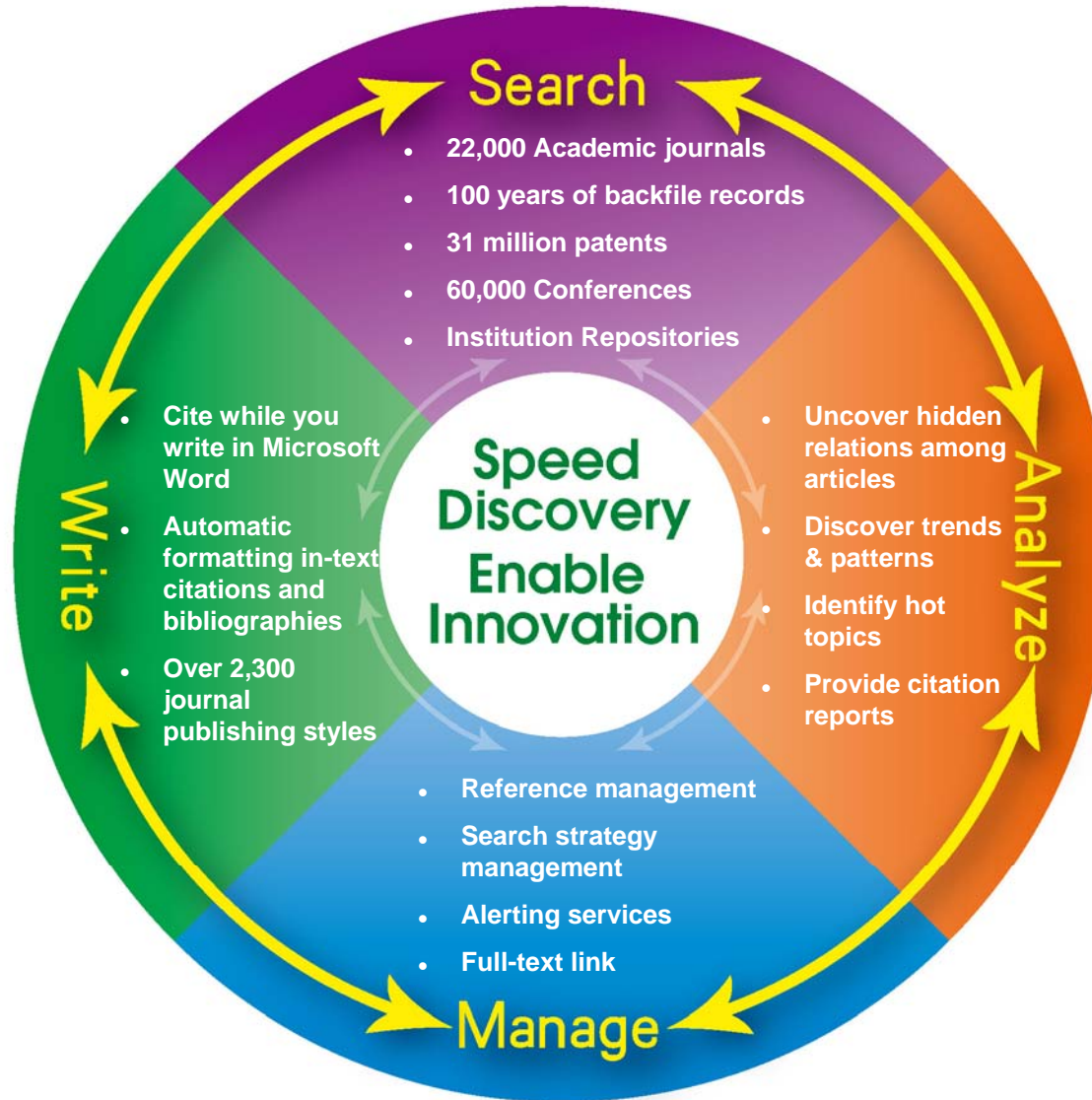




# Journal Selection Process for Web of Science

**Fung Siew Tyng**  
Director  
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Thomson Scientific-Asia Pac  
Singapore

# ISI Web of Knowledge: an integrated research platform



## *ISI Web of Knowledge: Content*

- 22000+ **unique journals**
- 100 years of journal records
- 60000+ **conferences** from 1990 to the present
- 15 million **patents**

# Web of Science

- **SCIExpanded**
- **Social Sciences Citation Index**
- **Arts & Humanities Citation Index**
- *Index Chemicus*
- *Current Chemical Reactions*

## Web of Science Journal Selection Process

- Citation analysis
  - Impact Factor
  - Self Citation Rate
- Regional Journals
- Science Citation Index Expanded
- Social Sciences Citation Index
- Arts & Humanities Citation Index

## Web of Science Journal Selection Process

- Small number of journals publish the bulk of significant scientific results.
  - 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%)
- 2000 journals evaluated annually
  - 10% accepted
- Thomson editors: information professionals; librarians; experts in the literature of their subject area.

