10020LS 850003 Seminar 書報討論

Journal discussion seminar for PhD students

王歐力 副教授
Oliver I. Wagner, PhD
Associate Professor

National Tsing Hua University

Institute of Molecular & Cellular Biology

Department of Life Science

10020LS 850003 Seminar 書報討論

1. **Time**: Fridays, 10:10-11:00, Classroom: LSB II Room 217, First class: Feb 24th 2012

2. **Instructor**: Dr. Oliver Wagner (王歐力), LSB I Room 507, ext. 42487, owagner@life.nthu.edu.tw

3. **Course description**: To train the presentation, discussion, interpretation and judging of scientific publications

4. **Teaching Method**:

a) Each student will present one paper. The paper should not be older than 1 year and the more recent the better. The Impact Factor should be >5.5. It should be related to Cellular & Molecular Biology. The student can suggest the paper to be presented. However, both, the student and the instructor have to be in agreement of the relevance of the paper. The decision of the paper to be presented will be made **one week before the presentation**. Therefore, the student has to contact the instructor *at least* one week in advance! => Please no "Letters" or "Reports". Only Full Research Articles.

b) Presentation time: 35 min followed by 15 min discussion

c) Evaluation of the presentation will be given by both, the instructor and the students: each student will fill out an evaluation form (see below) to grade the speaker's performance. In addition, each student can write down one sentence about the speaker's presentation. I will email these sentences (without naming the authors) to the speaker afterwards.

d) Each student will be the host of one speaker. The host has to:

- introduce the speaker and the topic he will talk about
- be aware that the speaker won't exceed the 35 min presentation time (give warnings)
- guide the discussion and make a conclusion after the presentation

e) If unanswered questions appear during the discussion, the presenter can email the participants the correct answers later on (this is voluntary).

f) Tolerated absence of class: maximum twice; however, overall grading will improve upon continuous presence in the class!

g) Class will be held in English (including presentation, discussion, evaluation form etc.).

5. **Scoring**:
55% Oral presentation (50% as judged by instructor, 50% as judged by students)
25% Class activity (asking questions, participating in the discussion, overall class presence etc.)
15% Written paper opinion (see evaluation form below: your debate/analysis of the paper)
5% Hosting

6. **Syllabus**:
First class will be held by the instructor on Feb 24th 2012
First class' topics: Why do we need papers of good quality? What is a good quality paper? How to find out the quality of a journal (IF ranking)? Why IF factors are based on a poor algorithm? What is the "Eigen Factor"?

- The host is always the next presenter
- The first host is the last presenter

7. **Your presentation dates**: (03/02 NTHU Game Day and PhD qualify exam 03/30 => no class)

Stud. ID	Name	English Pronunciation	Date	Hosting
Oliver Wagner: Course Introduction			02/24	-
100080881	慕尼許	Muniesh Shanmugam	03/09	03/16
9980846	方裕勝	Fang Yu-Sheng	03/16	03/23
9980840	鄭美雲	Cheng Mei-Yun	03/23	04/06
9980806	溫少瑄	*Wen Shao-Hsuan*	04/06	04/13
100080831	陳英傑	Chen Ying-Chieh	04/13	04/20
100080810	劉 靜	*Liu Jing*	04/20	03/09

8. **Evaluation form** (download: http://life.nthu.edu.tw/~laboiw/evaluation.htm):

EVALUATION FORM

Please return to me at the beginning of the next class!

Name:_____ (**your** name in Chinese and Roman letters, e.g.: 王歐力 Wang Ou-Li)

Date:_____

Evaluation form for speaker:_____(**speaker** name, Chinese/Roman letters)

(Short-)Title of paper:_____

Grade the questions below (based on the school's grading system with 100 points = best score):

(1) Was the speaker sufficiently prepared?

Points____

(2) Did the speaker explain the topic understandable?

Points____

(3) Did the speaker sufficiently interact with the audience (eye contact, voice loud enough)?

Points____

(4) Was the Power-Point content in an adequate format (letters not too small, title on each slide)?

Points____

(5) Did the speaker answer your questions in a satisfactory way?

Points____

AVERAGE points____

One sentence you want to tell the presenter **about his presentation**:

Now, imaging **you are the reviewer** of this paper. Please **analyse** (debate) the paper and write down your **own opinion** about the paper. (*Do not simply summarize the paper and do not criticise the today's presentation. For example, write down whether or not the authors show sufficient data to prove (verify) their stated hypothesis and conclusions. Do they provide enough data for their conclusions? If not, which methods or experiments would* ***you*** *suggest? Or maybe something wrong with the figures, images, gels etc.? For example, any controls missing? Other inconsistencies? Some benefits for human health? Please do not only write one sentence. Try your best to give a short review of the paper.*)

Please sign here: _____

Please introduce yourself

- Which PhD year (1st, 2nd, 3rd …)
- Which lab
- What are your working on / what is your thesis about (1-2 sentences)

A few words about your presentation (old and new to you)

- Images and graphics should be **clear and large and readable for everybody**

$\Rightarrow$ in the Acrobat reader zoom in first and then copy the graphic to your PPT / download high quality pictures from the HTML version of the paper

