

# All About Metrics:

A review of research impact metrics and how to use them

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Research Assessment and Communications



# All About Metrics:

A review of research impact metrics and how to use them

Course Description: This 45 minute course will provide information on the most common research evaluation metrics. There will also be discussion around metrics in action, the responsible use of metrics, and examples on how to include metrics in your impact statements.

Course Outcomes: At the end of the course, the attendee will:

- Become familiar with the most metrics used in research impact.
- Understand the concept of responsible metrics.
- Be able to create descriptive statements that include metrics.
- Become aware of the metrics services available to them through Galter Library.



User Services



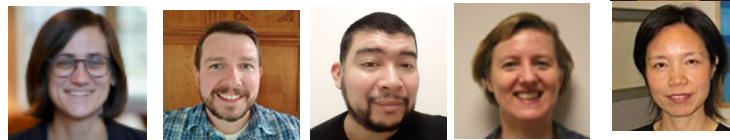
Digital Systems



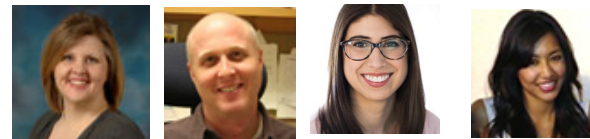
Research and  
Information Services



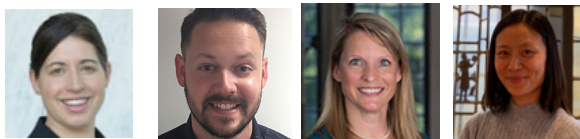
Collection Management  
and Metadata Services



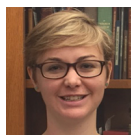
Administration



Research Assessment  
and Communications



Special Collections



**We are just a click away.**

[galter.northwestern.edu](http://galter.northwestern.edu)



Photo by Jacob Lund from Noun Project

## Metrics can be used to identify:

research productivity

innovative or impactful research

quality of research communication

collaboration between individuals or groups

engagement with various audiences

advancement of knowledge

health or policy impacts

scientific potential

career prestige

and more. . .



# How can Galter Library help?

Where possible, we want to help our faculty **choose metrics cautiously** and to inform users of bibliometric metrics **about their correct interpretation** and where necessary **about their limitations**.

Reference: Glänzel, Thijs. "Productivity, Performance, Efficiency, impact—What Do We Measure Anyway?: Some Comments on the Paper 'A Farewell to the MNCS and Like Size-Independent Indicators' by Abramo and D'Angelo." *Journal of Informetrics*, vol. 10, no. 2, Elsevier Ltd, May 2016, pp. 658–60, doi:10.1016/j.joi.2016.04.008.





## Bibliometrics: The Leiden Manifesto for research metrics

Diana Hicks, Paul Wouters, Ludo Waltman, Sarah de Rijcke & Ismael Rafols

22 April 2015

Use these ten principles to guide research evaluation, urge Diana Hicks, Paul Wouters and colleagues.

# Responsible Metrics Movement

The **Declaration on Research Assessment (DORA)** is a initiative to improve the ways in which researchers and the outputs of scholarly research are evaluated (2012).

The **Metric Tide** is an independent review of the role of metrics in research assessment (2015).

The **Leiden Manifesto** is a list of ten principles to guide research evaluation (2015).

In addition, academic institutions and other organizations have written their own responsible metrics statements.  
See: <https://thebibliomagician.wordpress.com/statements-of-responsible-metrics-2/>

# Best Practices for Metrics or Indicators

*a metric or an indicator is a proxy; it has the authority to represent something else*



Metrics should be easy to understand, open and transparent.



Metrics should not substitute for informed, qualitative assessment.



Different contexts may require different sets of metrics.

## Best Practices for Metrics or Indicators



Allow those evaluated to verify data and analysis.



Account for variation in fields related to publication and citation practices.

Keep in mind that basic citation **metrics can have bias** caused by differences in:

- publication patterns between research fields,
- publication growth and speed,
- different document types,
- time frames
- and/or database coverage.









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Where we are going  
(Technology time)



## A Quick Note: Databases

Database	Item Count and Content Coverage	Availability	Basic Metrics	Advanced Metrics
 by Google	<b>160M records</b> [articles, books, theses, abstracts, court opinions, etc.]	Full free version	Google Scholar	Publish or Perish (free tool)
 by US National Library of Medicine	<b>32M records</b> [5,618 Medline journals as well as life sciences journals from PubMed Central and books from NCBI Bookshelf]	Limited free version; Galter Library full version	iCite	iCite (free tool)
 by Elsevier	<b>75M records</b> [210K books, 120K conferences, 44M patents, 25,100 journals]	Limited free version; Galter Library full version	Scopus	SciVal (no access at Northwestern)
 by Clarivate Analytics	<b>79M records</b> [119K books, 220K conferences, 10M datasets, 46M patents, 34,586 journals]	Limited free version; Galter Library full version	Web of Science	InCites (limited Galter Library access)



## A Quick Note: Databases

### Dimensions

A linked research information dataset that connects grants, publications, datasets and clinical trials to patents and policy documents. Dimensions indexes data from a myriad of sources so that you can track and understand the complete research cycle. The platform includes a free version as well as subscriptions for analytics and cloud services.