## Web of Science Journal Selection Process

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

# Basic Journal Publishing Standards

- 1.) Publishing Standards
  - a.) Timeliness
  - b.) Editorial Conventions
  - c.) English Language Bibliographic Information
  - d.) Peer Review



## Basic Journal Publishing 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 on-time issues in sequence.
  - E-Journals: held to the same standard.

## Basic Journal Publishing Standards

### b.) International Editorial Conventions

- Informative Journal Titles
  - Descriptive Article Titles
- Full Address Information for Every Author
- Complete Bibliographic Information for All Cited References

## Basic Journal Publishing 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.***

# Basic Journal Publishing Standards

## d. Peer Review

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

## Web of Science Journal Selection Process

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

## Editorial Content

- 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 Publishing Standards
2. Editorial Content
3. **International Diversity**
4. Citation Analysis

## International Diversity

- Do the authors, editors, and editorial advisory board members represent the international research community?
- Does this journal reflect the global context of scholarly research?



## International Diversity

### Infectious Diseases category

Journal level: 8 countries represented  
(JCR)

Article level: 115 countries represented  
(National Science Indicators)

## International Diversity

### **Regional Journals:**

- Typically published outside North America or Western Europe.
- Publish excellent research targeted at a regional rather than international audience.
- Citation Impact may be low to moderate – but stable.
- Regional journals meet all selection criteria.

## Web of Science Journal Selection Process

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

## Citation Analysis

- Capture all cited references to articles in covered journals and to articles in journals not covered.
- Expert use of citation data help identify influential and useful publications.

Measure use by analyzing citation data.

# Citation Analysis

Rank	Category <i>(linked to category information)</i>	Total Cites	Median Impact Factor	Aggregate Impact Factor	Aggregate Immediacy Index	Aggregate Cited Half-Life	# Journals	Articles
1	<a href="#">GENETICS &amp; HEREDITY</a>	593960	2.626	4.459	0.840	5.6	124	14038
2	<a href="#">BIOTECHNOLOGY &amp; APPLIED MICROBIOLOGY</a>	383432	1.634	2.795	0.455	5.4	139	16212
3	<a href="#">CRYSTALLOGRAPHY</a>	105633	1.270	1.270	0.326	8.3	24	7783

- Citation Characteristic of 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

- Citations to the journal itself (Impact Factor)
- Citations to the contributing authors and editorial board members.

# Citation Analysis

- ***Established Journals***

Impact Factor:

*...the average number of times recent articles in a journal were cited in a particular year.*

## Top 20 Biomedical Journals by Number of Articles Published in 2005

Abbreviated Journal Title <i>(linked to journal information)</i>	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life
<a href="#">J BIOL CHEM</a>	0021-9258	404397	5.854	1.265	5050	6.2
<a href="#">BIOCHEM BIOPH RES CO</a>	0006-291X	66630	3.000	0.448	2356	6.4
<a href="#">J GEOPHYS RES</a>	0148-0227	102065	2.784	0.630	1981	8.6
<a href="#">J IMMUNOL</a>	0022-1767	112686	6.387	0.906	1916	5.8
<a href="#">BIOCHEMISTRY-US</a>	0006-2960	95172	3.848	0.777	1723	8.3
<a href="#">GEOPHYS RES LETT</a>	0094-8276	30488	2.491	0.506	1604	5.6
<a href="#">J VIROL</a>	0022-538X	76925	5.178	1.059	1599	6.1
<a href="#">J AGR FOOD CHEM</a>	0021-8561	32470	2.507	0.278	1521	5.9
<a href="#">CANCER RES</a>	0008-5472	108146	7.616	1.001	1460	6.2
<a href="#">TRANSPLANT P</a>	0041-1345	9464	0.799	0.070	1378	6.8
<a href="#">NUCLEIC ACIDS RES</a>	0305-1048	71112	7.552	1.391	1336	6.7
<a href="#">J NEUROSCI</a>	0270-6474	96732	7.506	1.254	1232	5.8
<a href="#">BLOOD</a>	0006-4971	105074	10.131	2.251	1229	5.2
<a href="#">APPL ENVIRON MICROB</a>	0099-2240	51664	3.818	0.464	1191	7.2
<a href="#">J CHROMATOGR A</a>	0021-9673	42441	3.096	0.411	1174	6.9
<a href="#">J CLIN MICROBIOL</a>	0095-1137	38704	3.537	0.498	1101	6.1
<a href="#">FEBS LETT</a>	0014-5793	53316	3.415	0.678	1096	7.3
<a href="#">CLIN CANCER RES</a>	1078-0432	28894	5.715	0.846	1082	3.8
<a href="#">BIOORG MED CHEM LETT</a>	0960-894X	14580	2.478	0.573	1076	3.8
<a href="#">INFECT IMMUN</a>	0019-9567	45582	3.933	0.648	1023	6.7

