Web of Science®
Using it for “Smart Discovery”

Dr. Lim Khee Hiang
Principal Trainer, Customer Education
ts.training.asia@thomson.com

Stop Searching, Start Discovering
Why “Smart Discovery”? 

- Who can read this all? 
- Who needs to read this all? 
- Is it a Numbers game? 

Basic Problem: Data Rich, Knowledge Poor!
Web of Science®

SELECTIVE, yet COMPREHENSIVE

Discover the world’s best scholarship

- The world’s best scholarships across all the disciplines provide RELEVANT contents to all scholars
- Cover-to-cover indexing, unique search tools and integrated navigation enable PRECISE search
- More than 100 years of global research history brings a DEEP understanding of the development of your topic
- Publisher-neutral and rigorous contents selection policy is time-tested, OBJECTIVE way to find most reliable literature
- Used by more than 3,800 institutions in 90 countries world-wide, most AUTHENTIC source of world-class research discovery
- Refine, analyze and map the COLLABORATIVE pattern of scholarly research
Evaluated authoritative content
- Thomson Reuters specialists evaluate journals to ensure that the content is authoritative and trustworthy
- We provide independent evaluation of all types of journal
  - Journals from commercial publishers
  - Academic society journals
  - Open Access journals
  - Electronic only journals etc.
• The world’s best scholarships across all the disciplines provide **RELEVANT** contents to all scholars
Web of Science – key benefits

Truly Multidisciplinary
- Journals are selected to provide coverage of all fields of scholarly research
- 11,332 journals in 250 subject categories
  - 7,890 journals in the hard sciences
  - Social sciences – 2,690 journals
  - Arts & humanities – 1,470 journals
- More than 12,000 conferences annually. Unmatched coverage.
- > 46 million unique records (largest citation database)
- > 1.96 million records in 2008 (largest citation database)

For up to date info see: http://wokinfo.com/realfacts/
AUTHENTIC

- Used by more than 4,000 institutions in 91 countries worldwide, most AUTHENTIC source of world-class research discovery

http://www.jisc-adt.com/
Web of Science – key benefits

A vast archive of important research: Coverage from 1900 in the Sciences and Social Sciences and from 1975 in the Arts and Humanities

All content has been indexed by Thomson Reuters and consequently the data is highly accurate and consistent throughout with a minimum of gaps

An essential requirement for trend analysis and accurate calculation of research evaluation metrics such as the h-index

All journals indexed cover-cover every item gets a unique record

Have confidence that you are accurately searching the available materials
PRECISE

- Cover-to-cover indexing, unique search tools and integrated navigation enable PRECISE search


Rare structural variants disrupt multiple genes in neurodevelopmental pathways in schizophrenia

Author(s): Walsh T (Walsh, Torn)\(^2\), McClellan JM (McClellan, Jon M.)\(^1\), McCarthy SE (McCarthy, Shane E.)\(^3\), Addington AM (Addington, Anjene E.)\(^4\), Pierce SB (Pierce, Sarah B.)\(^5\), Cooper GM (Cooper, Greg M.)\(^5\), Nord AS (Nord, Alex S.)\(^6\), Kusenda M (Kusenda, Mary)\(^7\), Malhotra D (Malhotra, Dheeralal)\(^8\), Bhandari A (Bhandari, Abhishek)\(^8\), Stray SM (Stray, Sunday M.)\(^9\), Rippey CF (Rippey, Caitlin F.)\(^5\), Roccanova P (Roccanova, Patricia)\(^5\), Makary V (Makary, Viad)\(^5\), Lakshmi B (Lakshmi, B)\(^6\), Findling RL (Findling, Robert L.)\(^7\), Sikich L (Sikich, Limnarie)\(^6\), Stromberg T (Stromberg, Thomas)\(^4\), Merriman B (Merriman, Barry)\(^9\), Gogtay N (Gogtay, Nilanjan)\(^8\), Butler P (Butler, Philip)\(^8\), Eckstrand K (Eckstrand, Kristen)\(^4\), Noony L (Noony, Leila)\(^8\), Cochran P (Cochran, Peter)\(^4\), Long R (Long, Robert)\(^4\), Chen ZD (Chen, Zugen)\(^9\), Davis S (Davis, Sean)\(^10\), Baker C (Baker, Carli)\(^5\), Eichler EE (Eichler, Evan E.)\(^5\), Meltzer PS (Meltzer, Paul S.)\(^11\), Nelson SF (Nelson, Stanley F.)\(^5\), Singleton AB (Singleton, Andrew B.)\(^4\), Lee MK (Lee, Ming KJ)\(^5\), Rapoport JL (Rapoport, Judith L.)\(^5\), King MC (King, Mary Claire)\(^2\), Sebat J (Sebat, Jonathan)\(^3\)

Source: SCIENCE Volume: 320 Issue: 5875 Pages: 539-543 Published: APR 25 2008

Times Cited: 153 References: 42
DEEP

• More than 100 years of global research history brings a DEEP understanding of the development of your topic
Web of Science – key benefits

- Thomson Reuters captures all formal Cited References for all records
- All author names captured, including the full name when available
- Authors are linked to addresses making the affiliation clear
- All addresses are captured and addresses are standardized for easy searching
- Funding Acknowledgements are captured for easy identification of grant based research and commercial interests
AUTHOR-ADDRESS LINKING

- Author-address linking to correctly attribute author names with their affiliations (January 2008 onwards)

