

How to do an Effective Literature Search?

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Stop Searching, Start Discovering



The scenarios

- "I'm a new graduate student and I'm not sure how to do a literature search"
- "I've been into research for sometime now but I spend too much time to get the articles I want"
- "I want to start a new research project. How can I get the relevant literature in the shortest possible time?"

\rightarrow \rightarrow If you have similar concerns, this module may help you to do an *effective* literature search



What is Web of Science?

Features	Benefits and Applications		
Easy to use search interface – designed for different abilities/uses levels/types of	Quickly identify relevant articles and save time		
searching, enabling fast and effective searching of the literature	Follow the path and direction of today's hottest ideas and concepts		
Multidisciplinary – over 11,261 high quality journals selected from around the world	Determine if a theory has been confirmed, changed or improved		
Over 100 years of citation information	Track a topic through years of research, find		
Alerting functionality	related records quickly and easily without		
Analysis and refinement tools	having to understand changes in terminology		
Export to bibliographic software	Quickly identify the most influential papers/researches in a particular area and		
Full text – Link to the primary literature sources	uncover seminal research of an important theory or concept		
Citation Map – Totally new features enhancing discovery process			



How many types of searches are available?

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There are 5 types generally:

Search: use this for normal keyword search such as Topic, title, address, conference, funding agency etc

- Cited Reference Search: Find articles that cite a person's work
- Structure Search: Search for chemicals using structure drawing
- Advance Search: Suitable for more complex search queries
- Author Finder: Systematic ways to retrieve sets of articles from one author

How to search effectively in WOS?

- For example, we want to do a search in "Japanese encephalitis", a virus transmitted from mosquitoes and very prevalent in Southeast Asia and the Far East
- Annually, 30K to 50K of people are infected with the virus, with up to 60% of fatality rate for some regions in Asia
- The disease can be controlled primarily via vaccination

How should we begin the search?



You only know about "Japanese ence..." but not sure how to spell "encephalitis"

••••				
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1-	apanese ence* xample: oil spill* mediterranean	in Topic 🗸		help you!
AND 💌	xample: O'Brian C* OR OBrian C* eed help finding papers by an author? Use Author Finder.	in Author 💌		Put an " * " after the word to retrieve all
0	xample: Cancer* OR Journal of Cancer Research and Clinical Incology dd Another Field >>	in Publication Name 💌	٩	combinations of words from 0 to infinity characters

•Under Topic Search, just type in "Japanese ence*" and hit the "Search" button

•The search will return all combinations of words begin with "ence"

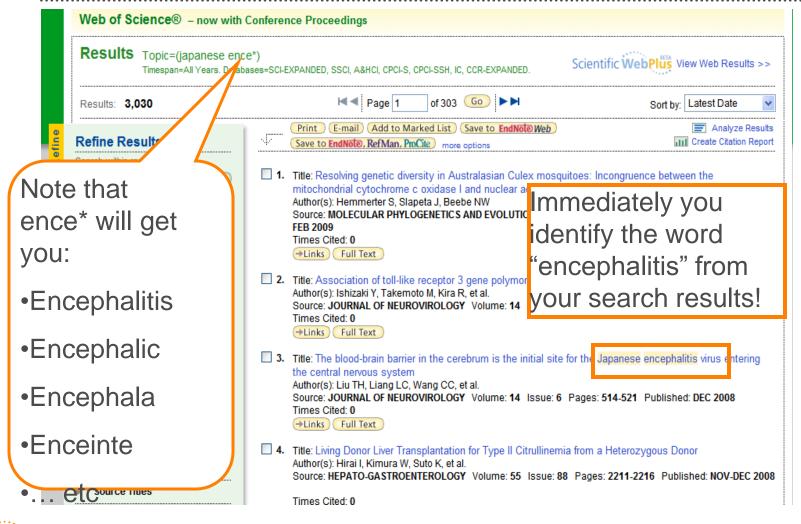
Clear

•Other wildcards include: ? (if it is only one character) \$ (if it is 0 to one character)