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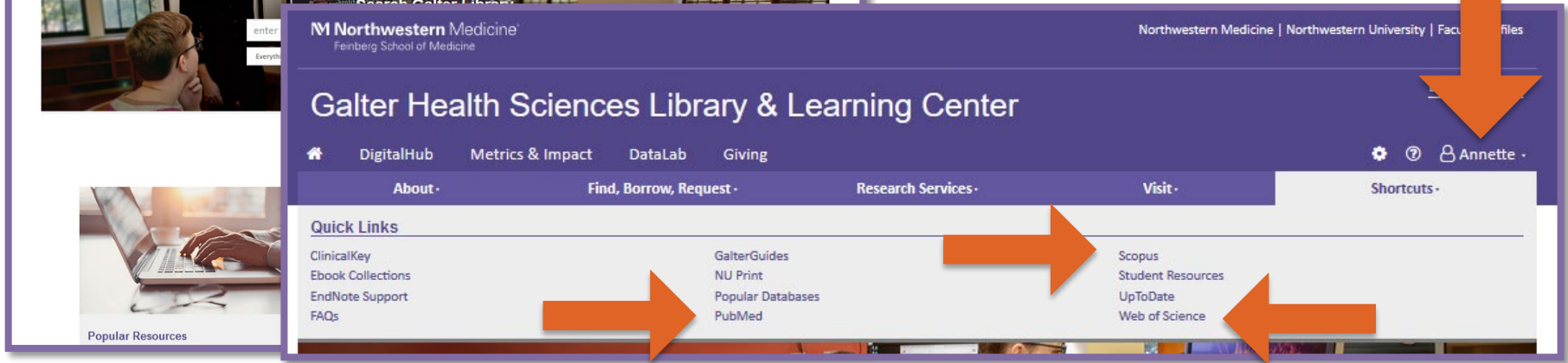
### Microsoft Academic

Microsoft Academic (MA) uses machine readers powered by artificial intelligence (AI) to scan and extract knowledge from all scholarly publications discovered and indexed by Bing. Bing indexes data from a variety of sources ranging from publisher sites to individual authors' personal homepages. MA's AI agent then cleans and organizes these data into a graph database we call the Microsoft Academic Graph (MAG).

# Getting to Scopus, Web of Science and PubMed

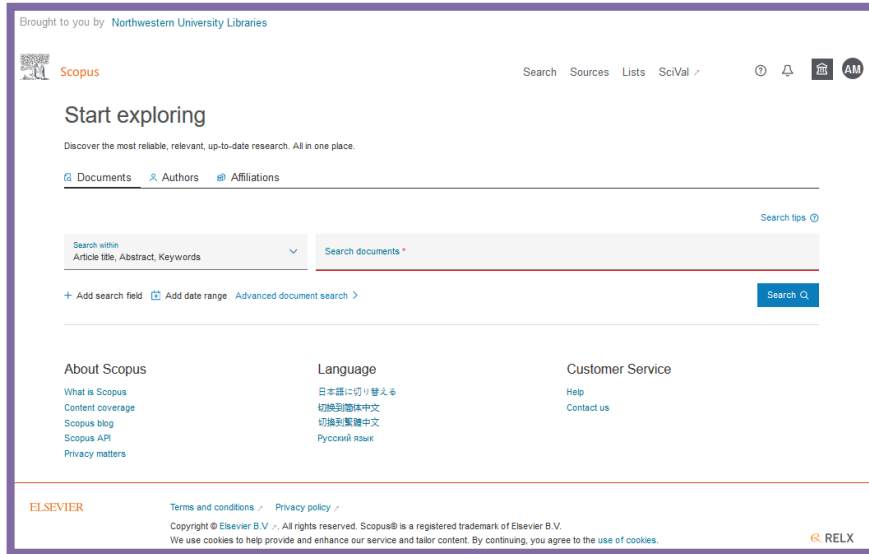


Galter Health Sciences Library & Learning Center:  
[www.galter.northwestern.edu](http://www.galter.northwestern.edu)



To learn more about accessing resources at Galter Library visit the [Online Resource Access](#) page on the Library Services FAQs libguide.

# Scopus and Web of Science Home Pages



Brought to you by **Northwestern University Libraries**

**Scopus** Search Sources Lists SciVal

Start exploring  
Discover the most reliable, relevant, up-to-date research. All in one place.

Documents Authors Affiliations

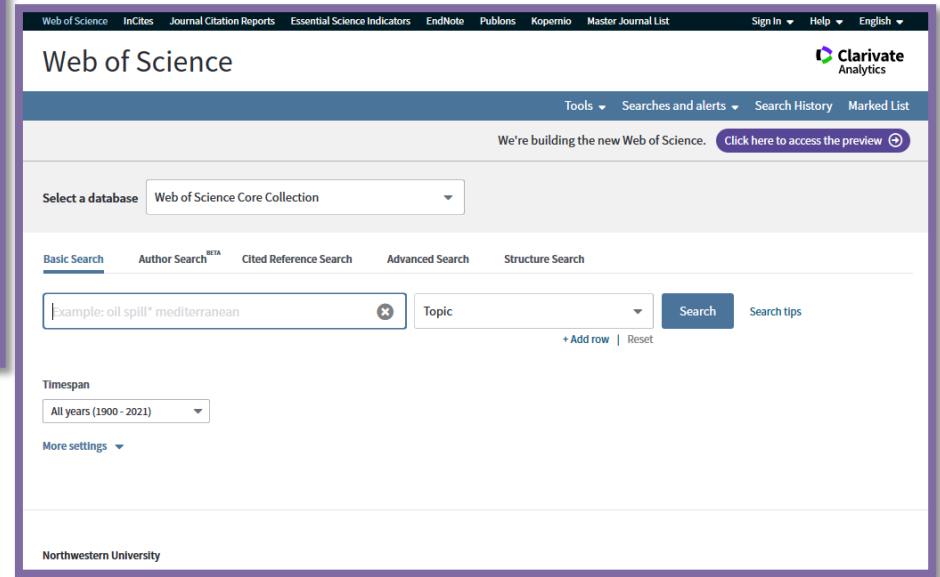
Search within: Article title, Abstract, Keywords. Search documents