Observation of the suppression of the flux of cosmic rays above $4 \times 10^{19}$ eV

Addresses:

1. Univ Tecnol Nazi, FR Mendoza, Mendoza, Argentina
2. LIP, Lisbon, Portugal
3. Inst Super Tecn, Lisbon, Portugal
4. Univ Turin, Inst Fis Spazio Interplanetario, INAF, Turin, Italy
5. Bae INAF, Turin, Italy
6. Univ Catolica Bolivia, La Paz, Bolivia
7. Univ Paris 07, CNRS, IN2P3, Lab AstroParticle & Cosmol, Paris, France
8. Comis Nazi Energia Atom, Ctr Atom Bartolome, Bari, Italy
9. Univ Wisconsin, Milwaukee, WI 53201 USA
10. Northeastern Univ, Boston, MA 02115 USA
11. Univ Beograd, Beograd, Serbia
12. Univ Santiago de Compostela, Santiago de Compostela, Spain
13. Szcz INFM Napoli, Naples, Italy
14. Univ Wisconsin, Milwaukee, WI 53201 USA
15. Northeastern Univ, Boston, MA 02115 USA
16. Ist Astrophys Spaziale & Fis Cosm Palermo INAF, Palermo, Italy
17. Univ Calif Los Angeles, Los Angeles, CA USA
18. Ist Nazl Fis Nucl, Lab Nazl Gran Sasso, L' Aquila, Italy
19. Univ Complutense Madrid, Madrid, Spain
20. Forschungszentrum Karlsruhe, Inst Prozessdatenerarbeitung & Elekt. Karlsruhe, Germany
21. Penn State Univ, University Park, PA 16802 USA
22. Univ Paris 06, Lab Phys Nucl & Hautes Energies, IN2P3, CNRS, Paris 06, France
23. Univ Paris 07, Lab Phys Nucl & Hautes Energies, IN2P3, CNRS, Paris 06, France
24. Univ Chicago, Enrico Fermi Inst, Chicago, IL 60637 USA
25. Pierre Auger So Os, Malargue, Argentina
26. Comis Nazi Energia Atom, Malargue, Argentina
27. Univ Siegen, Siegen, Germany
FUNDING ACKNOWLEDGEMENT

- WoS “Funding Acknowledgement” field captures funding agency names and grant numbers (August 2008 onwards)
  - There are 350,000 records that include a funding acknowledgement (as of April 2009)
  - Approximately 38% of current SCIE records include a funding acknowledgement
- Many funding bodies mandate that articles based on the research they have supported must include an acknowledgement
- Funding bodies can use this info to:
  - Track the research output and influence for any funding body, a specific grant, or research program
  - Identify the strategic scope of a funding body
  - Identify vested interests
- Can also be utilized by researchers to:
  - Identify future funding opportunities
  - Support an existing grant application by showing related information and evidence of previous performance

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<tr>
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Web of Science – key benefits

- Authority
- Diversity
- Depth & Consistency
- Quality Data
- Discovery Tools

Searching and navigation via citations to discover unique research and evaluate the impact of research.

Visualization & reporting tools help identify trends and generate reports:
- Analyze & Refine tools, Citation Report, Citation Map

Integration with ISI Web of Knowledge resources to aid the entire research cycle:
- EndNote Web, ResearcherID
- Single article level classification scheme across all resources
Web of Science – Discovery Tools

Analyze results for detailed analysis such as collaborator identification

Instant Citation Reports to easily evaluate research and identify trends

Visualize citations using the Citation Map. Identify trends and track research pathways
Web of Science – key benefits

A unique resource!

No other scholarly information resource offers the same level of high quality, authoritative and trustworthy content with advanced searching capabilities covering 110 years of multidisciplinary and consistent coverage.
The language of science is always changing
Concepts and terminology continue to evolve
Keyword searching alone will never maximize retrieval of critical information

• Cited Reference Search
• KeyWords Plus
• Related Records
Citation Index - The Value Add

The language of research is constantly changing, as research progress concepts and terminology evolve.

- Text based searching may **miss** critical information
- Network linkages through citations facilitate the **discovery** of information across the boundaries of terminology

**LAV** (Europe)
**HTLV-III** (USA)

1983 → 1987 → Present → Future

**HIV + many variants, “SIV”**

**IMPORTANT OF THE NEF GENE FOR MAINTENANCE OF HIGH VIRUS LOADS AND FOR DEVELOPMENT OF AIDS**

Author(s): KESTLER HW, RINGLER DJ, MORI K, et al.
Source: CELL Volume: 65 Issue: 4 Pages: 661-662 Published: MAY 17 1991
Times Cited: 1,103 (from Web of Science)
Cited References: 49 Citation Map

Abstract: When rhesus monkeys were infected with a form of cloned **SIVmac239** having a premature stop codon and a coding codon at this position quickly and universally came to predominate in the infected animals. Nef are strong selective forces for open functional forms of nef in vivo. Although deletion of nef sequences had no effect on replication in cultured cells, deletion of nef sequences dramatically altered the properties of virus in infected animals. These results indicate that nef is required for maintaining high virus loads during the course of persistent infection in vivo. Thus, nef should become a target for antiviral drug development. Furthermore, the properties of virus with nef mutation for making live-attenuated strains of virus for experimental vaccine testing.

