5.328	5.440	1.055	3686	8.2	1.09385	2.222
☐	2	CELL	0092-8674	153972	31.152	32.628	6.825	359	8.7	0.69859	20.124
☐	3	NUCLEIC ACIDS RES	0305-1048	95799	7.479	7.279	2.030	1112	6.6	0.35247	3.001
☐	4	MOL CELL	1097-2765	38987	14.608	13.929	2.760	296	5.3	0.30020	9.397
☐	5	MOL CELL BIOL	0270-7306	70185	6.057	6.367	1.361	527	7.7	0.29032	3.435
☐	6	EMBO J	0261-4189	74782	8.993	9.395	2.324	321	9.1	0.24818	5.552
☐	7	ONCOGENE	0950-9232	57366	7.135	6.730	1.086	420	6.1	0.24014	2.786
☐	8	CURR BIOL	0960-	37237	10.992	11.571	2.190	357	5.6	0.23416	6.762

Metrics at different levels

- Is it fair to judge a paper by the journal in which it appears?
- An individual paper may be much
  - Better/worse
  - More popular/less popular
  - More cited/less cited

Than the journal in which it appears

Article-level metrics

- Web of Knowledge
  - Web of Science
  - Times cited per article
  - Basic but a very important metric
- Also available in Google Scholar and Scopus

The human hair follicle immune system: cellular composition and immune privilege

Author(s): Christoph T, Muller-Rover S, Audring H, Tobin DJ, Hermes B, Cotsarelis G, Ruckert R, Paus R

Source: BRITISH JOURNAL OF DERMATOLOGY Volume: 142 Issue: 5 Pages: 862-873 Published: MAY 2000

Times Cited: 76 References: 64 Citation Map

Abstract: The immunology of the hair follicle, its relationship with the "skin immune system' and its role in hair diseases remain biological intriguing and clinically important. In this study, we analysed the immunoreactivity patterns of 15 immunodermatological markers to determine the cellular composition and immune privilege of the human hair follicle immune system in anagen VI (growth phase). The most prominent cells located in or around the hair follicle were Langerhans cells, CD4+ or CD8+ T cells, macrophages and mast cells, whereas B cells, natural killer cells and gamma delta T cells were found wry rarely. Langerhans cells (CD1a+, major histocompatibility complex, MHC class II+), and T cells (CD4+ or CD8+) were predominantly distributed in the distal hair follicle epithelium, whereas macrophages (CD68+, MHC class II+) and mast cells (Giemsa+) were located in the perifollicular connective tissue sheath. Transmission electron microscopy confirmed low numbers of immune cells in the proximal hair follicle epithelium, and wry few macrophages and Langerhans cells were seen in the dermal papilla, Melanophages were observed in the connective tissue sheath and dermal papilla, MHC class I (HLA-A, -Bt -C) and beta(2)-microglobulin immunoreactivity was found on most skin cells, but was substantially reduced on isthmus keratinocytes and virtually absent in the proximal hair follicle epithelium. Apart from the absence of Fas ligand immunoreactivity,

Cited by: 76

This article has been cited 76 times (from Web of Science).

Gregoriou S, Papafragkaki D, Kontochristopoulos G, et al. Cytokines and Other Mediators in Alopecia Areata MEDIATORS OF INFLAMMATION 2010

von Bubnoff D, Andres E, Hentges F, et al. Natural killer cells in atopic and autoimmune diseases of the skin JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY 125 1 60-68 JAN 2010

Strober BE, Menon K, McMichael A, et al. Alefacept for Severe Alopecia Areata A Randomized, Double-blind, Placebo-

Google scholar author:"dj tobin" Search Advanced Scholar Search

Scholar Articles and patents anytime include citations Create email alert Results 1 - 10 of about 260. (0.14 sec)

Melanin pigmentation in mammalian skin and its hormonal regulation [HTML] from physiology.org
A Slominski, **DJ Tobin**, S Shibahara... - Physiological ..., 2004 - Am Physiological Soc
Cited by 288 - Related articles - SFX at Bradford - BL Direct - All 4 versions - Import into RefMan

The human hair follicle immune system: cellular composition and immune privilege
..., S Müller-Röver, H Audring, **DJ Tobin**... - British Journal of ..., 2000 - Wiley Online Library
Summary The immunology of the hair follicle, its relationship with the `skin immune system' and its role in hair diseases remain biologically intriguing and clinically important. In this study, we analysed the immunoreactivity patterns of 15 immunodermatological markers to ...
Cited by 129 - Related articles - SFX at Bradford - BL Direct - All 5 versions - Import into RefMan