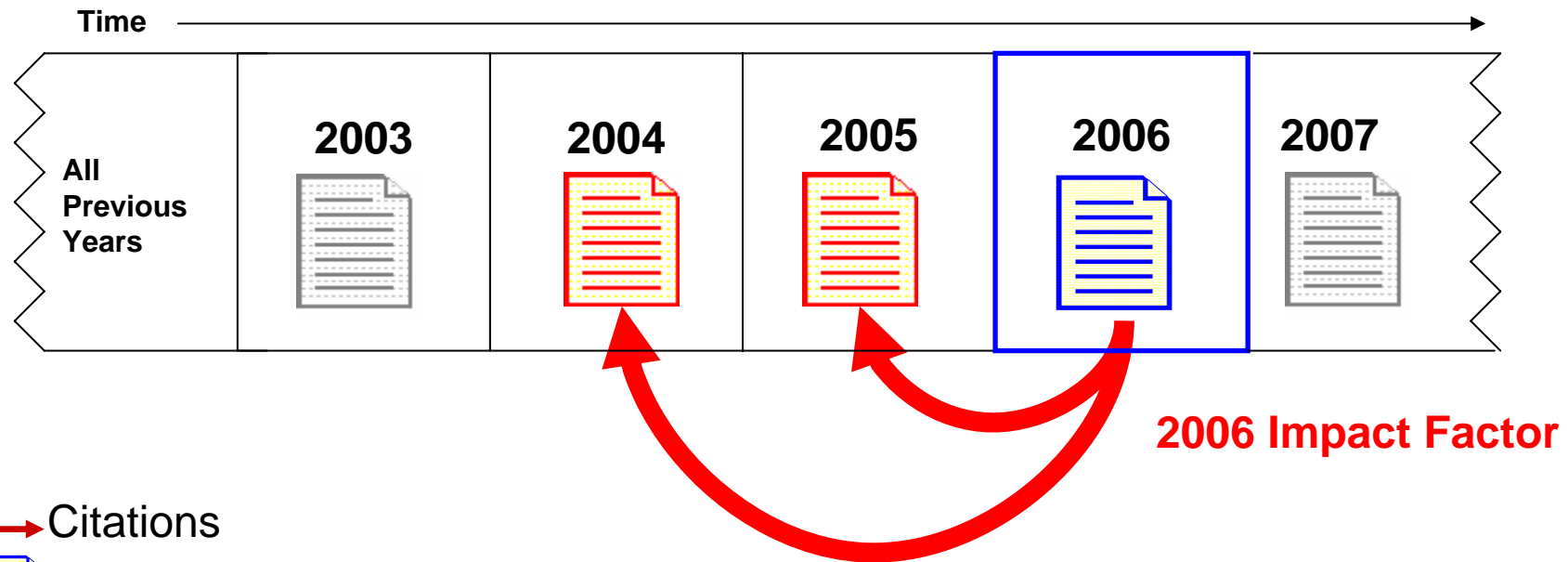


## Top 20 Biomedical Journals by Total Citations Rec'd 2005


Abbreviated Journal Title <i>(linked to journal information)</i>	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles
<a href="#">J BIOL CHEM</a>	0021-9258	404397	5.854	1.265	5050
<a href="#">NEW ENGL J MED</a>	0028-4793	167894	44.016	13.422	308
<a href="#">CELL</a>	0092-8674	132371	29.431	6.238	319
<a href="#">LANCET</a>	0140-6736	131616	23.878	7.347	360
<a href="#">CIRCULATION</a>	0009-7322	120204	11.632	1.641	980
<a href="#">J IMMUNOL</a>	0022-1767	112686	6.387	0.906	1916
<a href="#">CANCER RES</a>	0008-5472	108146	7.616	1.001	1460
<a href="#">BLOOD</a>	0006-4971	105074	10.131	2.251	1229
<a href="#">J GEOPHYS RES</a>	0148-0227	102065	2.784	0.630	1981
<a href="#">J NEUROSCI</a>	0270-6474	96732	7.506	1.254	1232
<a href="#">JAMA-J AM MED ASSOC</a>	0098-7484	95715	23.494	5.082	380
<a href="#">BIOCHEMISTRY-US</a>	0006-2960	95172	3.848	0.777	1723
<a href="#">J CLIN INVEST</a>	0021-9738	78425	15.053	2.887	345
<a href="#">EMBO J</a>	0261-4189	77132	10.053	2.198	394
<a href="#">J VIROL</a>	0022-538X	76925	5.178	1.059	1599
<a href="#">NUCLEIC ACIDS RES</a>	0305-1048	71112	7.552	1.391	1336
<a href="#">MOL CELL BIOL</a>	0270-7306	68516	7.093	1.181	950
<a href="#">J CELL BIOL</a>	0021-9525	67749	10.951	1.898	381
<a href="#">BIOCHEM BIOPH RES CO</a>	0006-291X	66630	3.000	0.448	2356
<a href="#">J EXP MED</a>	0022-1007	64170	13.965	2.695	354