Document Type: Article
Language: English

KeyWords Plus: SIMIAN IMMUNODEFICIENCY VIRUS; OPEN READING FRAME; Rhesus-Monkeys; Function; MUTATIONAL ANALYSIS; MACAQUE MONKEYS; HTLV-III; SRC GENE; TYPE-1; PROTEIN

This particular article is highly cited and relevant, but does not contain the term “HIV”

Therefore, this record cannot be found by searching for the text “HIV” but is easily found by using citations.
Web of Science – key benefits
Web of Science helps you to Acquire, to Retrieve and to DISCOVER!

- To Acquire is straightforward, all researchers are doing it … I know what I need to know
- To Retrieve is common, any researcher can do it … I know what I don’t know
- But … To Discover is challenging, you need to discover what others don’t know … things that you didn’t even know you don’t know

Web of Science provides the “discovery links” that are essential to link up known ideas to discover unknown concepts
I know what I need to know – you are only acquiring information – any researcher can do it (1,2,3,4,5)
I know what I don’t know – you are only retrieving information – every researcher is doing it (6,7)
If you could find what are those things that you didn’t even know you don’t know, you **DISCOVER!** (8,9,10,11)
Without the “discovery links” and you lost the related materials (8,9,10,11)
The “discovery links” in WOS help you to

• **Understand** the complete picture of a research
• **Identify** the gaps of a research
• **Evaluate** the limitations of a research
• **Plan** your research comprehensively
• **Discover** the unknown findings from known results

Don’t duplicate existing work!
Save time and money for more discoveries!

*Stop Searching, Start Discovering*
1. Title: SOUTHEAST-ASIAN MITOCHONDRIAL-DNA ANALYSIS REVEALS GENETIC CONTINUITY OF MONGOLOID MIGRATIONS
   Author(s): BALLINGER SW, SCHURR TG, TORRONI A, et al.
   Source: GENETICS Volume: 130 Issue: 1 Pages: 139-152 Published: JAN 1992
   Times Cited: 254

2. Title: Single, rapid coastal settlement of Asia revealed by analysis of complete mitochondrial genomes
   Author(s): Macaulay V, Hill C, Achilli A, et al.
   Source: SCIENCE Volume: 308 Issue: 5724 Pages: 1034-1036 Published: MAY 13 2005
   Times Cited: 157

3. Title: ROLE OF ANTS IN PEST-MANAGEMENT
   Author(s): WAY MJ, KHOO KC
6. Title: Flavonoid (myricetin, quercetin, kaempferol, luteolin, and apigenin) content of edible tropical plants
   Author(s): Miean KH, Mohamed S
   Source: JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY Volume: 49 Issue: 6 Pages: 3106-3112 Published: JUN 2001
   Times Cited: 112

7. Title: Sorption of cadmium and lead from aqueous solutions by spent grain
   Author(s): Low KS, Lee CK, Liew SC
   Source: PROCESS BIOCHEMISTRY Volume: 36 Issue: 1-2 Pages: 59-64 Published: SEP 2000
   Times Cited: 102

8. Title: REMOVAL OF LEAD, CADMIUM AND ZINC BY WASTE TEA LEAVES
   Author(s): TEE TW, KHAN ARM
   Source: ENVIRONMENTAL TECHNOLOGY LETTERS Volume: 9 Issue: 11 Pages: 1223-1232 Published: NOV 1998
   Times Cited: 91

9. Title: Growth performance, intestinal microbial populations, and serum cholesterol of broilers fed diets containing Lactobacillus cultures
   Author(s): Jin LZ, Ho YW, Abdullah N, et al.
   Source: POULTRY SCIENCE Volume: 77 Issue: 9 Pages: 1259-1265 Published: SEP 1998
   Times Cited: 87

10. Title: Distribution of polycyclic aromatic hydrocarbons (PAHs) in rivers and estuaries in Malaysia: A widespread input of petrogenic PAHs
    Author(s): Zakaria MP, Takada H, Tsutsumi S, et al.
    Source: ENVIRONMENTAL SCIENCE & TECHNOLOGY Volume: 36 Issue: 9 Pages: 1907-1918 Published: MAY 1 2002
    Times Cited: 86
"Author"
- enable to track prolific researcher
- click in to see the rate of published article
- click in to see the year published
- check for respective institution
- strategic recruitment
- advisory member selection

"Institution Name"
- prolific institution
- click in to see the rate of published article
- click in to see the year published
- Check for respective researcher
- strategic collaboration
“Source Title”
- Important journals for this area of study
- Check where your users publish at
- Identify journals for subscription

“Subject Area”
- Identify research focus of a country, institution or author
- Identify cross disciplinary research
- Check how a methodology is being used by other categories
- Identify new area of research and opportunities
Citation Report helps you to answer:

- The citation trend and publication pattern → the development of the field of study
- Is the subject currently active or is it stagnant (no research breakthrough) or no longer a subject of interest?
- Is it worthwhile to start a new project in the area?
- Is it likely to get funded or approved in my proposal?
Citation Report

Address=(malaysia)
Refined by: Institutions=(UNIV PUTRA MALAYSIA OR UNIV PERTANIAN MALAYSIA)
Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, 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

The latest 20 years are displayed.

View a graph with all years.

Results found: 4,929

Sum of the Times Cited: 19,479

View Citing Articles
View without self-citations

Average Citations per Item: 3.95

h-index: 43

Citation Report
Quantify scientific research output

Results: 4,929

Use the checkboxes to remove individual items from this Citation Report or restrict to items processed between 1900-1914 and 2010.