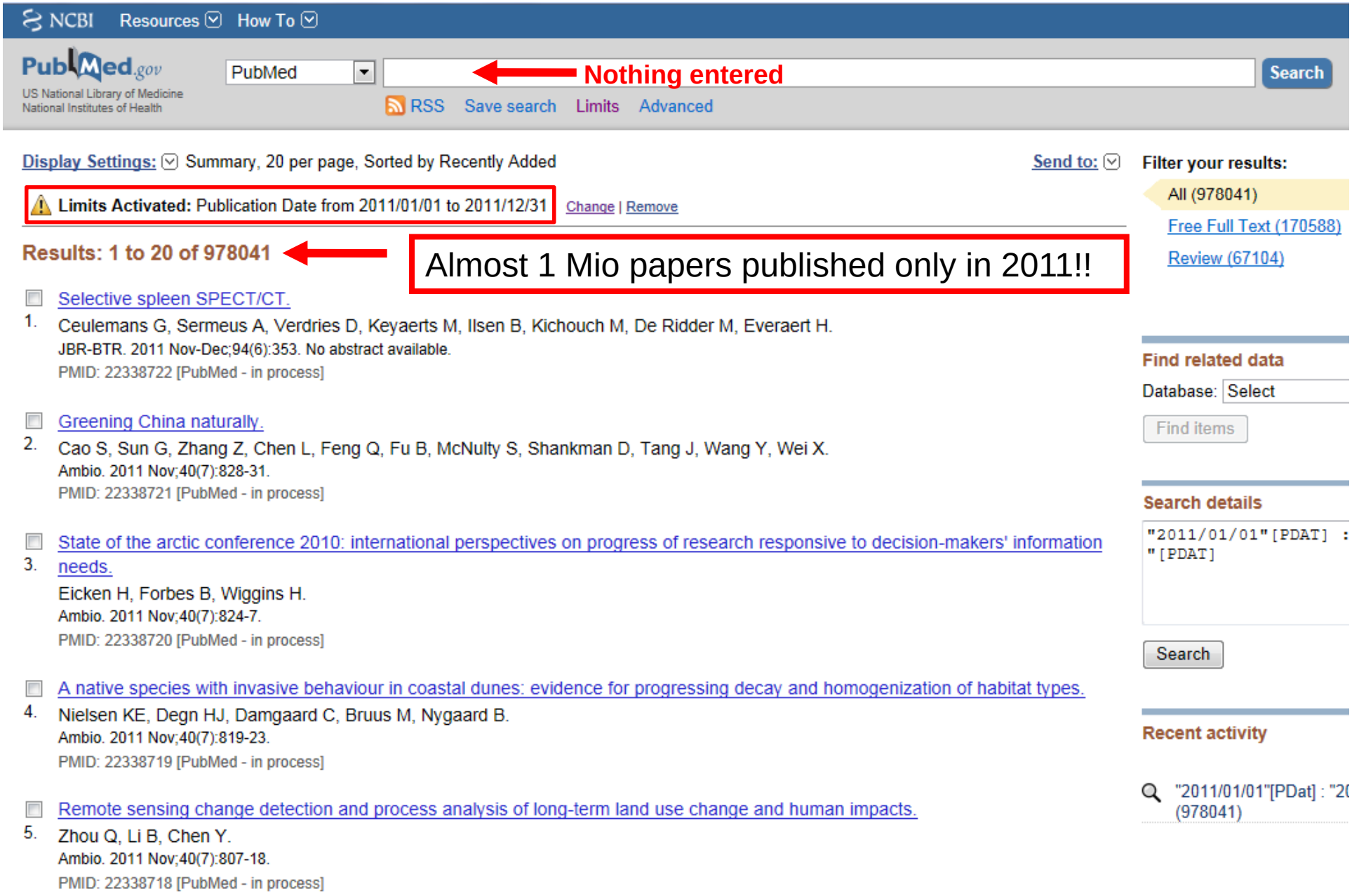
- You might need to **read previous papers of the group** to understand the "whole story"
- Ask yourself what kind of questions your audience might have later
- **Practice the talk** before to make sure you are in the right time scale and to make your presentation overall more smooth
- If there are too many data (especially high quality papers), try to cut down less important data:
    - Your audience does not necessarily need to understand every single detail
    - We want to **get to know the big picture**
    - The attitude of an audience is usually more like to be entertained by a presentation (rather then being troubled by looking at every single detail of the study)
- You can **present the data in a different way** as they are presented in the paper to have a better flow of the whole story
- The introduction is very important to **give us enough background** to understand the topic
- Make a point! Make many points! You can have several summaries during your presentation
- Plan enough time ahead to setup your computer and to solve technical problems
- **Speak load** so the audience keep being alerted during your whole presentation
- Speak not too fast and not too slow: speak in a flow!
- Focus on **making your presentation comprehensive and logic** (rather then making the audience tired showing all the details of the paper)
- Choose large letters and **avoid dark background and bright letters** (makes people sleepy)
- Use the PPT **spelling checker**

Something about impact factors

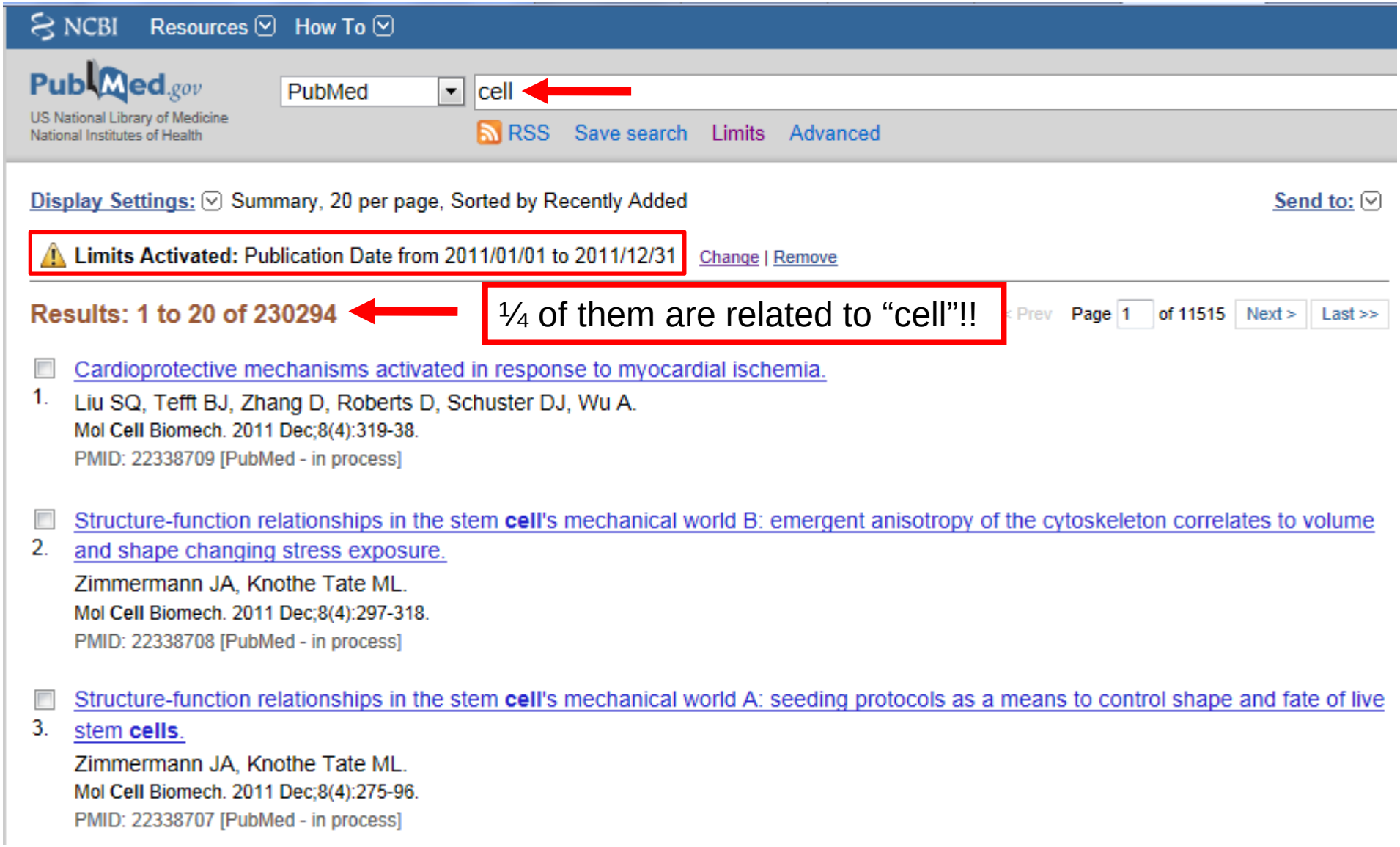
1. Why do we need papers of good quality?
2. What is a good quality paper?
3. How to find out the quality of a journal (IF ranking)?
4. Why IF factors are based on a poor algorithm.