## Top 20 Biomedical Journals by 2005 Impact Factor

Abbreviated Journal Title <i>(linked to journal information)</i>	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles
<a href="#">CA-CANCER J CLIN</a>	0007-9235	4218	49.794	21.300	20
<a href="#">ANNU REV IMMUNOL</a>	0732-0582	14745	47.400	10.828	29
<a href="#">NEW ENGL J MED</a>	0028-4793	167894	44.016	13.422	308
<a href="#">ANNU REV BIOCHEM</a>	0066-4154	16313	33.456	4.857	28
<a href="#">NAT REV CANCER</a>	1474-175X	9823	31.694	3.935	77
<a href="#">NAT REV IMMUNOL</a>	1474-1733	8686	30.458	3.792	72
<a href="#">NAT REV MOL CELL BIO</a>	1471-0072	11438	29.852	6.225	80
<a href="#">CELL</a>	0092-8674	132371	29.431	6.238	319
<a href="#">NAT MED</a>	1078-8956	40386	28.878	6.600	155
<a href="#">PHYSIOL REV</a>	0031-9333	14943	28.721	4.788	33
<a href="#">NAT IMMUNOL</a>	1529-2908	16989	27.011	5.362	130
<a href="#">NAT GENET</a>	1061-4036	52387	25.797	5.921	190
<a href="#">ANNU REV NEUROSCI</a>	0147-006X	8563	24.184	2.263	19
<a href="#">LANCET</a>	0140-6736	131616	23.878	7.347	360
<a href="#">ANNU REV CELL DEV BI</a>	1081-0706	7097	23.690	0.857	28
<a href="#">JAMA-J AM MED ASSOC</a>	0098-7484	95715	23.494	5.082	380
<a href="#">NAT BIOTECHNOL</a>	1087-0156	20914	22.738	5.210	124
<a href="#">ENDOCR REV</a>	0163-769X	10851	22.538	3.275	40
<a href="#">NAT REV NEUROSCI</a>	1471-0048	8447	20.951	3.293	75
<a href="#">ANNU REV PHARMACOL</a>	0362-1642	5994	19.833	5.793	29



→ Citations

 Source paper – published in 2006

 Cited reference – published in 2004 or 2005

$$\text{Impact Factor} = \frac{\text{Cites in 2006 to 2004 or 2005 papers}}{\text{Papers published in 2004 or 2005}}$$

The average number of citations in 2006 to scholarly material that was published in the prior two years

# Citation Analysis

## Some characteristics of citable items:

- Descriptive title
- One or more named authors with address
- An abstract
- Length
- Data tables or figures
- Cited references

## 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

## Emerging Infectious Diseases

**2005 Impact factor: 5.308**

## Journal Citation Reports (JCR) -- 2005 Science Edition

### Impact Factor Calculation

Journal: **Emerging Infectious Diseases**

Impact Factor: **5.308**

Cites in 2005 to articles published in :

2004 = **1556**

2003 = **1921**

04 + 03 = **3477**

Number of articles published in:

2004 = **374**

2003 = **281**

04 + 03 = **655**

Calculation:

Cites to recent articles  $\frac{3477}{655} = 5.308$

Number of recent articles

## Citation Analysis

- ***New Journals – citations to the work of authors and editorial board members.***

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



# Citation Analysis

## Self Citations:

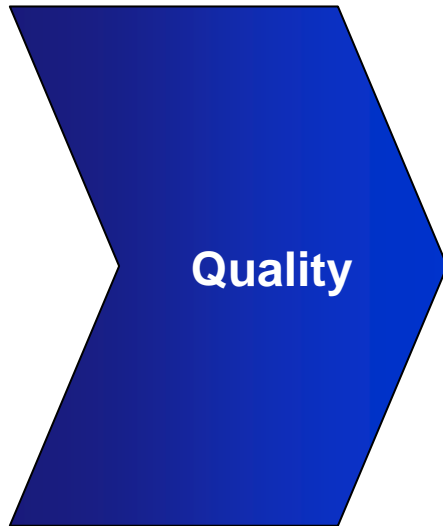
- 80% of all journals listed in the JCR Science Edition have self-citation rates of less than 20%.
- Excessive self-citation weakens the integrity of the journal's Impact Factor.
- Journals with excessive self-citation may be deleted from the Journal Citation Reports until the problem is corrected.