In vivo and in vitro evidence for hydrogen peroxide (H2O2) accumulation in the epidermis of patients with vitiligo and its successful removal by a UVB-activated ...
..., WD Beazley, DC Gaze, **DJ Tobin**... - The journal of ..., 1999 - ncbi.nlm.nih.gov
To date there is compelling in vitro and in vivo evidence for epidermal H2O2 accumulation in vitiligo. This paper reviews the literature and presents new data on oxidative stress in the epidermal compartment of this disorder. Elevated H2O2 levels can be demonstrated in vivo in ...
Cited by 122 - Related articles - SFX at Bradford - All 2 versions - Import into RefMan

Melanocytes are not absent in lesional skin of long duration vitiligo
DJ Tobin, NN Swanson... - The Journal of ..., 2000 - interscience.wiley.com
Desmond J. Tobin1, Nelle N. Swanson2, Mark R. Pittelkow2, Eva M. Peters1 and Karin U. Schallreuter1,3* 1 Clinical and Experimental Dermatology, Department of Biomedical Sciences, University of Bradford, Bradford, UK 2 Department of Dermatology, Mayo Clinic, ...
Cited by 114 - Related articles - SFX at Bradford - BL Direct - All 3 versions - Import into RefMan

Thody, A.J. and Graham, A., 1998. Does alpha-MSH have a role in regulating skin pigmentation in humans?. *Pigment Cell Res* **11** 5, pp. 265–274. **Full Text** via CrossRef | View Record in Scopus | Cited By in Scopus (59)

Tobin, D.J., Fenton, D.A. and Kendall, M.D., 1990. Ultrastructural observations on the hair bulb melanocytes and melanosomes in acute alopecia areata. *J Invest Dermatol* **94**, pp. 803–807. View Record in Scopus | Cited By in Scopus (46)

Tobin, D.J. and Cargnello, J.A., 1992. Partial reversal of canities in a twenty-two year old Chinese male. *Arch Dermatol* **129**, pp. 789–791.

Tobin, D.J., Colen, S.R. and Bystryn, J.-C., 1995. Isolation and long-term culture of human hair-follicle melanocytes. *J Invest Dermatol* **104**, pp. 86–89. View Record in Scopus | Cited By in Scopus (30)

Tobin, D.J., Hagen, E., Botchkarev, V.A. and Paus, R., 1998. Do hair bulb melanocytes undergo apoptosis during hair follicle regression (catagen)?. *J Invest Dermatol* **111**, pp. 941–947. View Record in Scopus | Cited By in Scopus (56)

Tobin, D.J., Slominski, A., Botchkarev, V. and Paus, R., 1999. The fate of hair follicle melanocytes during the hair growth cycle. *J Investig Dermatol Symp Proc* **4**, pp. 323–332. **Full Text** via CrossRef | View Record in Scopus | Cited By in Scopus (45)

Tosti, A., Piraccini, B.M. and Van Neste, D.J.J., 2001. Telogen effluvium after allergic contact dermatitis of the scalp. *Arch Dermatol* **137**, pp. 187–190. View Record in Scopus | Cited By in Scopus (13)

Van Neste, D., 2002. Assessment of hair loss. Clinical relevance of hair growth evaluation methods. *Clin Exp Dermatol* **27**, pp. 358–365.

Van Neste D., 2004. Thickness, medullation and growth rate of female scalp hair are subject to significant variation according to pigmentation and scalp location during ageing. Eur J Dermatol 14, in press.

Van Neste, D., Blume-Peytavi, U., Grimalt, R. and Messenger, A., 2003. Hair Science and Technology. , Skinterface, Tournai 496 p .

Vexiau, P., Chaspoux, C., Boudou, P., Fiet, J., Jouanique, C., Hardy, N., Reygagne, P., 2002. Effects of minoxidil 2% vs cyproterone acetate treatment on female androgenetic alopecia & cntrolled, 12-month randomized trial. Br J Dermatol 146, 992–999.

Westerhof, W., Njoo, D. and Menke, K.E., 1998. Miscellaneous hypomelanoses: disorders characterized by extra-cutaneous loss of pigmentation. In: Nordlund, J.J., Boissy, R.E., Hearing, V.J., King, R.A. and

Author metrics in Web of Knowledge

- Create Citation Report
- Times cited
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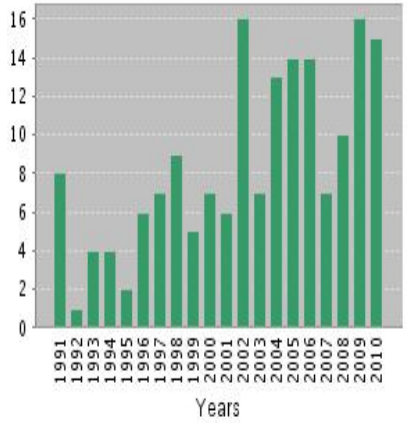
Citation Report

Subject Heading=(LIFE SCIENCES BIOMEDICINE OR MULTIDISCIPLINARY SCIENCE TECHNOLOGY OR SOCIAL SCIENCES) AND Author=(TOBIN DJ)

Timespan=All Years. Databases=SCI-EXPANDED, A&HCI, SSCI, CPCI-SSH, CPCI-S.