How to find a paper?

Why do we need high quality papers?



Why do we need high quality papers?



Why do we need high quality papers?

⇒ every year thousands and thousands of SCI papers are published

⇒ good papers are usually those which underwent **careful peer-review** (not all journals have peer-review; or only one peer instead of 3-5 peers)

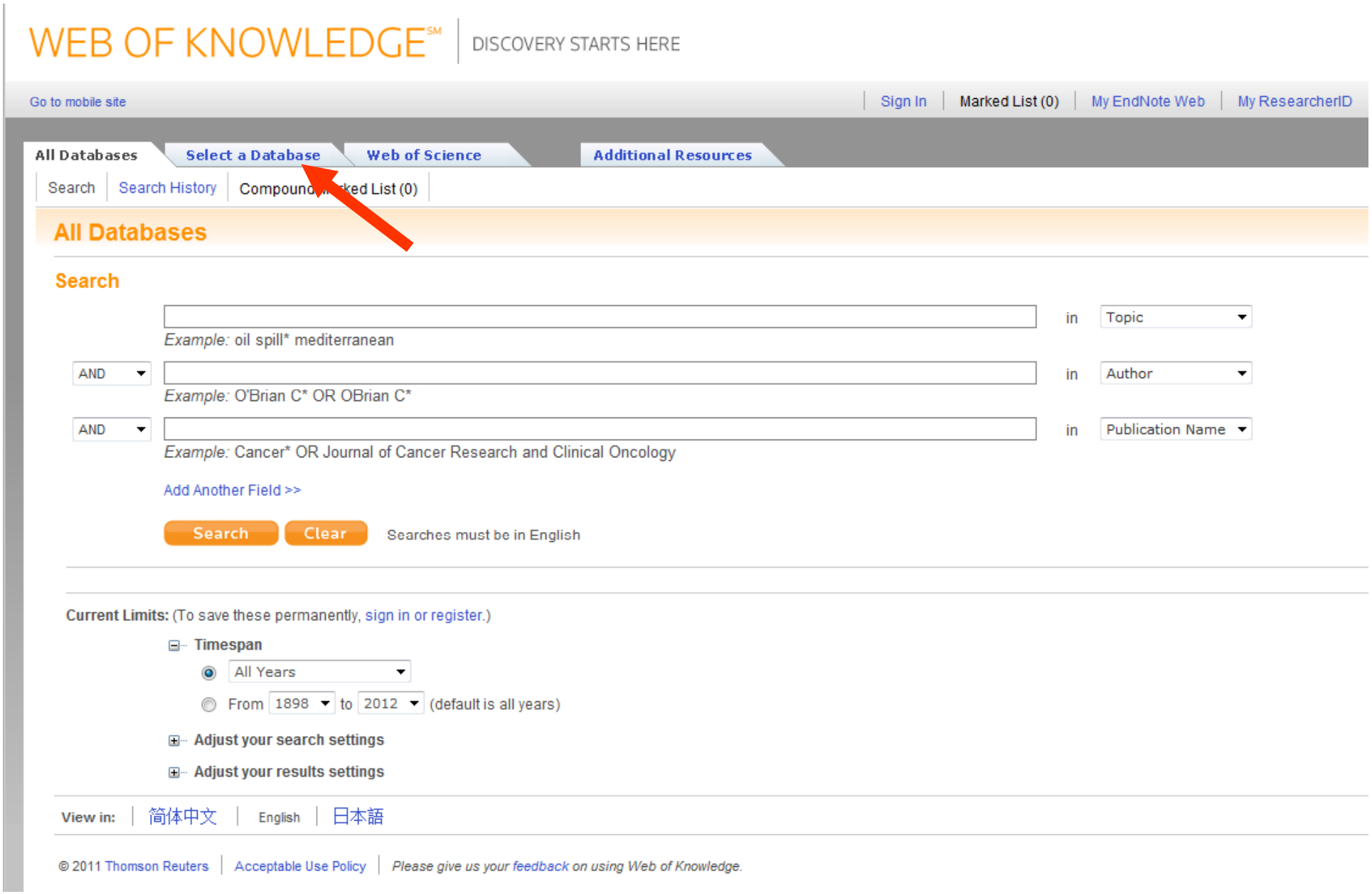
⇒ however, pressure on scientists to publish in high quality journals increases (finding job positions depends of number papers and journal rankings)

⇒ thus the quality of data *de*creases **including *increase* in scientific fraud** which will slow down scientific progress since in many cases data need to be again reproduced by others (and, unfortunately, many data are not reproducible at all…)