## Web of Science Journal Selection Process

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

# *Web of Science*

## Web of Science



### **Quality:** Evaluated, *Selected* Content

- Our selection criteria is unbiased, impartial, time-tested.
  - We are “Publisher-Neutral”, evaluating research, Commercial, Society, Open Access publications, etc.
  - 9,600+ titles total
    - Sciences – 6563 titles
    - Social sciences – 1926 titles
    - Arts & Humanities – 1151 titles

## Web of Science



### **Diversity:** Truly Multidisciplinary

- All fields of research are included
  - Over 230 categories

## Web of Science



### **Depth!** -- A vast archive of important research

- to 1900 in the Sciences
- to 1956 in the Social Sciences
- to 1975 in Arts & Humanities

## Web of Science



**Data:** *unique capabilities*

- The combination of Quality, Diversity, and Depth, along with the capture of Author Cited References for over 100 years of data provides for ***unique features of searching and navigation -- driving discovery.***

# References



## CONCLUSIONS

1. The results of this research suggested that reducing mineral nutrient concentration in MS medium to half the normal value increased the rooting percentage of PR 204/84 shoots when IBA concentration was 2.5  $\mu\text{M}$ , and the mean root number when IBA concentrations were 2.5 and 5  $\mu\text{M}$ . Root elongation was stimulated at all IBA levels on both full and half strength media, however means were not significantly different.
2. After 12 days of culture in a dark room followed by 12 days in standard conditions, rooting percentage of shoots increased in comparison to the control (24 days in standard growth room conditions) at IBA concentrations 1 and 2.5  $\mu\text{M}$ . However, further experiments should be conducted adopting shorter dark treatments in order to avoid problems of shoot chlorosis and excessive shoot elongation. The differences in rooting percentage of shoots between the two experiments could be attributed to the different experimental periods.