Search

Refine search results to get what you want



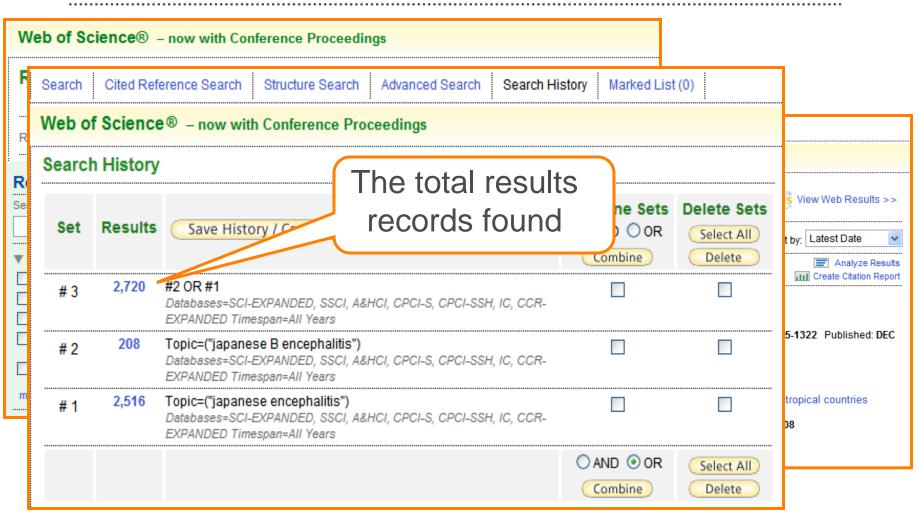
Want to retrieve the right results?

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- "Japanese Encephalitis" is a type of disease, which used to be called "Japanese B Encephalitis"
- Use inverted commas to get the exact words

Web of Science® – now with Co	onference Proceedings
Search for: "japanese encephalitis" <i>Example</i> : oil spill* mediterr AND V <i>Example</i> : O'Brian C* OR C Need help finding papers t	Use inverted unue of Science® – now with Converse Search for:
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	AND V in Publication Name V <i>Example:</i> Cancer* OR Journal of Cancer Research and Clinical Oncology

Use Search History to combine your search results





Use Refine to retrieve only the relevant

Hide Refine

Results: 2,784	Page 1 of 279 Go >> Sort by: Times Cit	
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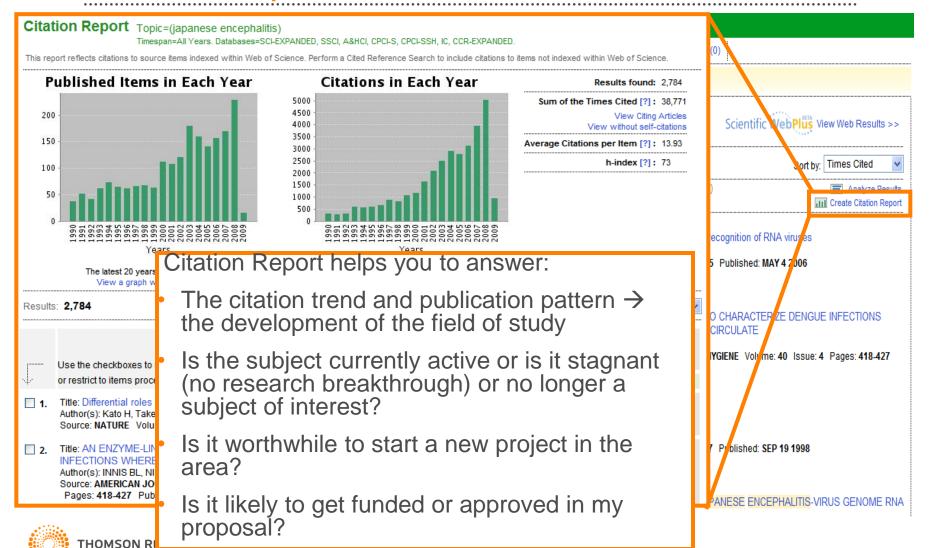
Sort the results to get the popular article