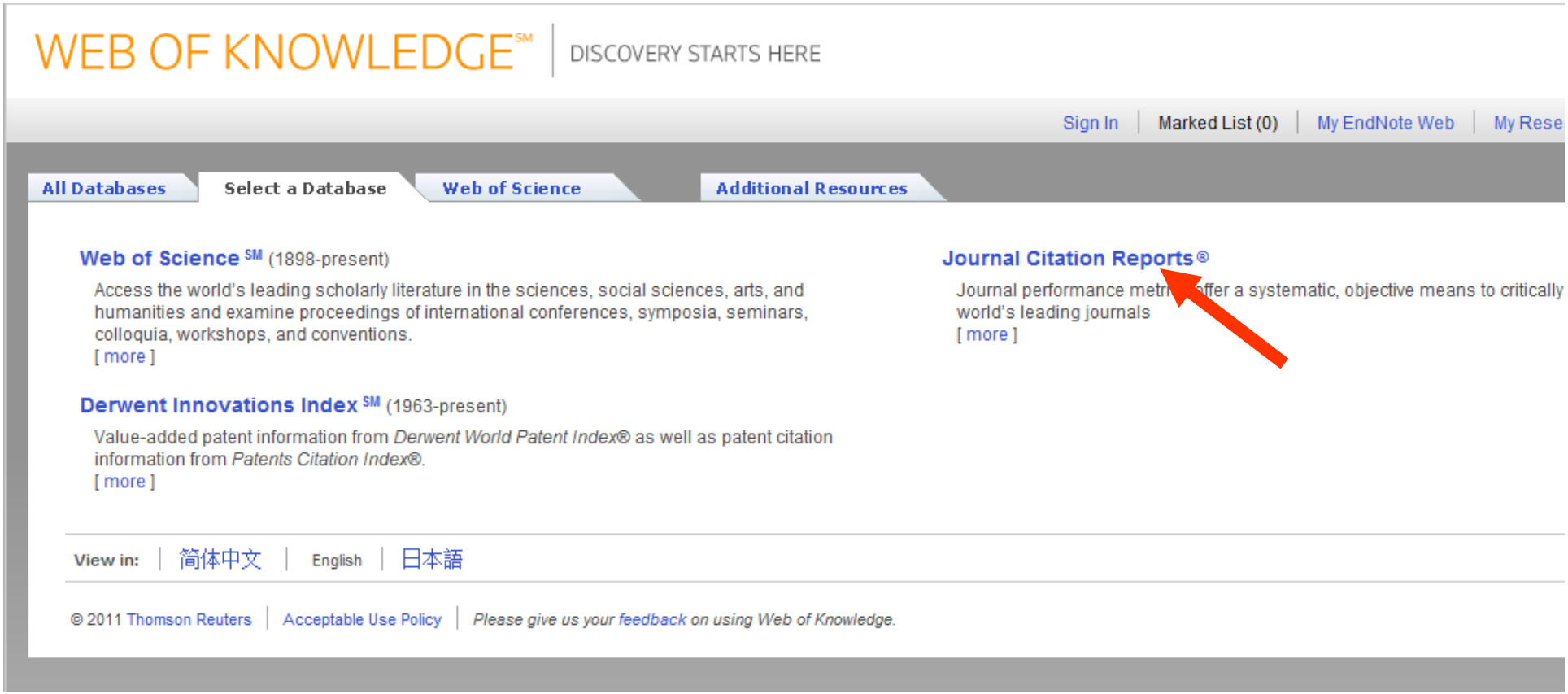
⇒ how to find out the quality of a journal?

⇒ impact factor ranking?

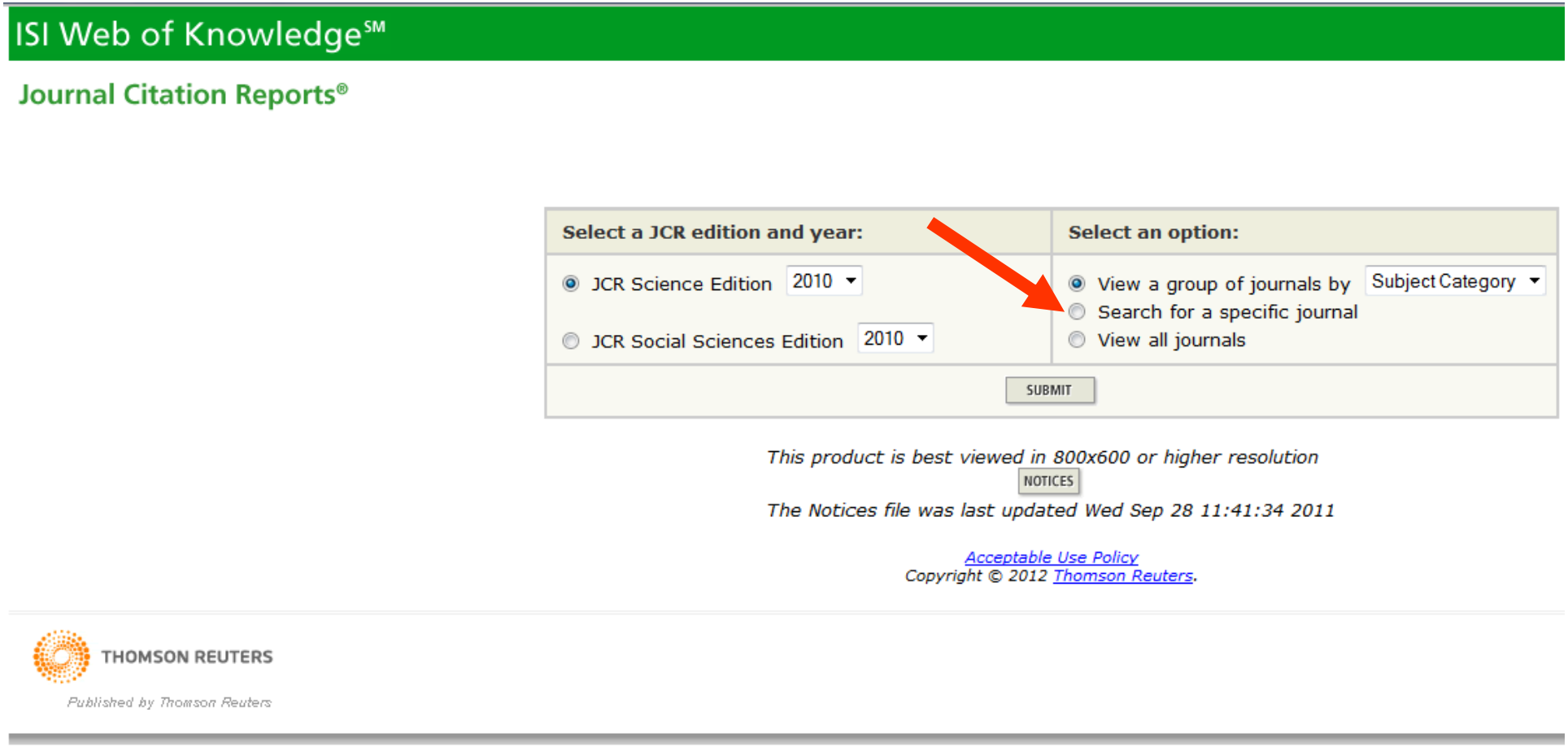
http://apps.isiknowledge.com (=> only from NTHU accessible)