1. Title: SOUTHEAST-ASIAN MITOCHONDRIAL-DNA ANALYSIS REVEALS GENETIC CONTINUITY OF ANCIENT MONGOLOID MIGRATIONS
   Author(s): BALLINGER SW, SCHURR TG, TORRONI A, et al.
   Source: GENETICS Volume: 130 Issue: 1 Pages: 139-152 Published: JAN 1992

THOMSON REUTERS
Literature Citation Information – Driving Discovery of “CLOSE Art”

...navigating
- **Backward in time** via **Cited References**
- **Forward in time** via **Times Cited**
- and through **Related Records**

Time
Navigate backward in time to uncover an author's prior influences.

Navigate Forward to discover a paper's impact on current research.

Find Related Records: Retrieve articles which cited the same references.
You will be surprised to find out that an article in Analytical Chemistry has applications in:

- Biophysics
- Analytical Chemistry
- Multidisciplinary Chemistry
- Environmental Sciences
- Nanoscience & Nanotechnology
- Spectroscopy
- Toxicology

Six more new application fields!

\[ \rightarrow \rightarrow \text{Discovery} \]
Recently published
From backfiles, we realize …

Veterinary Sciences
Respiratory System
Peripheral Vascular Disease
Radiology
Pediatrics

Acoustics
Biomedical Eng
Electrical & Electronic Eng
Gastroenterology
& Hepatology

Hematology

Explore the subjects’ hidden relations, discover the undiscovered!

THOMSON REUTERS
A paper in “Business Management” has applications in “Management” and “Operations Research & Management Science” but also others unimaginable fields that await unfold …
Let's look into the references

Looking into one of the backfiles in 1951

Discover an old (1951) but important article that is still heavily cited today!

→ Unfold the past, discover the future via Citation Map

Unfold the hidden relationship between “Business” and “Mathematics Application in Social Sciences and Psychology”
Search History

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</table>

TS=(hurricane*) AND TS=(environment* or ecolog*)

Please give us your feedback on using ISI Web of Knowledge.
Be Agile in your Decision

*Latest!* The U.S. National Institutes of Health (NIH) has chosen *Web of Science®* data to power the NIH electronic Scientific Portfolio Assistant (eSPA). eSPA is an information technology system designed to assist NIH grants management officials in creating grant portfolios and tracking research outputs and outcomes, including publications and citations.

Read more here
Why *Web of Science*?

- Over 4,000 institutions in 91 countries
- Of the top 25 U.S. universities
  - 96% access *Web of Science*
  - 92% have the science, social science, and arts & humanities editions
  - 60% have backfiles to 1900
- Shanghai Jiao Tong University World Rankings
  - 100% of the top 100 Universities have *Web of Science*
- Times Higher Education Supplement World University Rankings
  - 99% of the top 100 Universities have *Web of Science*

Want to be Centre of Excellence?

Are you having access to world class resources?
**Web of Science is all you need!**

- Actively covers 11,332 journals, including 1,544 regional journals
- Over 46.1 million records
- Across 250 disciplines
- Over 727.5 million cited references from 1900-20010
- 65 million cited references captured every year (to articles in journals covered and not covered)

Wait no more! Visit [REAL FACTS](#) for Real Decisions
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*Track* citations of an article?

See the *influence* of research?

*Learn* the latest developments in a field?

*Identify* potential collaborators?

What are you waiting for?

Start your *Discovery* process now … with *Web of Science!*
Web of Science® is SELECTIVE…

• “Lack of complete coverage is not necessarily an argument against a citation index. It is in fact an argument in its favor.”

Garfield, E.
...yet COMPREHENSIVE

- "Multidisciplinary" coverage
  - enable to analyze the whole context of scientific research

- "Multiyear" coverage
  - enable to analyze the history and development of sciences

- "Cover to Cover" policy
  - enable to follow the flow of a topic regardless of communication type

- "ALL Authors, ALL Addresses"
  - enable to analyze by author name, by institution

- "ALL Cited References"
  - enable to perform analyses on literature that is not indexed

Web of Science® – new with Conference Proceedings

Control of Graphene's Properties by Reversible Hydrogenation: Evidence for Graphane

Abstract: Although graphene is known as one of the most chemically inert materials, we have found that graphene, a single atomic plane of highly conductive zero-gap semimetal, can be transformed into an insulator. Transmission electron microscopy reveals that the organic graphene derivative becomes markedly shorter than that of graphene. The reaction with hydrogen is reversible, so that the original metallic state can be restored. Our work illustrates the concept of graphene as a robust atomic-scale scaffold on the basis of which new two-dimensional materials can be designed.