About Scopus: What is Scopus, Content coverage, Scopus blog, Scopus API, Privacy matters

Language: 日本語に切り替える, 切换到简体中文, 切换到繁體中文, Прысцяніць рускай

Customer Service: Help, Contact us

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Copyright © Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.  
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Web of Science InCites Journal Citation Reports Essential Science Indicators EndNote Publons Kopernio Master Journal List Sign In Help English

**Web of Science** Clarivate Analytics

Tools Searches and alerts Search History Marked List

We're building the new Web of Science. [Click here to access the preview](#)

Select a database: Web of Science Core Collection

Basic Search Author Search<sup>RE3A</sup> Cited Reference Search Advanced Search Structure Search

Example: oil spill\* mediterranean Topic Search Search tips

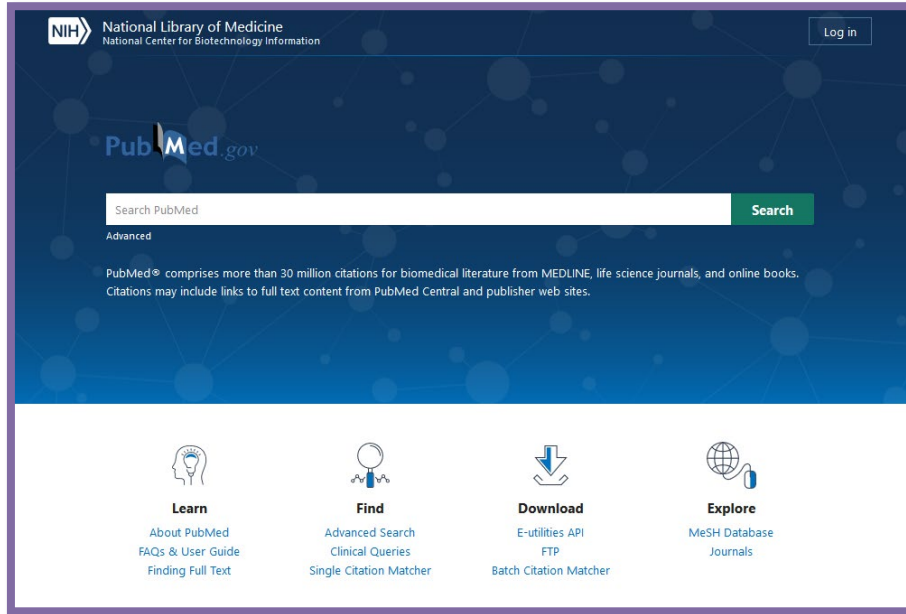
+ Add row | Reset

Timespan: All years (1900 - 2021)