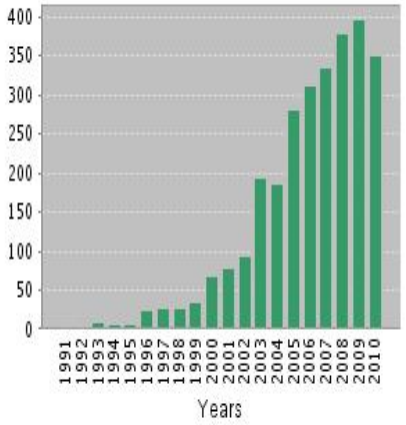
This report reflects citations to source items indexed within Web of Science. Perform a Cited Reference Search to include citations to items not indexed within Web of Science.

Published Items in Each Year



The latest 20 years are displayed.
View a graph with all years.

Citations in Each Year



Results found: 174

Sum of the Times Cited [?]: 2,807

View Citing Articles
View without self-citations

Average Citations per Item [?]: 16.13

h-index [?]: 34

Results: **174** Page 1 of 18 Go Sort by: Times Cited

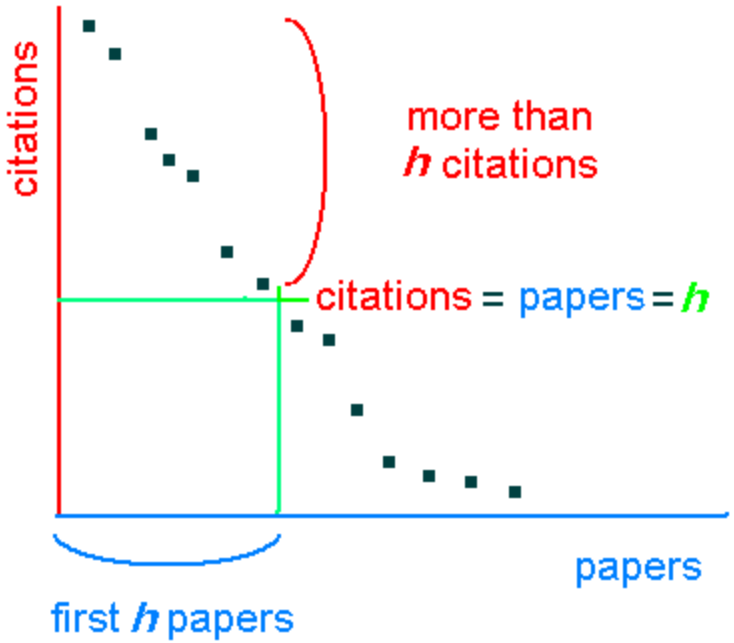
Use the checkboxes to remove individual items from this Citation Report or restrict to items processed between 1970 and 2010 Go

	2006 ◀	2007	2008	2009	2010 ▶	Total	Average Citations per Year
	311	336	380	396	351	2,807	75.86
☐ 1. Title: Melanin pigmentation in mammalian skin and its hormonal regulation Author(s): Slominski A, Tobin DJ, Shibahara S, et al. Source: **PHYSIOLOGICAL REVIEWS** Volume: **84** Issue: **4** Pages: **1155-1228** Published: **OCT 2004**	23	36	44	45	33	201	28.71
☐ 2. Title: In vivo and in vitro evidence for hydrogen peroxide (H2O2) accumulation in the epidermis of patients with vitiligo and its successful removal by a UVB-activated pseudocatalase Author(s): Schallreuter KU, Moore J, Wood JM, et al.	15	16	25	19	6	124	11.27

H-index (Hirsch J, PNAS, 2005)

- The value of h is equal to the number of papers (N) in the list that have N or more citations
- Prof Tobin has h-index of 34
  - He has 34 papers that have at least 34 citations
  - discounts the disproportionate weight of highly cited papers

H-index


citations
more than
h citations
citations = papers = *h*
papers
first *h* papers

Criticisms of the H-index for authors

- Favours older authors
  - They will have more papers
  - They will have older papers, which have had more time to be cited
- Never decreases
- Methods papers, reviews increase H-index disproportionately
- Ignores small numbers of highly cited papers
- Variants on the H-index
  - G index
    - Aims to restore the effect of highly cited papers
  - Contemporary h-index
    - Gives less weight to older articles

Results Author=(tobin dj)
Timespan=All Years.