Document Type: Article
Language: English
Keywords Plus: CARBON NANOTUBES, ATOMIC-HYDROGEN, GRAPHITE, STORAGE, SHEETS, MEMBRANES, OXIDE
Reprint Address: Novoselov, KS (reprint author), Univ Manchester, Sch Phys & Astron, Manchester M1 3BZ, Lancs England

Addresses:
1. Univ Manchester, Sch Phys & Astron, Manchester M1 3BZ, Lancs, England
2. Russian Acad Sci, Inst Microstruct Technol, Chernogolovka 142432, Russia
3. Univ Manchester, School of Materials, Manchester M13 9PL, Lancs, England
4. Univ Cambridge, Dep Eng, Cambridge CB3 0FA, England
5. Radboud Univ Nijmegen, Infor Mol Mat, NL-6525 ED Nijmegen, Netherlands

E-mail Addresses: kostya@manchester.ac.uk

Funding Agency

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<td>Office of Naval Research</td>
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<td>National Council for Scientific and Technological Development (Brazil)</td>
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Publisher: A K R S B O C A N V A N C E M E N T SCIENCE, 1200 NEW YORK AVE, NW, WASHINGTON, DC 20005 USA
Subject Category: Multidisciplinary Sciences
DOI: 10.1126/science.1197130

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Web of Science coverage

• More than 11,000 international and regional journals and book series
  – SCIExpanded
  – Social Sciences Citation Index
  – Arts & Humanities Citation Index

• Comprehensive does not necessarily mean all-inclusive
Web of Science Journal Selection Process: Why Be Selective?

- Small number of journals publish the bulk of significant scientific results (Bradford’s Law)
- 7,621 journals publish 814,967 articles that receive 20,834,641 citations
  - 300 journals publish 239,206 articles (30%)
  - 300 journals receive 10,681,596 citations (51%)
  - 3,000 journals publish 648,906 articles (80%)
  - 3,000 journals receive 19,287,265 citations (92%)
The Evaluation Process

• 2000 journals evaluated annually
  – 10 ~ 12 % accepted

• Existing journal coverage in WOS is constantly under review to ensure high standard and clear relevance

• Thomson Reuters editors: information professionals; librarians; experts in the literature of their subject area
OBJECTIVE

Publisher-neutral and rigorous contents selection policy is time-tested, OBJECTIVE way to find most reliable literature

Journal Selection Process

1. Basic Journal Publishing Standards
2. Editorial Content
3. International Diversity
4. Citation Analysis

http://isiwebofknowledge.com/benefits/essays/journalselection/
Web of Science Journal Selection Process

1. Basic Journal Standards
2. Editorial Content
3. International Diversity of Authorship
4. Citation Analysis
Basic Journal Standards

1.) Publishing Standards
   a.) Timeliness of publications
   b.) Editorial Conventions
   c.) English Language Bibliographic Information
   d.) Peer Review
Basic Journal Standards

a.) Timeliness of Publication

- A journal must be published according to its stated publication schedule to be considered for coverage in WOS
- Must receive three current issues in sequence
- E-Journals: held to the same standard
Basic Journal Standards

b.) International Editorial Conventions

- Informative *Journal* titles
- Fully descriptive *Article* titles and abstracts
- Complete bibliographic information for all cited references
- Full address information for every author
Basic Journal Standards

c.) **English Language Bibliographic Information**

- Article titles
- Author names and addresses
- Cited references in the Roman alphabet
- Abstracts and Keywords

Full text English is becoming the standard in the international research community – especially in the Natural Sciences
d.) **Peer Review**

Application of the peer review process is another indication of the journal’s standards and the overall quality of research presented and the completeness of cited references.

Funding source is also recommended whenever possible.
Web of Science Journal Selection Process

1. Basic Journal Standards
2. Editorial Content
3. International Diversity of Authorship
4. Citation Analysis
Editorial Content

- Core coverage in WOS is not static:
  - Will this journal enrich the database or is the subject already well covered?
  - Will this journal complement coverage in a specific category?
  - How does this journal compare with covered journals of similar editorial content?
Web of Science Journal Selection Process

1. Basic Journal Standards
2. Editorial Content
3. International Diversity of Authorship
4. Citation Analysis
International Diversity

• Do the contributing authors, journal’s editors, and editorial advisory board members represent the international research community?

• Does the journal reflect the global context of scholarly research?
International Diversity

For Example: **Infectious Diseases** category

**Journal level:** 8 countries represented  
*(JCR)*

**Article level:** 115 countries represented  
*(National Science Indicators)*
Regional Journals:

• Importance is measured in terms of content specificity:
  – Will it enrich coverage of a subject?
  – Will it provide specific regional perspective?

• Publish excellent research targeted at a regional rather than international audience

• Citation Impact may be low to moderate – but stable

• Regional journals meet all journal selection criteria
Web of Science Journal Selection Process

1. Basic Journal Standards
2. Editorial Content
3. International Diversity of Authorship
4. Citation Analysis
Citation Analysis

- Capture *all* cited references *to* every article in *covered* journals and *to* articles in journals *not covered*
- Expert use of citation data help identify *influential* and *useful* journals
- Using quantitative citation data to measure impact is useful only for journals of the same discipline
Citation Analysis

<table>
<thead>
<tr>
<th>Rank</th>
<th>Category</th>
<th>Total Cites</th>
<th>Median Impact Factor</th>
<th>Aggregate Impact Factor</th>
<th>Aggregate Immediacy Index</th>
<th>Aggregate Cited Half-Life</th>
<th># Journals</th>
<th>Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GENETICS &amp; HEREDITY</td>
<td>593960</td>
<td>2.626</td>
<td>4.459</td>
<td>0.840</td>
<td>5.6</td>
<td>124</td>
<td>14038</td>
</tr>
<tr>
<td>2</td>
<td>BIOTECHNOLOGY &amp; APPLIED MICROBIOLOGY</td>
<td>383432</td>
<td>1.634</td>
<td>2.795</td>
<td>0.455</td>
<td>5.4</td>
<td>139</td>
<td>16212</td>
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<tr>
<td>3</td>
<td>CRYSTALLOGRAPHY</td>
<td>105633</td>
<td>1.270</td>
<td>1.270</td>
<td>0.326</td>
<td>8.3</td>
<td>24</td>
<td>7783</td>
</tr>
</tbody>
</table>