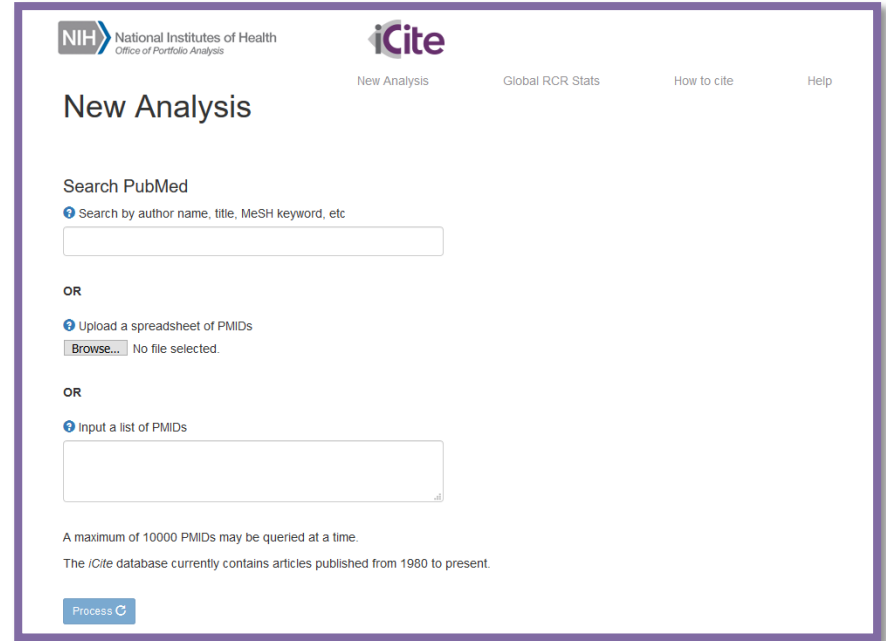
More settings

Northwestern University

# PubMed and iCite

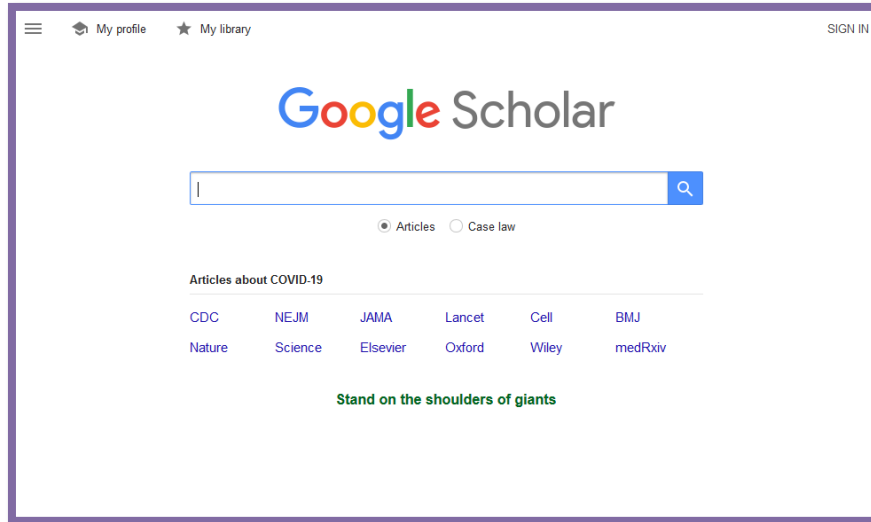


← <https://pubmed.ncbi.nlm.nih.gov/>

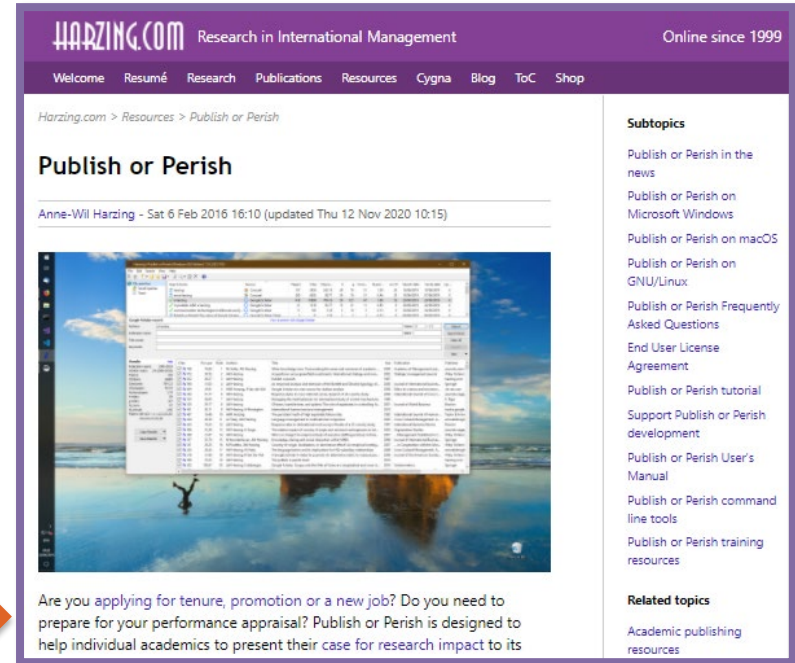


<https://icite.od.nih.gov/analysis> →

# GoogleScholar and Publish or Perish



← <https://scholar.google.com/>



<https://harzing.com/resources/publish-or-perish> →

# Altmetric Bookmarklet

How to get there:

1. Go to Altmetric.com
2. Click on “For Researchers”
3. Scroll down to section entitled “Tools for researchers”
4. Select “Altmetric Bookmarklet”
5. Follow the download instructions

The screenshot shows the Altmetric website interface. At the top, there is a navigation bar with the Altmetric logo and links for 'CONTACT US', 'ABOUT US', and 'EXPLORER LOGIN'. Below this is a secondary navigation bar with links for 'Who are we for?', 'Products', 'About altmetrics', 'About our data', 'Case Studies', 'Blog', 'Events', and 'Support'. The main heading reads 'Bookmarklet for Researchers' with the subtext 'Find the altmetrics for your articles'. Below the heading are three sub-sections: 'Introduction', 'Get started', and 'Troubleshooting'. The main content area is titled 'Article insights for individual researchers' and contains the following text: 'Want to find out the Altmetric details for a paper you've published? Install our free bookmarklet for Chrome, Firefox and Safari to view the online shares and mentions of an article with a single click.' Below this text are three numbered steps: 1. Add bookmarklet to your bookmarks toolbar, 2. Visit any paper, and 3. Get article level metrics with a single click. To the right of these steps are three overlapping screenshots of the Altmetric bookmarklet in use, showing a paper's page with the bookmarklet icon and the resulting altmetric data overlay. To the left of the screenshots is a detailed altmetric badge for a paper with 353 mentions, listing various metrics such as 'Twittered by 243', 'On Facebook Pages', 'Mentioned on 220 Google+ posts', 'Highlighted by 1', 'Picked up by 3 news outlets', 'Blogged by 9', 'Readers on Mendeley', 'Readers on CrossRef', and 'Readers on CrossRef'.





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# Exploring Metrics



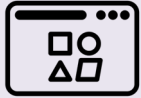


# Author Level Metrics

Author level metrics help track an individual researcher's impact in an academic discipline.

Author Level Metrics	Article or Book Level Metrics	Journal Level Metrics
g-index	Altmetrics Attention Score	CiteScore
h-index	Category Normalized Citation Impact	Eigenfactor
i10-index	Citation Count	Immediacy Index
m-quotient	Field Citation Ratio (FCR)	Journal Impact Factor (JIF)
	Field Weighted Citation Impact (FWCI)	SCImago Journal Rank (SJR)
	Relative Citation Ratio (RCR)	Source Normalized Impact per Paper (SNIP)

# h-index



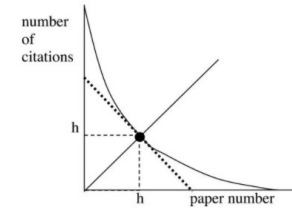
## Use Case

The h-index is used as evidence of the scholarly influence of an author's, or group of authors', body of work.



## Definition

The h-index is equivalent to the number of h publications by an author that have been cited h number of times.



## Location

The h-index can be calculated by hand, however it is offered in databases such as Scopus, Web of Science, and Google Scholar.



## Caveats

- Not field normalized.
- Point of time in a career will affect this metric.
- Inconsistent when you compare it from database to database.



# A Quick Note: Field Normalized



? ≠ ?



? ≠ ?