Scientific WebPlus BETA View Web Results >>

Results: **172**

Page 10 of 18 Go

Sort by: Publication Date

Print | E-mail | Add to Marked List | Save to EndNote Web | Save to EndNote, RefMan, ProCite | more options

Analyze Results

Refine Results

Search within results for

Search

General Categories Refine

- SCIENCE & TECHNOLOGY (156)
- SOCIAL SCIENCES (9)
- ARTS & HUMANITIES (2)

more options / values...

Subject Areas Refine

- DERMATOLOGY (88)
- BIOCHEMISTRY & MOLECULAR BIOLOGY (54)
- CELL BIOLOGY (27)
- GENETICS & HEREDITY (24)
- ENDOCRINOLOGY & METABOLISM (18)

more options / values...

- Document Types
- Authors
- Source Titles
- Publication Years
- Languages

Hide Refine

91. Title: A natural canine homologue of alopecia areata in humans
Author(s): Tobin, DJ; Gardner, SH; Luther, PB, et al.
Source: BRITISH JOURNAL OF DERMATOLOGY Volume: 149 Issue: 5 Pages: 938-950 Published: 2003
Times Cited: 3
S·F·X

92. Title: Characterization of hair follicle antigens targeted by the anti-hair follicle immune response
Author(s): Tobin, DJ
Source: JOURNAL OF INVESTIGATIVE DERMATOLOGY SYMPOSIUM PROCEEDINGS Volume: 8 Issue: 2 Pages: 176-181 Published: 2003
Times Cited: 12
S·F·X

93. Title: Indium phosphide (001)-(2x1): Direct evidence for a hydrogen-stabilized surface reconstruction
Author(s): Chen, G; Cheng, SF; Tobin, DJ, et al.
Source: PHYSICAL REVIEW B Volume: 68 Issue: 12 Article Number: 121303 Published: SEP 15 2003
Times Cited: 8
S·F·X

94. Title: Functional activity of serotoninergic and melatoninergic systems expressed in the skin
Author(s): Slominski, A; Pisarchik, A; Zbytek, B, et al.
Source: JOURNAL OF CELLULAR PHYSIOLOGY Volume: 196 Issue: 1 Pages: 144-153 Published: JUL 2003
Times Cited: 57
S·F·X

95. Title: Regulation of human epidermal melanocyte biology by beta-endorphin

Who's Who

- Disambiguation
  - REF working on this
- WoK
  - Author search/Distinct Author Sets
    - Allows you to select specific authors and regenerate metrics
  - Use Author Finder for Author search
    - Can refine by subject and institution
  - ResearcherID
    - Assigns an identifier to researchers
    - Self-register via Web of Knowledge or at:
    - http://www.researcherid.com/

Other sources of citation data

- **Scopus**
  - Elsevier
    - Author metrics
    - Journal metrics
    - Not just journals
- **Scimago**
  - http://www.scimagojr.com/
  - Uses Scopus data
  - Many metrics for journals, including H-index
  - Free
- **Google Scholar**
  - Times cited BUT Author searching tricky
  - Not just journals
  - Publish or Perish software to calculate H-index etc

Other general criticisms

- Self-citation – a bad thing for authors and journals?
- Few accurate metrics for arts etc
- Can they measure value of work?

Metrics and open access

- Many metrics are journal-based – How will these fare in the world of repositories?
- Author/article/institutional metrics may supercede journal-based metrics
- Citebase and others
  - Citation metrics for repositories

Responses to criticisms - Mapping/networking measures

- Eigenfactor
- CiteRank – citation networks
- MESUR
  - http://www.mesur.org/MESUR.html
  - Combine usage and citation measures
  - Very large database, collated from publishers etc
  - Free

Responses to criticisms - Other metrics

- Funding - Self-perpetuating?
- Impact
  - REF
- Usage
  - COUNTER
  - MESUR
  - Repositories
- Web 2.0

Simple versus complex

- Complex measures require trust
- Harder to ‘game’
- Or do we go for easy to understand metrics like the H-index and Impact Factor?

Uses of citation metrics

- Journals
  - Where to publish?
    - Impact Factors
    - A highly-cited, high Impact Factor journal is still likely to be best
    - Good rough indicator for those new to a field
  - Supporting library purchasing decisions
- Authors
  - Recruitment
- Most only valid within field

Institutional-level citation metrics

- Institutional metrics may be purchased from Thomson Reuters or Scopus
- REF working in this area

RAE, REF and research metrics

- Largely dependent on expert panels - may have the support of metrics in some areas
- ‘Building a picture’
- ‘Informed by’
- Will also include ‘Impact’

Overall

- No measure is perfect
- Use in combination