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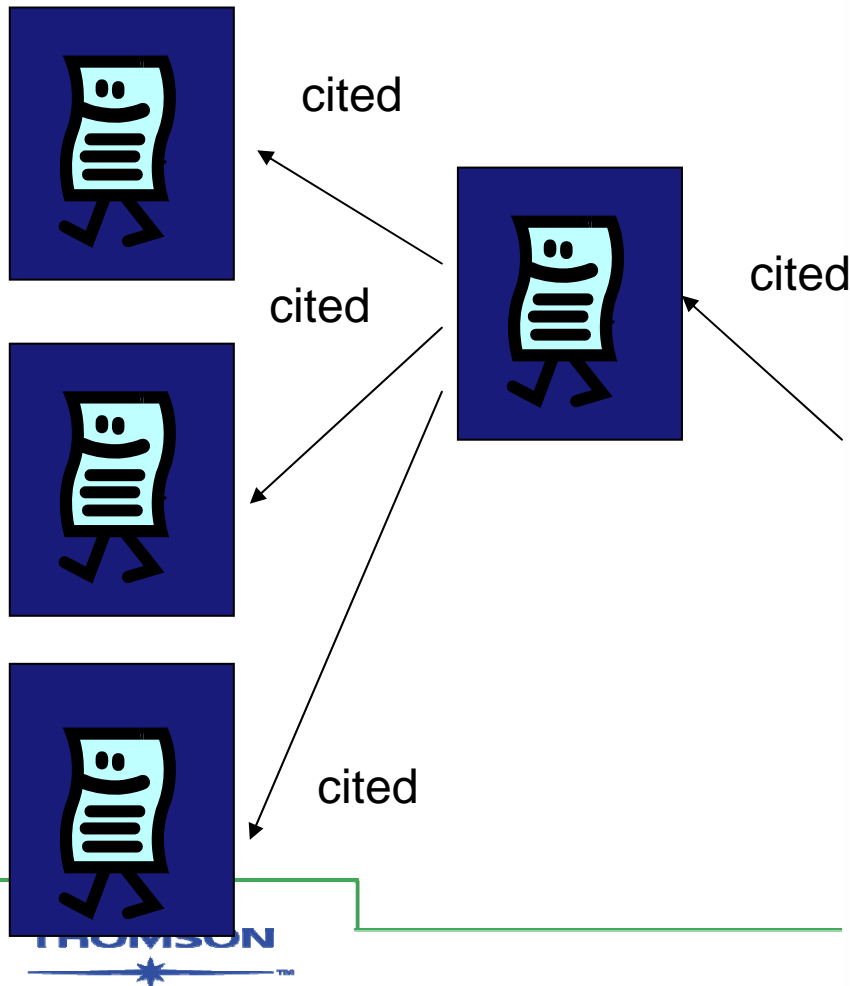
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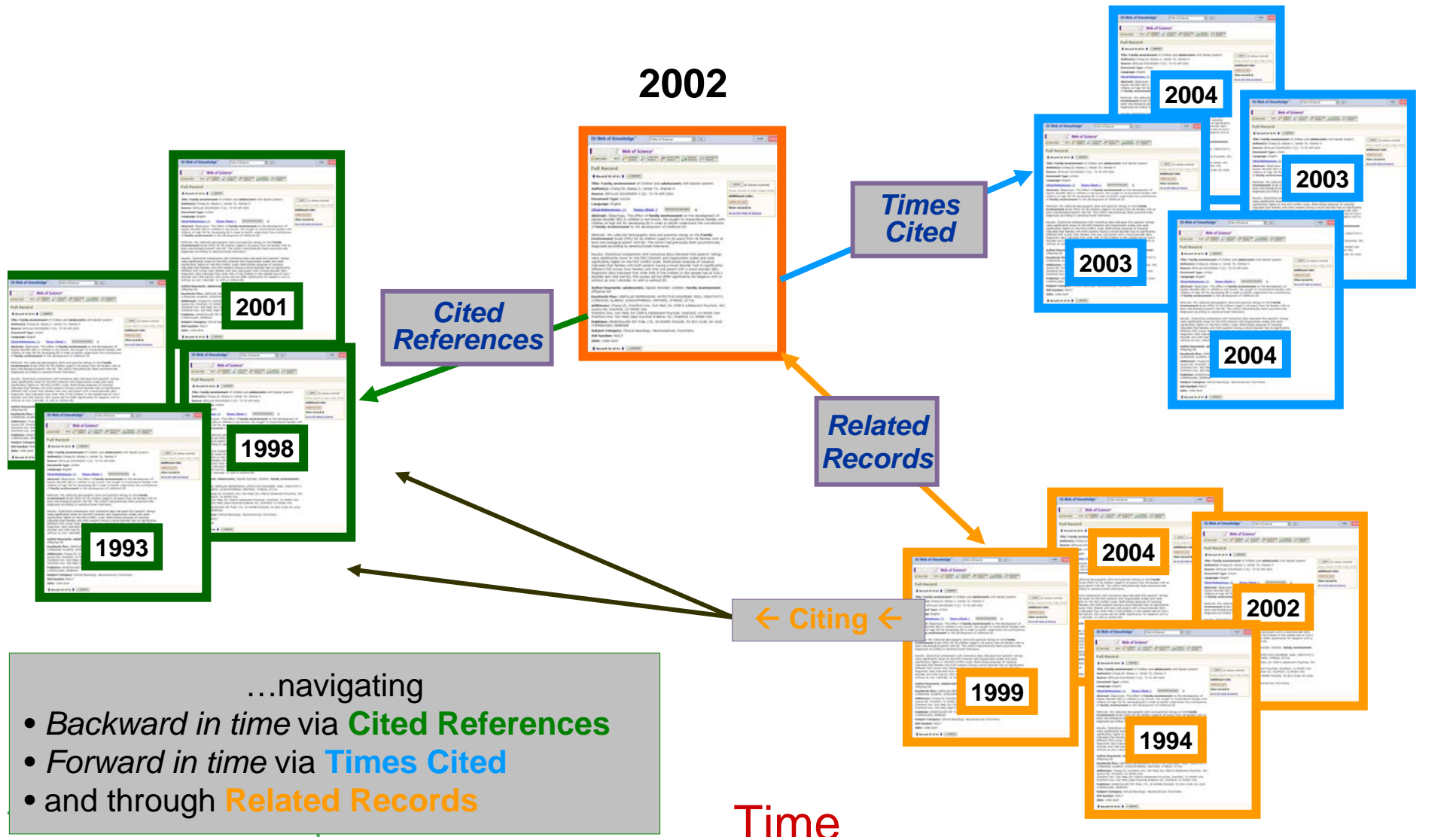
George, E. F. 1996. *Plant propagation by tissue culture: in practice, Part II. 2<sup>nd</sup> edition*. Exegetics Limited Press, London.

Hammerschlag, F., Bauchan, G. & Scorza, R. 1987. Factors influencing *in vitro* multiplication and rooting of peach cuttings. *Plant Cell, Tissue Organ. Cult.* **8**, 225–232.







# 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**

## Full Record

Record 1 of 29,237 (Set #2)  