“a scientometric indicator that in some way corrects for differences between scientific fields...is referred to as a field-normalized indicator”

Reference: Waltman, v. (2018).  
Field normalization of scientometric indicators.  
<https://arxiv.org/ftp/arxiv/papers/1801/1801.09985.pdf>



Frequency of publication



Length of reference list



Number of co-authors

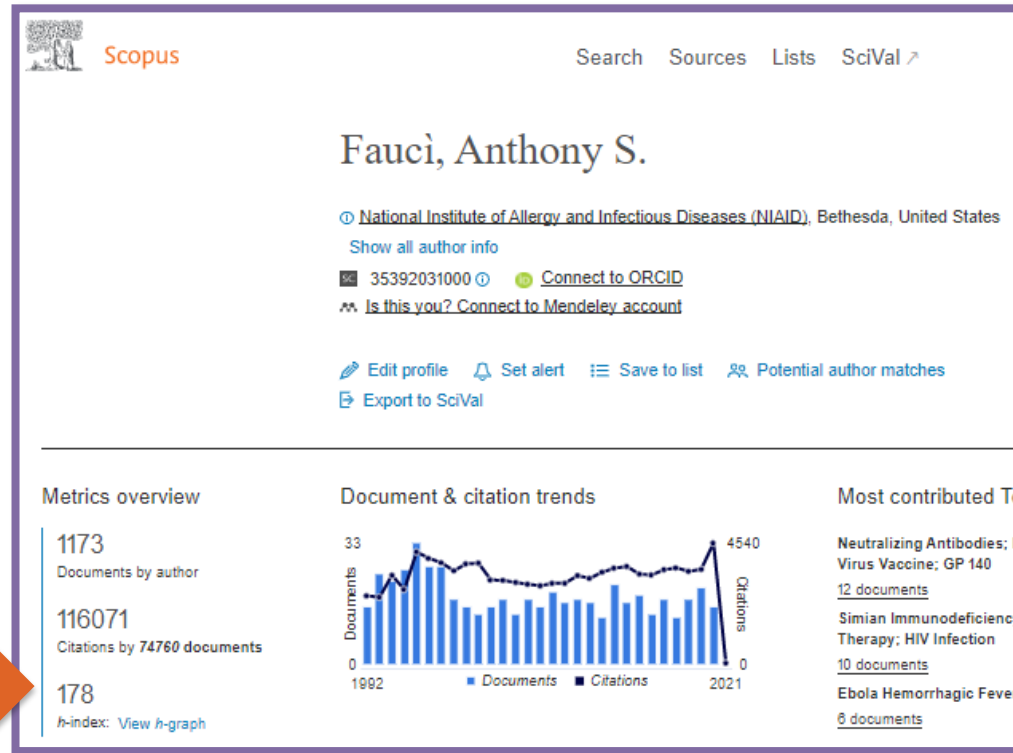
High



Neuroscience  
Life Sciences  
Pharmacology and Toxicology  
Chemistry and Chemical Engineering  
Physics  
Environmental Sciences  
Health Sciences  
Earth Sciences  
Biological Sciences  
Social Sciences  
Materials Science and Engineering  
Mathematics and Computer Sciences  
Art and Humanities

Low

# Where to find it: h-index

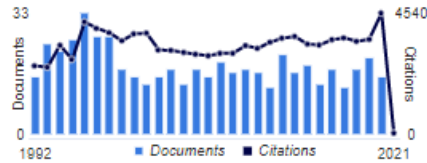


The screenshot shows the Scopus profile for Anthony S. Fauci. The profile includes the Scopus logo, navigation links (Search, Sources, Lists, SciVal), and the author's name. Below the name, it lists the author's affiliation: National Institute of Allergy and Infectious Diseases (NIAID), Bethesda, United States. There are links to show all author info, connect to ORCID (ID: 35392031000), and connect to Mendeley. Action buttons include Edit profile, Set alert, Save to list, Potential author matches, and Export to SciVal.

**Metrics overview**

- 1173 Documents by author
- 116071 Citations by 74760 documents
- 178 h-index: [View h-graph](#)

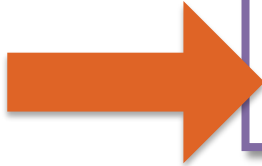
**Document & citation trends**



The chart displays the number of documents and citations from 1992 to 2021. The x-axis represents years, and the y-axis represents the count. Blue bars represent the number of documents, and a black line with square markers represents the number of citations. The number of documents peaks at 33 in 2003, and the number of citations peaks at 4540 in 2021.

**Most contributed To**

- Neutralizing Antibodies; H Virus Vaccine; GP 140  
[12 documents](#)
- Simian Immunodeficiency Therapy; HIV Infection  
[10 documents](#)
- Ebola Hemorrhagic Fever  
[6 documents](#)



# Where to find it: h-index

The screenshot displays the Web of Science interface for the author Anthony S. Fauci. The page includes a navigation bar with various databases and a search bar. The author's profile shows their affiliation with the NIH National Institute of Allergy & Infectious Diseases (NIAID) in Bethesda, MD, USA. A 'Citation Network' sidebar on the right provides key metrics: an H-index of 120, a total of 52,081 times cited, and 40,300 citing articles. A large orange arrow points to the H-index value. Below the metrics, there is a link to 'View full Citation Report'. The main content area shows a list of publications, with the first one being 'Therapy for Early COVID-19 A Critical Need' from JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, published in 2020.

Web of Science InCites Journal Citation Reports Essential Science Indicators EndNote Publons Kopernio Master Journal List Sign In Help English

## Web of Science

Clarivate Analytics

Search Tools Searches and alerts Search History Marked List

### Fauci, Anthony S.

CLAIM THIS RECORD BETA

Unclaimed - This is an algorithmically generated author record

NIH National Institute of Allergy & Infectious Diseases (NIAID)  
NIH  
BETHESDA, MD, USA

Alternative names: Fauci, AS Fauci, Anthony S. Fauci, Anthony Fauci, A. S. Fauci, A.