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Understand the publication pattern – Create Citation Report



To explore what's hidden in the data – Analyze Results

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	JOURNAL OF VIROLOGY	123	4.4181 %
	VACCINE	122	4.3822 %
	VIROLOGY	108	3.8793 %
	INDIAN JOURNAL OF MEDICAL RESEARCH	95	3.4124 %
	JOURNAL OF GENERAL VIROLOGY	84	3.0172 %
	ACTA VIROLOGICA	78	2.8017 %
	ARCHIVES OF VIROLOGY	53	1.9037 %
	JAPANESE JOURNAL OF VETERINARY SCIENCE	44	1.5805 % •
	JOURNAL OF MEDICAL ENTOMOLOGY	43	1.5445 %
View Records Exclude Records	Field: Source Title	Record Count	% of 2784

Source Title"

Important journals for this area of study Check where your users publish in What are the most popular journals

researchers in this area

- like to publish
- 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

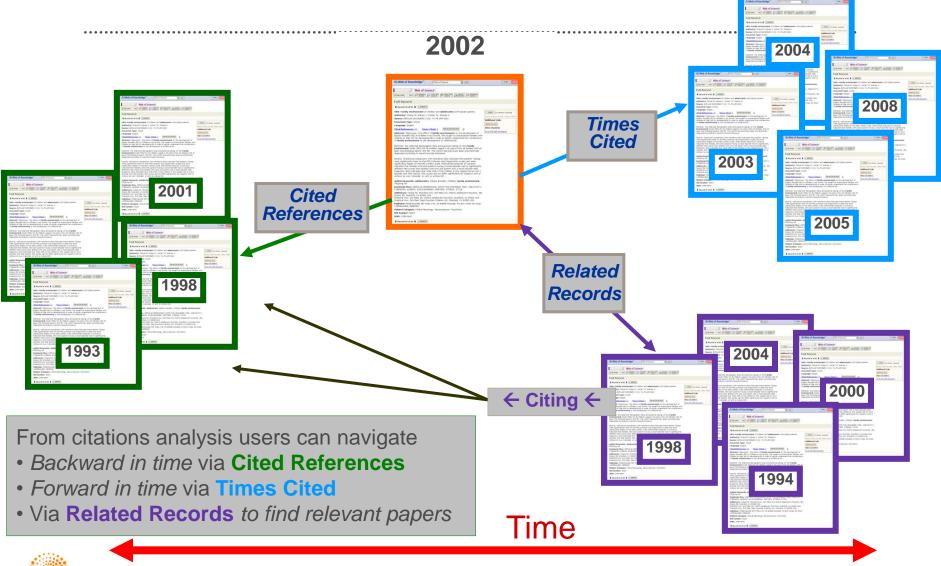
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	VIROLOGY	726	26.0776 %	
	IMMUNOLOGY	494	17.7443 %	
	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH	335	12.0330 %	-
	MEDICINE, GENERAL & INTERNAL	316	11.3506 %	
	VETERINARY SCIENCES	314	11.2787 %	
	MEDICINE, RESEARCH & EXPERIMENTAL	312	11.2069 %	
	TROPICAL MEDICINE	270	9.6983 %	
	INFECTIOUS DISEASES	222	7.9741 %	
	MICROBIOLOGY	212	7.6149 %	
	BIOTECHNOLOGY & APPLIED MICROBIOLOGY	164	5.8908 %	- C.
View Records K Exclude Records	Field: Subject Area	Record Count	% of 2784	Bar Chart

How to Discover?