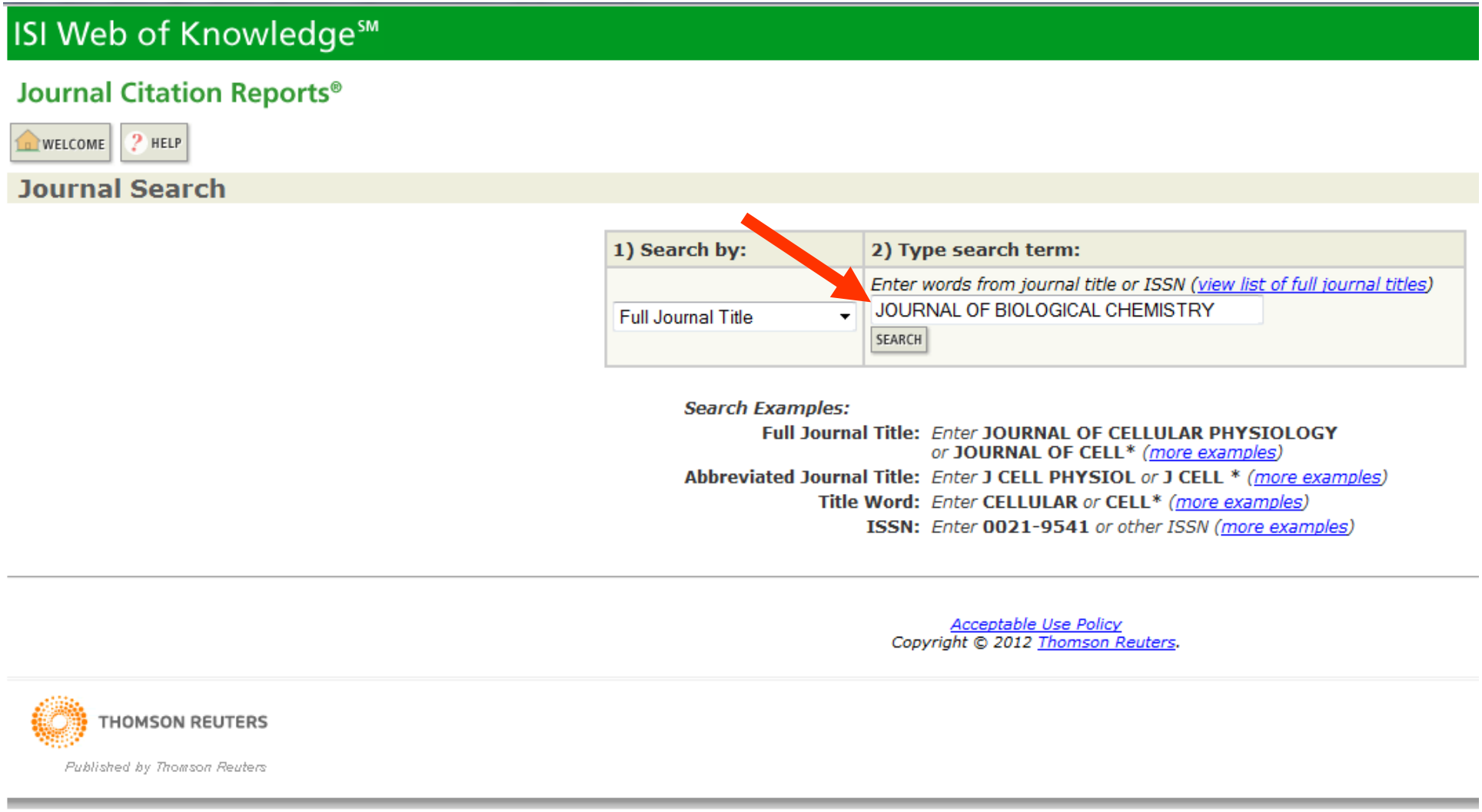
http://apps.isiknowledge.com (=> only from NTHU accessible)



http://isiknowledge.com (=> only from NTHU accessible)



http://isiknowledge.com (=> only from NTHU accessible)



http://isiknowledge.com (=> only from NTHU accessible)

ISI Web of Knowledge℠

Journal Citation Reports®

WELCOME HELP

Journal Summary List

Journals from: search Full Journal Title for 'JOURNAL OF BIOLOGICAL CHEMISTRY'

Sorted by: Journal Title SORT AGAIN

Journals 1 - 1 (of 1) [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				
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles
☐	1	J BIOL CHEM	0021-9258	412004	5.328	5.498	0.945	4208

MARK ALL UPDATE MARKED LIST

Journals 1 - 1 (of 1) [1]

Acceptable Use Policy
Copyright © 2012 Thomson Reuters.

THOMSON REUTERS

Published by Thomson Reuters

How are impact facors calculated?

Journal impact factor **is a citation index**:

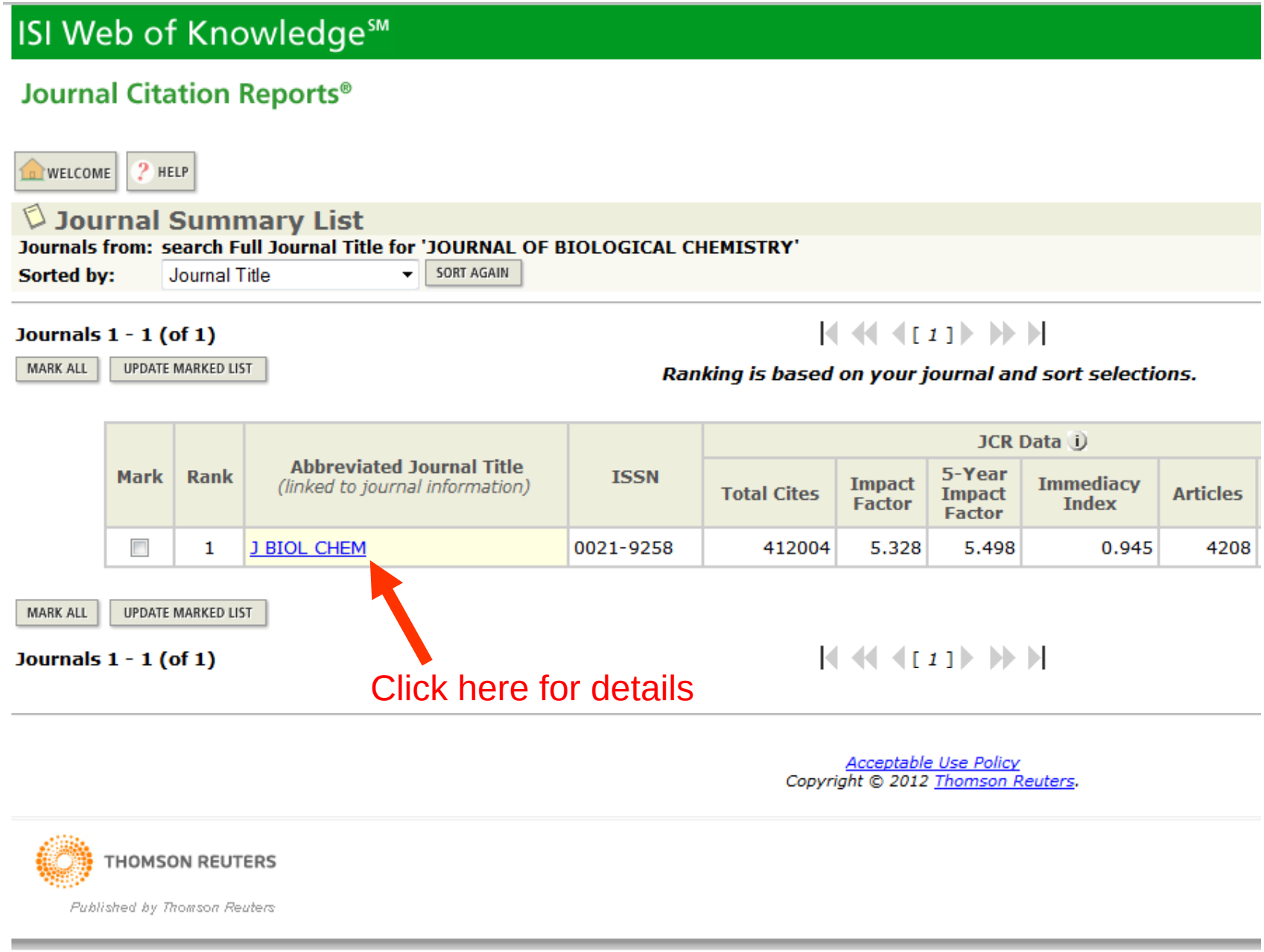
Counting **citations** of articles from the journal in the past two years

Dividing them **by** the **number of** all published **articles** from this journal (within these two years)

An impact factor of 1.0 means that, on average, the articles (published two years ago) have been cited (in average) once.

(An impact factor of 2.5 means that, on average, the articles published two years ago have been cited 2.5 times.)

http://isiknowledge.com (=> only from NTHU accessible)



ISI Web of Knowledge℠

Journal Citation Reports®

WELCOME | HELP | RETURN TO LIST

Journal: JOURNAL OF BIOLOGICAL CHEMISTRY

Mark	Journal Title	ISSN	Total Cites	Impact Factor	5-In Fa
☐	J BIOL CHEM	0021-9258	412004	5.328	5

Cited Journal | Citing Journal | Source Data | Journal Self

CITED JOURNAL DATA | CITING JOURNAL DATA | IMPACT FACTOR TREND

Journal Information

Full Journal Title: JOURNAL OF BIOLOGICAL CHEMISTRY
ISO Abbrev. Title: J. Biol. Chem.
JCR Abbrev. Title: J BIOL CHEM
ISSN: 0021-9258
Issues/Year: 52
Language: ENGLISH
Journal Country/Territory: UNITED STATES
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC
Publisher Address: 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996
Subject Categories: BIOCHEMISTRY & MOLECULAR BIOLOGY SCOPE NOTE | VIEW JOURNAL SUMMARY LIST

Journal Rank in Categories: JOURNAL RANKING

Journal Impact Factor

Citations in past 2 years divided by number of articles published in past 2 years

Cites in 2010 to items published in: 2009 = 17279
2008 = 22468
Sum: 39747

Number of items published in: 2009 = 3686
2008 = 3774
Sum: 7460

Calculation: Cites to recent items / Number of recent items = 39747 / 7460 = **5.328**

ISI Web of Knowledge℠

Journal Citation Reports®

WELCOME | HELP | RETURN TO LIST

Journal: JOURNAL OF BIOLOGICAL CHEMISTRY

Mark	Journal Title	ISSN	Total Cites	Impact Factor	5-In Fa
☐	J BIOL CHEM	0021-9258	412004	5.328	5

Cited Journal | Citing Journal | Source Data | Journal Self

CITED JOURNAL DATA | CITING JOURNAL DATA | IMPACT FACTOR TREND

Click here for trends

Journal Information

Full Journal Title: JOURNAL OF BIOLOGICAL CHEMISTRY
ISO Abbrev. Title: J. Biol. Chem.
JCR Abbrev. Title: J BIOL CHEM
ISSN: 0021-9258
Issues/Year: 52
Language: ENGLISH
Journal Country/Territory: UNITED STATES
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC
Publisher Address: 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996
Subject Categories: BIOCHEMISTRY & MOLECULAR BIOLOGY SCOPE NOTE | VIEW JOURNAL SUMMARY LIST

Journal Rank in Categories: JOURNAL RANKING

Journal Impact Factor

Cites in 2010 to items published in:	2009	=17279	Number of items published in:	2009	=3686
	2008	=22468		2008	=3774
	Sum:	39747		Sum:	7460

Calculation: Cites to recent items / Number of recent items = 39747 / 7460 = **5.328**