- Citation pattern varies in different categories
  - Genetics & Heredity, Biotech & Appl Microbiol:
    - Many citations, many articles
  - Crystallography
    - Fewer citations, fewer articles
  - Arts & Humanities
    - Slow citation growth
  - Life Sciences
    - Rapid citation growth
Citation Analysis

Citation analyses takes place in two levels:

• Citations to the journal (Impact Factor and/or total citations received)

• Citations record of the contributing authors and editorial board members – for evaluating new journals where citation history does not exist yet
When re-evaluating established journals not covered, citation impact is important to reflect changes resulting from:

- Translation into English
- Change in Editorial focus
- Change in Publisher or medium, etc

**Impact Factor:**

…the average number of times recent articles in a journal were cited in a particular year
The impact factor is a measure of the average number of citations received in a particular year by papers published in the two preceding years. It is calculated as follows:

\[
\text{Impact Factor (2008)} = \frac{\text{Cites in 2008 to 2006 and 2007 papers}}{\text{Papers published in 2006 and 2007}}
\]

The average number of citations in 2008 to scholarly material that was published in the prior two years.
Impact Factor Calculation

Journal: Emerging Infectious Diseases

Impact Factor: 6.449

Cites in 2008 to articles published in:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cites</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1878</td>
</tr>
<tr>
<td>2006</td>
<td>2527</td>
</tr>
<tr>
<td>06 + 07</td>
<td>4405</td>
</tr>
</tbody>
</table>

Number of articles published in:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>345</td>
</tr>
<tr>
<td>2006</td>
<td>338</td>
</tr>
<tr>
<td>06 + 07</td>
<td>683</td>
</tr>
</tbody>
</table>

Calculation:

\[
\frac{\text{Cites to recent articles}}{\text{Number of recent articles}} = \frac{4405}{683} = 6.449
\]
Citation Analysis

Properly used Impact Factor can tell us something about a journal as a whole namely the extent to which its recently published papers were cited in a given year.

It tells us nothing concrete about any specific paper or specific author. Most articles in most fields are not well cited. Less than 25% of all articles receive 5 or more citations and many articles are never cited.
Citation Analysis

New Journals – citations to the work of contributing authors and editorial board members

Has the past work of authors and editorial advisory board members received citations?
Citation Analysis

Self Citations:

- 80% of all journals listed in the *JCR Science Edition* have self-citation rates of less than or equal to 20%
- Excessive self-citation weakens the integrity of the journal’s Impact Factor
- Journals with excessive self-citation may be de-selected from *Web of Science* until the problem is corrected
Journals for Social Sciences

• Journal selection process are same as natural sciences
  – Publishing standards
  – Editorial content
  – International diversity
  – Citation data

• However, citation rates are generally lower

• Regional studies are often important subject of scholarly research in Social Sciences
Journals in Arts & Humanities

• Publishing standards, including timeliness, are important factor in evaluating A&H journals

• A&H journal articles always reference to non-journal sources (books, musical compositions, etc)

• English language text in not a requirement in some areas of A&H scholarship, for example, research in regional literature
Electronic Journals

• Similar Journal Selection Criteria are applied to electronic journals
  – Publishing standards
  – Editorial content
  – International diversity
  – Citation analysis
Format of Electronic Journals

• It is extremely important follow a set of guidelines to insure correct citation of articles and reduce possibility of citation ambiguity:
  – Journal title
  – Year of publication
  – Volume and Issue (if applicable)
  – Article title
  – Page number or article number
  – Authors’ name and addresses
  – Labels all article identifiers, such as DOIs
  – A complete Table of Contents
How to Recommend Journals or Submit a Journal for Evaluation

• To recommend a journal for coverage in WOS
  http://science.thomsonreuters.com/info/journalrec/

• To submit a journal for evaluation in WOS
  http://science.thomsonreuters.com/info/journalsubmission/
Where should I submit my publication?

Application Training Module Series III
by Customer Education Team

ts.training.asia@thomson.com

Stop Searching, Start Discovering

THOMSON REUTERS
When to use *Journal Citation Reports*?
If you are …

**Teaching a course, you can:**

• Help your students learn how to search and analyze the right journal to submit

• Discover disciplinary connections and publication trends

**Writing a paper, you can:**

• Decide where to publish and why

• Publish in high quality, influential journal to maximize scholarly contributions

**Researching, you can:**

• Decide which journals to read first

• Examine citation patterns to quickly identify current research directions
Some factors to consider before article submission …

- Journal Impact Factor
- Immediacy Index
- Cited Half Life
- 5 Year Journal Impact Factor
The journal Impact Factor is the average number of times articles from the journal published in the past two years have been cited in the JCR year.

\[
\text{Impact Factor (2008)} = \frac{\text{Cites in 2008 to 2006 and 2007 papers}}{\text{Papers published in 2006 and 2007}}
\]

In simpler terms, it means …
- An Impact Factor of 1.0 means that, on average, the articles published one or two year ago have been cited one time.
- An Impact Factor of 2.5 means that, on average, the articles published one or two year ago have been cited two and a half times.
Why publish in high Impact Factor journal?