**Title:** PREVALENCE OF HUMAN PAPILLOMAVIRUS IN CERVICAL-CANCER - A WO

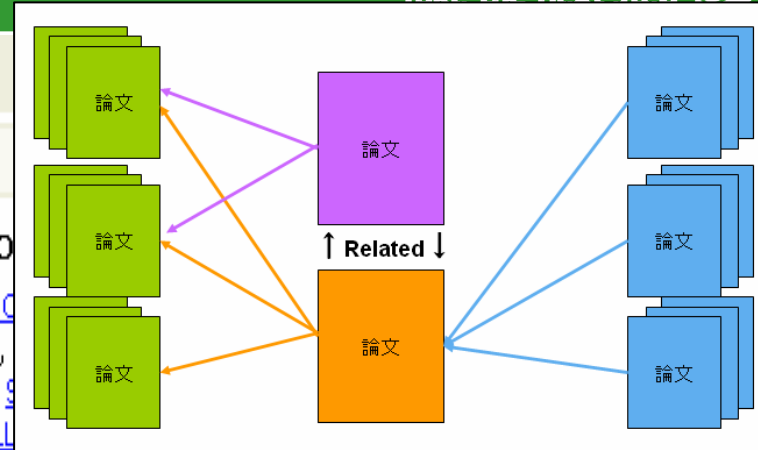
**Author(s):** [BOSCH FX](#), [MANOS MM](#), [MUNOZ N](#), [SHERMAN M](#), [JANSEN AM](#), [PETO J](#), [SC](#)  
[KURMAN R](#), [SHAH KV](#), [ALIHONOU E](#), [BAYO S](#), [MOKHTAR HC](#), [CHICAREON S](#), [DAUDT A](#),  
[KITINYA JN](#), [KOULIBALY M](#), [NGELANGEL C](#), [TINTORE LMP](#), [RIOSDALENZ JL](#), [SARJADI](#), [S](#)  
[TEYSSIE AR](#), [ROLON PA](#), [TORROELLA M](#), [TAPIA AV](#), [WABINGA HR](#), [ZATONSKI W](#), [SYLL](#)  
[D](#), [KALDOR J](#), [GREER C](#), [WHEELER C](#)

**Source:** JOURNAL OF THE NATIONAL CANCER INSTITUTE 87 (11): 796-802 JUN 7 1995

**Document Type:** Article

**Language:** English

[Cited References: 30](#) [Times Cited: 1340](#)  



Find Related Records: Retrieve articles which cited the same references

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

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

### Create Citation Alert



Receive e-mail alerts on future citations to this record. (Requires registration.)





Holdings  

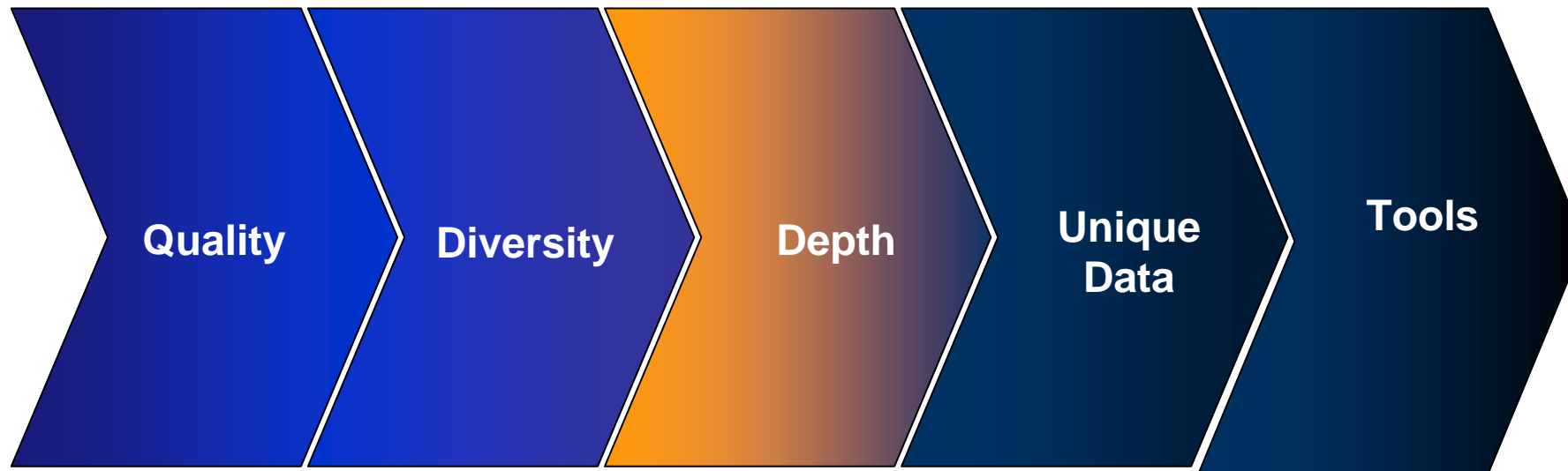
### View record in

[Essential Science Indicators](#)  
[Journal Citation Reports](#)

**Abstract** Background: Epidemiologic studies have shown that the association of genital human papillomavirus (HPV) with cervical cancer is strong, independent of other factors, and consistent in several countries. The associated HPV type varies by geographic region, but little is known about their geographic distribution and whether they are associated with different histologic types. We collected and analyzed sequential histologic review slides from a population-based histologic review of cervical cancer. A logistic regression model was fitted to the data on viral type and geographic region to assess geographic heterogeneity. Results: HPV DNA was detected in 93% of the tumors, with no significant variation in HPV positivity among countries, HPV 16 was present in 50% of the specimens, HPV 18 in 14%, HPV 45 in 8%, and HPV 31 in 5%, HPV 16 was the predominant type in all countries except Indonesia, where HPV 18 was more common. There was significant geographic variation in the prevalence of some less common virus types. A clustering of HPV 45 was apparent in

- The language of science is always changing
- Concepts and terminology continue to evolve
- Keyword searching alone will never maximize retrieval of critical information...