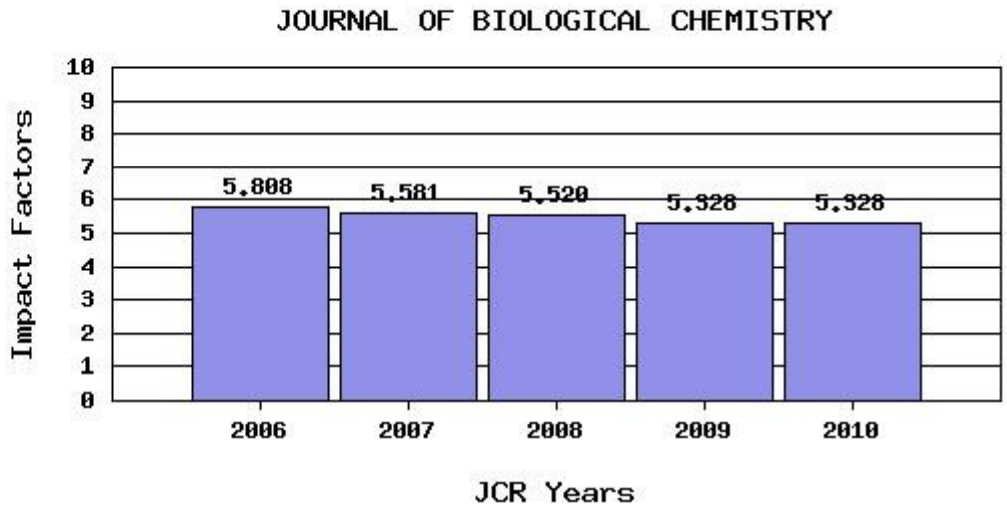
ISI Web of Knowledge℠

Journal Citation Reports®

WELCOME HELP RETURN TO JOURNAL

Impact Factor Trend Graph: JOURNAL OF BIOLOGICAL CHEMISTRY

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



eMJA “The Medical Journal of Australia” 2003 178 (6): 280-281

“The journal Impact Factor and citation counts are **misconstrued and misused** as measures of scientific quality.

Why inappropriate? Because the **IF is conceptually and technically flawed**:

• the quality of published material cannot be controlled by such a short period of time (two-year period set by the ISI)

• **reviews are cited more frequently than original research, thus favoring journals that use these type of articles as *part of a publishing strategy***

• the IF does not take into account self-citations, which amount to 1/3 (!) of all citations (if an author writes a new paper he/she try to put many citations about his/her own previous works into the new paper)

• errors are common in reference lists (occurring in up to 1/4 of references), inevitably affecting IF accuracy

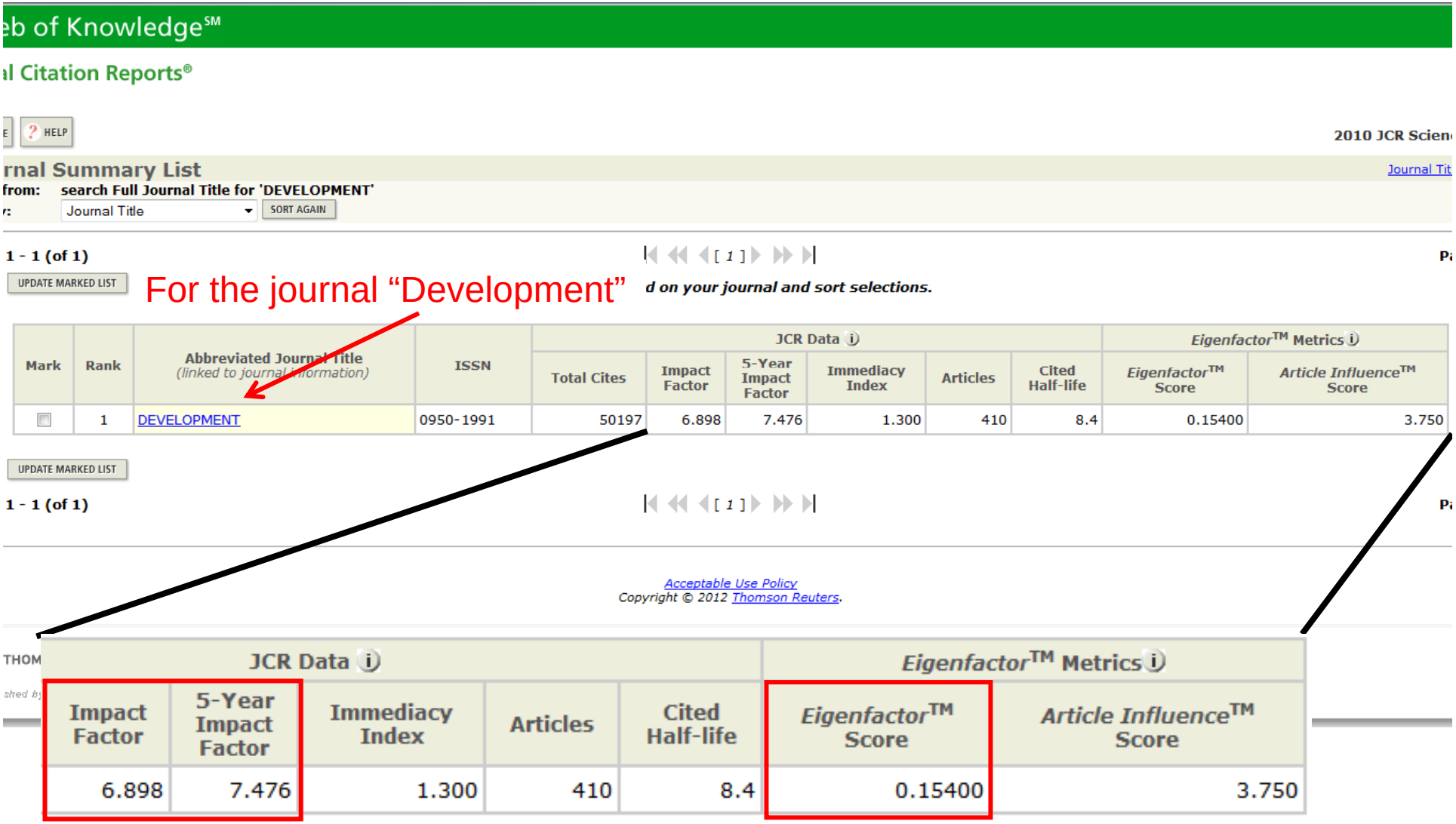
• the assumption of a positive link between citations and quality is wrong:

$\Rightarrow$ we cite articles for diverse reasons, **including those we think they are suspect or poor** (we cite studies which we want to criticize but citing these studies in turn increases the IF of the journal they are published)

What can we do?

… **nothing** until a better algorithm is developed and accepted; you should try to publish in high IF journals which dramatically affects your career

But... some recent improvements are going on...



5-years IF much higher!

Eigenfactor Score

• The *Eigenfactor* Score calculation is based on the number of times articles from the journal **published in the past five years** have been cited in the JCR year, but it also considers which journals have contributed these citations so that **highly cited journals will influence the network more** than lesser cited journals.