• Higher citations rate means your article has higher chances of getting cited

• Higher reading rate means your article get read by more researchers

• More recognition in terms of scholarly contribution
Journal Immediacy Index

• The **Journal Immediacy Index** indicates how quickly articles in a journal are cited.

• The Immediacy Index is calculated by dividing the number of citations to articles published in a given year by the number of articles published in that year.

\[
\text{Immediacy Index} = \frac{\text{no. of citations (in current year)}}{\text{no. of articles (in current year)}}
\]

• In simpler terms, we can say …
  – An Immediacy Index of 1.0 means that, *on average*, the articles in the journal have been cited one time within the same year.
When to use Immediacy Index?

- If you want your research to reach out to readers as quickly as possible
- For comparing journals specializing in cutting-edge research, the Immediacy Index can provide a useful perspective
Journal Cited Half Life

- Helps evaluate the *average age* range of articles cited from the journal

**Applications**

You use the Journal Cited Half Life to see if articles from a journal that were published a long time ago are still being cited. This shows you if the journal has a good track record and was producing good articles in the past.
5 Year Journal Impact Factor

• The traditional Journal Impact Factor is based on two years of cited journal content – cites in the current year to journal material published in the prior two years.

• The 5-Year Impact Factor is based on cites in the current year to journal material published in the prior five years.
5 Year Impact Factor is suitable for …

• Journals where body of citations may not be large enough to make reasonable comparisons

• Publication schedules may be consistently late

• Journals that may take longer than two years to disseminate and respond to published works
If you want your article to …

• Publish in most influential or highly cited journal
  → Use Impact Factor or
  → 5 Year Impact Factor (for subjects need longer citation period, e.g. GEOLOGY or MANAGEMENT or SOCIOLOGY, etc)

• To reach out to readers and be read immediately
  → Use Immediacy Index

• Stay active in journal collection
  → Use Cited Half Life

*Note: The above only serves as general guidelines, deeper understanding of JCR, the subjects and dynamic publication cycles are crucial when deciding where to publish your paper.*
Sort your metrics according to your needs

You can sort your metrics according to Impact Factor, Immediacy Index, etc.
Start analyzing the metrics and decide where to submit your article

**Journal Citation Reports**

**Journal Summary List**

Journals from: **subject categories MANAGEMENT**

Sorted by: Impact Factor

Journals 1 - 20 (of 81)

Use the metrics to decide which journal is best for submission

5 year Impact Factor is consistently higher than Impact Factor for MANAGEMENT
Start to retrieve the metrics to help you decide!

<table>
<thead>
<tr>
<th>Mark</th>
<th>Rank</th>
<th>Abbreviated Journal Title (linked to journal information)</th>
<th>ISSN</th>
<th>Total Cites</th>
<th>Impact Factor</th>
<th>5-Year Impact Factor</th>
<th>Immediacy Index</th>
<th>Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>NAT REV MOL CELL BIO</td>
<td>1471-0072</td>
<td>16584</td>
<td>31.921</td>
<td>32.422</td>
<td>6.205</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>CELL</td>
<td>0092-8674</td>
<td>136514</td>
<td>29.887</td>
<td>28.779</td>
<td>6.402</td>
<td>366</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>NAT MED</td>
<td>1078-8956</td>
<td>45986</td>
<td>26.382</td>
<td>29.567</td>
<td>6.342</td>
<td>149</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>ANNU REV CELL DEV BI</td>
<td>1081-0706</td>
<td>7867</td>
<td>23.545</td>
<td>25.642</td>
<td>1.320</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>NAT CELL BIOL</td>
<td>1465-7392</td>
<td>20639</td>
<td>17.449</td>
<td>17.061</td>
<td>4.347</td>
<td>147</td>
</tr>
</tbody>
</table>

Note: The top 5 journals sort according to Impact Factor are not the same as top 5 sort according to Immediacy Index.
Final notes to remember …

- Impact Factor, Immediacy Index, etc, are meant to evaluate the world's leading journals.
- Never compare Impact Factor or other metrics across different disciplines, such as:
  - Biophysics vs. Mathematics
  - Biomedical Engineering vs. Civil Engineering
  - Etc

Why?

→ Because different disciplines have different citation patterns!
Don’t be surprised …

• A lot journals in the world do not have an Impact Factor …

  Why?

  → Because only journals indexed in Web of Science may have Impact Factor

• If you want
  – To publish in high Impact Factor journals …
  – To know the Impact Factor of a journal …

Use Journal Citation Reports today! The only source to get you Impact Factor and more …

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STOP SEARCHING, START DISCOVERING

THOMSON REUTERS
Reasons for promoting scholarly output

Scientist needs a good scholarly CV to promote his publications for purpose of:

- Research evaluation (annually)
- Career advancement and tenure
- Collaboration opportunity
- Funding opportunity
- Knowledge sharing
- Quantify scholarly impact
What ResearcherID can do for you?

With ResearcherID, you can:

- Solve author names misidentification
- Promote your research publications
- Build collaboration opportunities and be identified
What is ResearcherID?
www.researcherid.com

- Online registry for creating a unique ResearcherID number
- Build a publication list identifying only your work
- Manage personal profile with flexibility and minimum maintenance
- Generate accurate personal citation metrics to promote scholarly contributions:
  - H-index
  - Citation distribution per year
  - Total Times Cited count
  - Average Times Cited
How to get a ResearcherID account?