- The language of science is always changing
- New concepts and terminology continue to evolve
- Keyword searching alone will never maximize retrieval of critical information
 - Cited Reference Search
 - KeyWords Plus
 - Related Records



Literature Citation Information – Driving Discovery of "CLOSE Art"

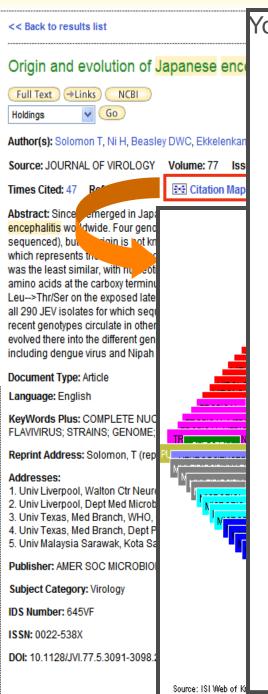


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Web of Science® – now with Conference Proceeding	gs	
<< Back to results list	◄ Record 181 of 2,784 ► 論文	論文
Origin and evolution of Japanese encephalitis	s virus in southeast Asia	
	et more information	1 Related ↓ 論文
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Reprint Add Solomon, T (reprint author), Univ Liverpool, Walt	ton Ctr Neurol & Neurosurg, Dept Neurol Sci, Liverpool L9 7LJ, Merseyside England	
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Subject Category: Virology	the same references	View the journal's Table of Contents (in
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ISSN: 0022-538X		Suggest a correction
DOI: 10.1128/JVI.77.5.3091-3098.2003		If you would like to improve the quality of this product by suggesting corrections, please fill

out this form.

Web of Science® – now with Conference Proceedings



You will be surprised to find out that an article in Virology has applications in:

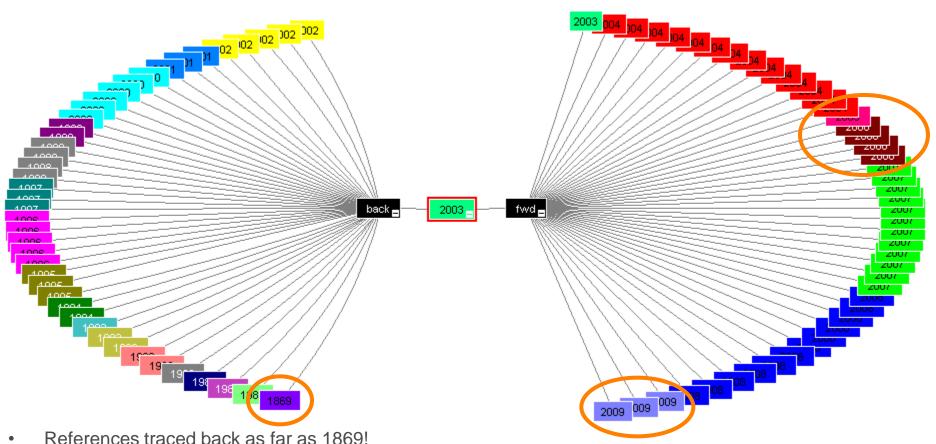
e®

- Immunology
- Infectious Diseases
- General and Internal Medicine
- Research and Experimental Medicine
- Microbiology
- Neurosciences
- Pediatrics
- Tropical Medicine
- Veterinary Sciences
- Entomology

Ten different new application fields!

→ ⇒ Explore the subjects' hidden relations, discover undiscovered applications!

Track the development both ways (forward and backward) to unfold new ideas and hidden applications



- References traced back as far as 1869! (Backfiles is equally important)
- The base principles to support the research (Work trustable? Any new point to challenge?)
- Identify relevant articles in the past



- Until today, it is still actively cited (2009)
- Citation pattern: Why citations are low in year 2005 and 2006? But high in 2007 and 2008?
- Identify relevant articles in future (new keyword, change of terminology)
- New applications or directions of research area?

Last note to take ...

- Effective literature search really depends on many factors, some of which are:
 - How much you know about a subject
 - Your research experience
 - Guidance from mentors
 - Your library resources ... access to the right literature, etc
 - And ... differences from discipline to discipline
- Features in *Web of Science (WOS)* are tools to help you doing your search more effectively
- In simple terms ... If you can complete your search effectively within 3 months using WOS, why bother to spend one year or even longer just to do similar search without WOS?
- You have a choice ...

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Thank You!



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