## Web of Science



Tools to take our users to the next step:

## Beyond Search

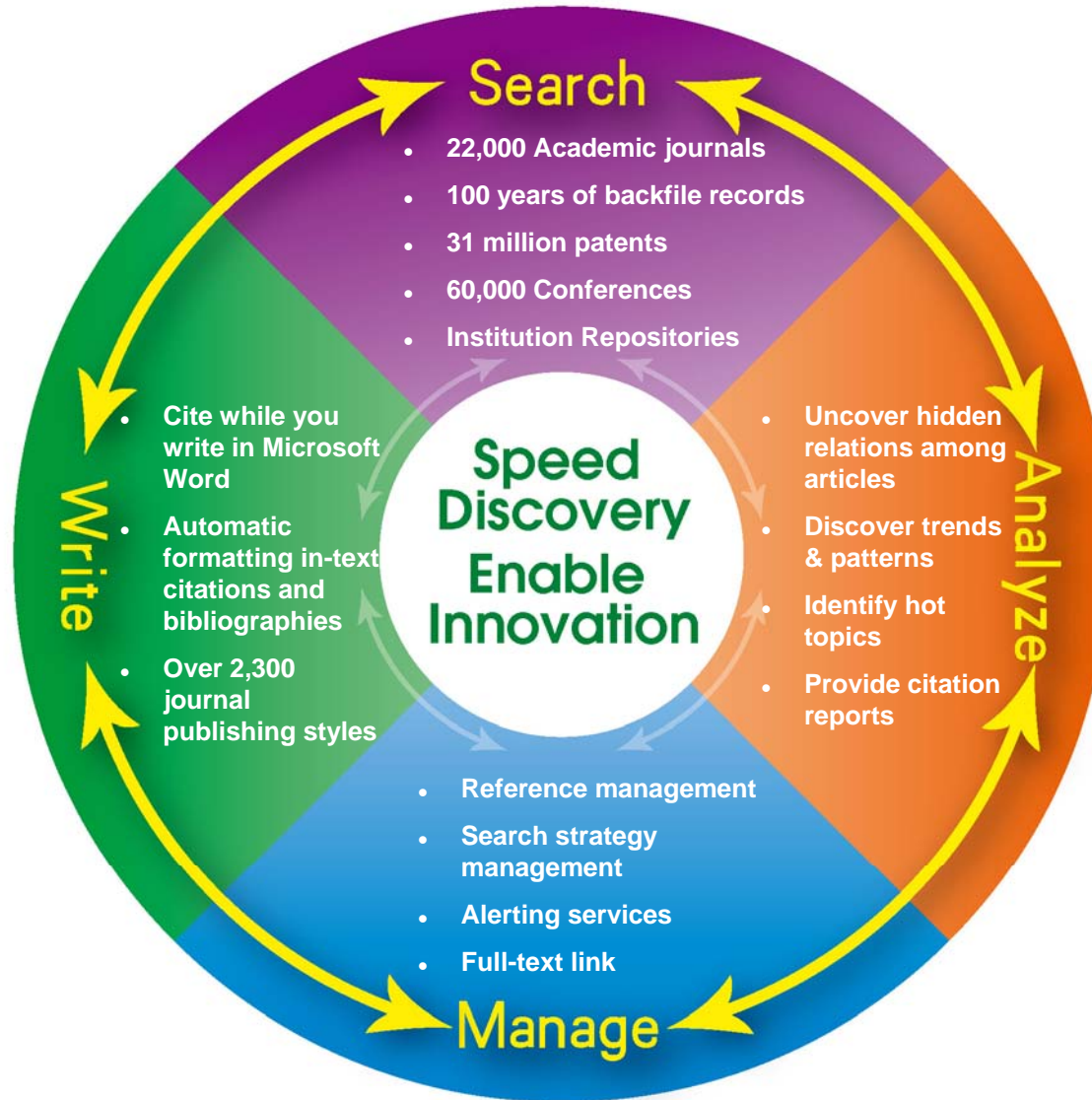
## Analyze – Manage - Discover

## Why Use the Web of Science?

- Keep you up to date
- Discover who is citing your search and why
- Track research activities
- Follow the history of an idea or a method
- Find relevant articles that are difficult to express with a few keywords
- Analyze the impact of published research
- etc

It brings you the **KEY** information  
at your fingertips

# ISI Web of Knowledge: an integrated research platform



**Thank you.**

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**Journal Selection Essay**

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Thank You