For ISI Web of Knowledge users:
How to get a ResearcherID account?

For all other users:
Personal profile with minimum maintenance

Know what you share: Preview before sharing
Make personal profile “public or private” is just few clicks – flexibility in what to share

Only share information that are comfortable to show
Build your publication list accurately – No more author misidentification!
Three easy ways to add publications

Option 1: Publications indexed in *ISI WOK*

Option 2: Publications saved in *ENW*

Option 3: Publications saved in *EN* or *RefMan*
Add publications from *Web of Science* in 3 simple steps

1. Search
2. Select
3. Add
Add publications from *EndNote Web* is equally stress free

1. Search
2. Select
3. Add
Add every publication once and the Times Cited will be updated automatically.

No more worries about outdated Times Cited counts.
Build a CV that is alive (Times Cited which updates automatically and instantly)

• Times Cited is used heavily for research evaluation exercise every year

• As academic CV is not complete without Times Cited, scientists spend tremendous time to update their Times Cited information

• With ResearcherID, the Times Cited information
  – Will be updated automatically
  – Synchronize times cited information from reliable source – Web of Science

→ Users can check most updated Times Cited Information at anytime, anywhere
Create an accurate Citation Metrics – Understand your performance progress!

This graph shows the number of times the articles on the publication list have been cited in each of the last 20 years. Note: Only articles from ISI Web of Knowledge with citation data are included in the calculations. More information about these data.

Citation Distribution by year

Total Articles in Publication List: 30
Articles With Citation Data: 17
Sum of the Times Cited: 126
Average Citations per Article: 7.41
h-index: 6
Last Updated: 04/18/2010 17:44 GMT
ResearcherID Labs: Appreciate your network – Expanding your collaborations
Repeated information upload for multiple sites? Try ResearcherID Badge for better experience
ResearcherID Badge: No more multiple sites maintenance

- Users are able to embed a ResearcherID image, or badge, onto their university website or blog
- There are currently thousands of badges living on the webpage of individuals
- Examples for individual include
  http://web.ics.purdue.edu/~huberm/
  http://www.di.uniba.it/~mencar/
- Examples for entire lab group pages
  http://dsm.fujita-hu.ac.jp/Members/index.html
  http://www.pssrc.org/index.php?id=cluster_members
Why Collaboration Network?

Understand and appreciate:

• Who are key collaborators?

• Major focus of study or research strength

• Network distributions

• Top collaboration institutes
Why Citing Articles Network?

It allows user to appreciate and understand:

- Who cited your articles?
- How many research fields have your findings influenced or impacted?
- What countries or territories has recognized your research?
- Which institutions are interested in your research?
- Which region most interested in your work?
- Which year has received the maximum citations?
- Do your researches continue to arouse interest globally?
- Most of your citations fall on recent years or previous years?
Citing Articles Network

The map graph below displays (up to) the top 500 geographic locations for publications that have cited this researcher’s information. This map represents the researcher’s citation network.

Logan, UT, USA.
Utah State Univ.
Molecular Cytogenetics and Gene Mapping in Sheep (Ovis aries, 2n = 54)
Di Meo, GP; Luhken, G; Drogemuller, C; et al.
CYTOGENETIC AND GENOME RESEARCH 126 (1-2): 63-76 2009
Powered By Web of Science
Want to share such a great tool with your peers? Invite them now and it is simple!

Click here to invite colleagues or co-authors
Two-steps easy way to invite your peers!

Step 1: You can send invitation to any email address, upload a file of email addresses or Co-Author email addresses.
Step 2: Type in the email addresses

Add a message before you send (optional)

Send the emails!
If you have author ambiguity problem ...
If you want to promote your publications ...
If you want to identify your network for expanding collaborations ...
If you are tired of checking times cited information annually ...
Why wait? Get yourself a free ResearcherID account today and invite your peers!
ISI Web of Knowledge™ – An Integrated Research Platform

- Uncover hidden relations among articles
- Discover trends & patterns
- Identify hot topics
- Provide citation reports
- Reference management
- Search strategy management
- Alerting services
- Full-text link
- Cite while you write in Microsoft Word
- Automatic formatting in-text citations and bibliographies
- Over 2,300 journal publishing styles

ISI Web of Knowledge

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- Essential Science Indicators
- ScholarOne-Manuscript Central
- ResearcherID.com
- EndNoteWeb
- Web of Science Hosted Contents Link

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**ISI Web of Knowledge** covers:

- 22,000+ journals, 23 million patents, 12,000 conference proceedings, 5,500 Web sites, 5,000 books, 2 million chemical structures, and scholarly Web content

**ISI Web of Knowledge** features:

- Over 110 years of backfiles via the *Century of Science and Century of Social Science*

**ISI Web of Knowledge** maintains:

- In-depth coverage from over 250 scientific disciplines
Thank You!
Need help? Contact us

For more recorded training sessions, please visit
http://science.thomsonreuters.com/training

For technical help, please direct to

<table>
<thead>
<tr>
<th>If you are from:</th>
<th>Please write to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td><a href="mailto:ts.support.jp@thomsonreuters.com">ts.support.jp@thomsonreuters.com</a></td>
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<tr>
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<tr>
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</tr>
<tr>
<td>SEA, HK, Taiwan, India)</td>
<td></td>
</tr>
</tbody>
</table>