Organizations:

- 2020-2020 Natl Inst Allergy
- 1978-2020 NIH National Institute of Allergy & Infectious Diseases (NIAID)
- 1978-2019 National Institutes of Health (NIH) - USA
- 2015-2015 Immunoregulat Lab

687 publications from Web of Science Core Collection View as a set of results to export, analyze, and link to full text

Sorted by Date: newest first Filter By: All Publications 1 of 14

Therapy for Early COVID-19 A Critical Need TIMES CITED 1  
Kim, Peter S.; Read, Sarah W.; Fauci, Anthony S.  
JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION  
Volume 324 Issue 21 Page 2149-2150 Published 2020

Are you this Author?  
If you're the author of this record, click "Claim This Record" to verify its documents. When you update your publications list on publons.com, it automatically sends a request to update this author record  
Claim This Record

Citation Network

H-index  
**120**

Sum of Times Cited  
**52,081**

Citing Articles  
**40,300**

View full Citation Report

# Where to find it: h-index

**AS Fauci**  
NIAID  
Verified email at nih.gov  
medicine

[FOLLOW](#)

[GET MY OWN PROFILE](#)

**Cited by** [VIEW ALL](#)

	All	Since 2015
Citations	219970	48287
h-index	221	99
i10-index	1190	528

**TITLE**

- Harrison's principles of internal medicine.** 16805\* 2018  
JL Jameson  
McGraw-Hill Education,
- Harrison's principles of internal medicine.** ~~6404~~ 2018  
JL Jameson  
McGraw-Hill Education,
- Harrison's Principles of Internal Medicine: Volume 2** ~~5240~~\* 2011  
DL Longo, JL Jameson, D Kaspe  
Macgraw-Hill
- Heart disease** 4912 1988  
E Braunwald

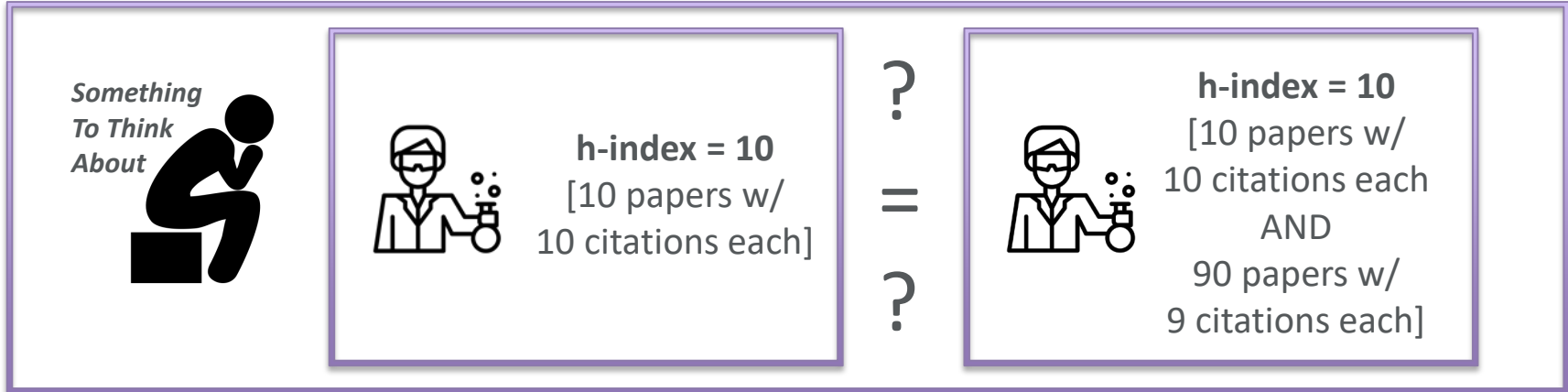
Year	Citations
2013	8000
2014	7500
2015	7500
2016	8000
2017	7500
2018	7500
2019	7500
2020	9500



# Final Thoughts: h-index

**Metric statement:** *Dr. Fauci has created an output of 1174 documents between 1965 and 2020, and his h-index is 178 (Scopus).*

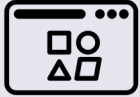
**What that means:** *Dr. Fauci has at least 178 papers that have been cited at least 178 times.*







# i10-index



## Use Case

The 1-10 index is used as evidence of the scholarly influence of an author's, or group of authors', body of work.



## Definition

The i10-index is equivalent to the number of publications by an author with at least 10 citations.



## Location

The i10-index can be found in Google Scholar.



## Caveats

- Not field normalized.
- Only available in Google Scholar.

# Where to find it: i10-index

**AS Fauci**  
NIAID  
Verified email at nih.gov  
medicine

[FOLLOW](#) [GET MY OWN PROFILE](#)

TITLE	CITED BY	YEAR
<a href="#">Harrison's principles of internal medicine.</a> JL Jameson McGraw-Hill Education,	16805 *	2018
<a href="#">Harrison's principles of internal medicine.</a> JL Jameson McGraw-Hill Education,	6494	2018
<a href="#">Harrison's Principles of Internal Medicine: Volume 2</a> DL Longo, JL Jameson, D Kaspe Macgraw-Hill	5210 *	2011
<a href="#">Heart disease</a> E. Braunwald	4912	1988

**Cited by** [VIEW ALL](#)

	All	Since 2015
Citations	219970	48287
h-index	221	99
i10-index	1190	528

Year	Citations
2013	7500
2014	7000
2015	7000
2016	7500
2017	7000
2018	7000
2019	7000
2020	9000



# Final Thoughts: i10-index

**Metric statement:** *Dr. Fauci currently has an i10-index of 1190 (Google Scholar).*

**What that means:** *Dr. Fauci has at least 1190 papers that are cited at least 10 times.*

**Something  
To Think  
About**



Problems with reproducibility in Google Scholar – why?