• References from one article in a journal to another article from the same journal are removed, so that *Eigenfactor* Scores **are not influenced by journal self-citation**

“Cell Biology” Journals sorted by Impact Factor

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						Eigenfact
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor™ Score
☐	1	NAT REV MOL CELL BIO	1471-0072	26838	38.650	41.578	6.400	70	4.7	0.18576
☐	2	CELL	0092-8674	167591	32.406	34.931	6.661	319	8.5	0.70027
☐	3	CANCER CELL	1535-6108	17941	26.925	28.438	5.774	93	4.7	0.10888
☐	4	CELL STEM CELL	1934-5909	6982	25.943	26.967	4.740	104	2.2	0.06641
☐	5	NAT MED	1078-8956	53666	25.430	27.887	5.377	151	7.1	0.18060
☐	6	NAT CELL BIOL	1465-7392	28409	19.407	19.578	5.562	130	5.5	0.16608
☐	7	CELL METAB	1550-4131	8682	18.207	20.130	2.755	106	3.4	0.07559
☐	8	MOL CELL	1097-2765	42991	14.194	14.447	3.010	304	5.7	0.26290
☐	9	ANNU REV CELL DEV BI	1081-0706	8414	14.078	22.924	0.714	28	7.6	0.03385
☐	10	DEV CELL	1534-5807	16739	13.946	14.240	2.677	155	4.9	0.12082
☐	11	NAT STRUCT MOL BIOL	1545-9985	21255	13.685	12.481	2.967	212	5.9	0.12645
☐	12	CURR OPIN CELL BIOL	0955-0674	13739	13.540	13.290	1.886	114	6.3	0.06826
☐	13	J MOL CELL BIOL	1674-2788	108	13.400	13.800	1.250	28	1.3	0.00044
☐	14	GENE DEV	0890-9369	56715	12.889	13.892	2.386	259	8.0	0.23657
☐	15	TRENDS CELL BIOL	0962-8924	10653	12.140	12.997	2.275	80	6.0	0.05260
☐	16	TRENDS MOL MED	1471-4914	5365	10.308	9.187	1.377	61	4.8	0.02370
☐	17	EMBO J	0261-4189	76014	10.124	9.369	2.267	329	9.7	0.20632
☐	18	CURR BIOL	0960-9822	39883	10.026	11.436	2.358	366	5.9	0.20664
☐	19	J CELL BIOL	0021-9525	72566	9.921	10.123	2.162	334	>10.0	0.20930
☐	20	CURR OPIN STRUC BIOL	0959-440X	9829	9.903	9.650	1.033	90	6.5	0.04345

“Cell Biology” Journals sorted by Eigenfactor

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						Eigenfact
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor™ Score
☐	1	CELL	0092-8674	167591	32.406	34.931	6.661	319	8.5	0.70027
☐	2	MOL CELL	1097-2765	42991	14.194	14.447	3.010	304	5.7	0.26290
☐	3	GENE DEV	0890-9369	56715	12.889	13.892	2.386	259	8.0	0.23657
☐	4	MOL CELL BIOL	0270-7306	71708	6.188	6.381	1.310	455	8.2	0.22917
☐	5	J CELL BIOL	0021-9525	72566	9.921	10.123	2.162	334	>10.0	0.20930
☐	6	CURR BIOL	0960-9822	39883	10.026	11.436	2.358	366	5.9	0.20664
☐	7	EMBO J	0261-4189	76014	10.124	9.369	2.267	329	9.7	0.20632
☐	8	ONCOGENE	0950-9232	59299	7.414	7.109	1.335	597	6.6	0.19817
☐	9	NAT REV MOL CELL BIO	1471-0072	26838	38.650	41.578	6.400	70	4.7	0.18576
☐	10	NAT MED	1078-8956	53666	25.430	27.887	5.377	151	7.1	0.18060
☐	11	NAT CELL BIOL	1465-7392	28409	19.407	19.578	5.562	130	5.5	0.16608
☐	12	MOL BIOL CELL	1059-1524	29596	5.861	5.949	0.939	408	6.1	0.14329
☐	13	J CELL SCI	0021-9533	38223	6.290	6.731	1.083	424	6.9	0.14078
☐	14	NAT STRUCT MOL BIOL	1545-9985	21255	13.685	12.481	2.967	212	5.9	0.12645
☐	15	DEV CELL	1534-5807	16739	13.946	14.240	2.677	155	4.9	0.12082
☐	16	FEBS LETT	0014-5793	53375	3.601	3.399	0.799	746	9.7	0.11103
☐	17	CANCER CELL	1535-6108	17941	26.925	28.438	5.774	93	4.7	0.10888
☐	18	FASEB J	0892-6638	38538	6.515	7.201	1.195	462	7.1	0.10353
☐	19	PLANT CELL	1040-4651	34533	9.396	10.648	1.346	272	7.1	0.10039
☐	20	CELL CYCLE	1538-4101	12395	4.999	4.499	0.981	524	3.2	0.08169

Ranking changes based on 5-year evaluation and elimination of self-citations

Sorted by Impact Factor

	Rank	Abbreviated Journal Title (linked to journal information)
	1	NAT REV MOL CELL BIO
	2	CELL
	3	CANCER CELL
X	4	CELL STEM CELL
	5	NAT MED
	6	NAT CELL BIOL
X	7	CELL METAB
	8	MOL CELL
X	9	ANNU REV CELL DEV BI
	10	DEV CELL
	11	NAT STRUCT MOL BIOL
X	12	CURR OPIN CELL BIOL
X	13	J MOL CELL BIOL
	14	GENE DEV
X	15	TRENDS CELL BIOL
X	16	TRENDS MOL MED
	17	EMBO J
	18	CURR BIOL
	19	J CELL BIOL
X	20	CURR OPIN STRUC BIOL

Review journal → X (rank 9)

Review journal → X (rank 12)

Review journal → X (rank 15)

Review journal → X (rank 16)

Review journal → X (rank 20)

8 journals “vanished” from top 20 (mostly review journals!)

A cluster of critical cell biol. journals moved upwards

Sorted by Eigenfactor

Rank	Abbreviated Journal Title (linked to journal information)	
1	CELL	
2	MOL CELL	
3	GENE DEV	
4	MOL CELL BIOL	O ← MCB
5	J CELL BIOL	
6	CURR BIOL	
7	EMBO J	
8	ONCOGENE	O
9	NAT REV MOL CELL BIO	
10	NAT MED	
11	NAT CELL BIOL	
12	MOL BIOL CELL	O ← MBC
13	J CELL SCI	O ← JCS
14	NAT STRUCT MOL BIOL	
15	DEV CELL	
16	FEBS LETT	O
17	CANCER CELL	
18	FASEB J	O
19	PLANT CELL	O
20	CELL CYCLE	O

8 new entries of important cell biological journals!

Thanks and wish us a successful seminar!