- Low quality of metadata, including lack of DOI
- Lack of advanced search options
- Data manipulations due to fake documents on the web



## Author Level Metrics – the others

### g-index

---

The g-index is the (unique) largest number such that the top g articles received (together) at least  $g^2$  citations.

*A g-index of 20 means that an academic has published at least 20 articles that **combined** have received at least 400 citations.*

Not available readily calculated in any citation databases.

### m-quotient

---

The m-quotient is calculated by dividing the h-index by the number of years the academic has been active (measured as the number of years since the first published paper).

Not available readily calculated in any citation databases.

# Pop Quiz!

Which of the following situations is a good use of the h-index?



A. Comparing the citation impact of researchers from different fields.



B. Finding highly cited researchers in a field of interest.



C. Deciding which researcher should receive an award.



D. Estimating the broad impact of a researcher's contributions.

# Pop Quiz!

Using the information in the table below, answer the four questions:

Paper	Citations
1	11
2	10
3	7
4	3
5	2

1. What is my h-index?
2. Which paper does NOT contribute to my h-index?
3. Which paper could receive one more citation and my h-index would increase by one?
4. What is my i10-index?

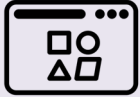


# Article Level Metrics

Article level metrics quantify the reach and impact of published research

Author Level Metrics	Article or Book Level Metrics	Journal Level Metrics
g-index	Altmetrics Attention Score	CiteScore
h-index	Category Normalized Citation Impact	Eigenfactor
i10-index	Citation Count	Immediacy Index
m-quotient	Field Citation Ratio (FCR)	Journal Impact Factor (JIF)
	Field Weighted Citation Impact (FWCI)	SCImago Journal Rank (SJR)
	Relative Citation Ratio (RCR)	Source Normalized Impact per Paper (SNIP)

# Citation Count



## Use Case

Citation count allows you to go beyond a number and describe why and where important ideas are spread from a researcher's original work to subsequent citing works.



## Definition

Citation count is the number of times an article is cited in other bodies of literature.



## Location

Citation databases including Google Scholar, Scopus, Web of Science, and Dimensions, and the citation tool iCite.



## Caveats

- **Not field normalized.**
- **Inconsistent when you compare it from database to database.**
- **Citations are impacted by the age of the paper.**
- **Difficult to track citations to unpublished articles such as preprints or white papers.**



# Where to find it: Citation Count

The screenshot shows the Scopus interface for a document. The document title is "Influenza vaccines for the future" by Lambert, L.C. and Fauci, A.S. The journal is the "New England Journal of Medicine". The metrics section on the right is highlighted with a red circle, showing 244 Citations in Scopus (99th percentile) and 15.57 Field-Weighted Citation Impact. The PlumX Metrics section is also visible below.

Scopus

Search Sources Lists SciVal

Create account Sign in

## Document details

< Back to results | 1 of 17 Next >

Export Download Print E-mail Save to PDF Add to List More... >

Find it @ NU Find it @ NU (opens in a new window) View at Publisher

New England Journal of Medicine  
Volume 363, Issue 21, 18 November 2010, Pages 2036-2044

### Influenza vaccines for the future (Review)

Lambert, L.C.<sup>a</sup> Fauci, A.S.<sup>b</sup>

<sup>a</sup>Division of Microbiology and Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States  
<sup>b</sup>Office of the Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States

Abstract

View references (66)

Metrics View all metrics >

244 Citations in Scopus  
99th percentile

15.57 Field-Weighted Citation Impact

PlumX Metrics  
Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

# Where to find it: Citation Count

The screenshot displays the Web of Science interface for a specific article. The article title is "CURRENT CONCEPTS Influenza Vaccines for the Future". The authors listed are Lambert, LC (Lambert, Linda C.) and Fauci, AS (Fauci, Anthony S.). The journal is the "NEW ENGLAND JOURNAL OF MEDICINE", Volume 363, Issue 21, published in 2010. The DOI is 10.1056/NEJMr1002842. The document type is a Review. The keywords include "RANDOMIZED CONTROLLED-TRIAL; RESEARCH-AND-DEVELOPMENT; PANDEMIC INFLUENZA; MF59-ADJUVANTED INFLUENZA; ANTIBODY-RESPONSE; UNITED-STATES; DNA VACCINES; A VIRUSES; IMMUNOGENICITY; SAFETY".

On the right side of the interface, the "Citation Network" section shows the article is in the "Web of Science Core Collection" and has been cited 214 times. Below this, it states "231 in All Databases". The number "214" is circled in orange.

Navigation and utility buttons at the top include "Find it @ NU", "Look Up Full Text", "Full Text from Publisher", "Export...", and "Add to Marked List". The top navigation bar includes "Web of Science", "InCites", "Journal Citation Reports", "Essential Science Indicators", "EndNote", "Publons", "Kopernio", "MasterSignalList", "Help", and "English".

# Where to find it: Citation Count



The screenshot shows a Google Scholar search interface. The search bar contains the text "Influenza vaccines for the future". Below the search bar, the results are displayed. The first result is titled "[HTML] Influenza vaccines for the future" and is from the New England Journal of Medicine (NEJM). The citation count "Cited by 379" is circled in orange. The interface also shows options for filtering results by time range and links to the user's profile and library.

Google Scholar "Influenza vaccines for the future" SIGN IN

Articles About 439 results (0.05 sec) My profile My library

Any time [HTML] **Influenza vaccines for the future** [HTML] nejm.org  
Since 2021 LC Lambert, AS Fauci - New England Journal of Medicine, 2010 - Mass Medical Soc  
Since 2020 New technologies can revolutionize influenza vaccine design, production, and delivery. In  
Since 2017 the near future, advances should reduce vaccine production time, provide enhanced  
Custom range... protection, and end mismatches between vaccine strains and circulating viruses.  
☆ 379 Cited by 379 Related articles All 13 versions

# Where to find it: Citation Count

**NIH** National Institutes of Health  
Office of Portfolio Analysis

**iCite**

New Analysis Global RCR Stats How to cite Help

## Results

[Citing Papers](#) [Referenced Papers](#)

**Influence** **Translation** **Citations**

Total Pubs	Pubs Per Year	Total Citations	MAX	MEAN	SEM	MED
1	1.00	200	200	200.00	0.00	200.00

**Pubs by Year** **Total Citations by Publication Year** **Total Citations by Year Cited** **Citations per Pub by Year**

**Customization**  
As you make changes below, the summary information and charts above are updated.

From 2010 To 2010  Only research articles  Only papers cited by clinical articles  Only clinical articles [Clear Filters](#) [Export](#) Total Pubs: 1

<input checked="" type="checkbox"/> PMID	Year	Title	Authors	Journal
<input checked="" type="checkbox"/> 21083368	2010	Influenza vaccines for the future.	Linda C Lambert, Anthony S F	N. Engl. J. Med.

1 to 1 of 1 Page 1 of 1



# Final Thoughts: Citation Count

**Metric statement:** *The review article “Influenza vaccines for the future” which was co-authored by Dr. Fauci has 244 citations (Scopus).*

**What that means:** *There are 244 publications that have used this paper in their reference list since the paper was published in 2010.*

*Something  
To Think  
About*

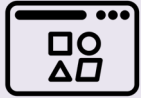


Self citations: To include or not to include?

For: You are an expert in a new field or are making strides in a field that continues to build on itself.

Against: Including self-citations makes you concerned that there will be an impression that you are gaming the system.

# Field Weighted Citation Impact (FWCI)



## Use Case

The FWCI facilitates the benchmarking of citation performance across groups of different size, disciplinary scope and age, such as research large groups, institutions, or geographic regions.



## Definition

The FWCI is the ratio of the document's citations to the average number of citations received by all similar documents (same document type, publication and field) over a three-year window (in the publication year and the following three years).

$$FWCI_i = \frac{c_i}{e_i}$$



## Location

The FWCI can be found in Scopus (SciVal).



## Caveats

- Is field normalized.
- For papers published in more than one field, the FWCI is determined based on a harmonic mean of the scores from those fields so that each field makes an equal contribution to the metric.
- Only available for publications indexed in Scopus.

# Where to find it: Field Weighted Citation Impact (FWCI)

The screenshot displays the Scopus interface for a document. At the top, the Scopus logo and navigation links (Search, Sources, Lists, SciVal) are visible. The main heading is "Document details". Below this, the document is identified as "1 of 1" with various action buttons like "Download", "Print", and "E-mail". The article title is "Covid-19 - Navigating the uncharted" from the "New England Journal of Medicine", published in Volume 382, Issue 13, on 26 March 2020. The authors listed are Fauci, A.S., Lane, H.C., and Redfield, R.R. The article is an editorial and is available in Open Access. On the right side, the "Metrics" section is expanded, showing "359 Citations in Scopus" (99th percentile) and "157.70 Field-Weighted Citation Impact". A large orange arrow points to the FWCI value. Below the metrics, the "PlumX Metrics" section is partially visible, indicating usage, captures, mentions, social media, and citations beyond Scopus.



# Final Thoughts: Field Weighted Citation Impact (FWCI)

**Metric statement:** *This 2020 editorial by Dr. Fauci has a field weighted citation impact of 157.70, indicating it is 157 times more cited than expected (Scopus).*

**What that means:** *The actual number of citations that Dr. Fauci's editorial received is significantly higher than the average expected for an editorial published in the same field at the same time.*

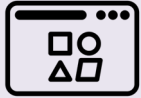
*Something  
To Think  
About*



“The FWCI is a sophisticated indicator and normalizes citations across publication year, field, and document type. It is used by various research bodies to benchmark research impact regardless of differences in entity size, disciplinary profile, age, and publication-type composition.”



# Relative Citation Ratio (RCR)



## Use Case

The RCR helps to understand the relative scholarly influence that a scientific article has had, as compared to other NIH-funded research.



## Definition

The RCR represents a citation-based measure that is calculated as the cites/year of each paper, normalized to the citations per year received by NIH-funded papers in the same field and year.

$$RCR_i = \frac{ACR_i}{ECR_i^Y}$$



## Location

The RCR can be found in iCite.



## Caveats

- Is field normalized.
- Benchmarked on NIH funding, therefore likely not useful outside of US.
- Only available for MEDLINE citations from 1995 on.
- Not available for papers published in the last fiscal year.

# Where to find it: Relative Citation Ratio (RCR)

**NIH** National Institutes of Health  
Office of Portfolio Analysis

**iCite**

New Analysis Global RCR Stats How to cite Help

## Results

Influence Translation Citations

Roll over table headers for definitions; visit the [Global RCR Stats](#) page for percentile tables

[Citing Papers](#) [Referenced Papers](#)

Total Pubs	Pubs Per Year	Cites Per Year				Relative Citation Ratio (RCR)				Weighted RCR
		MAX	MEAN	SEM	MED	MAX	MEAN	SEM	MED	
1	1.00	69.00	69.00	0.00	69.00	20.74	20.74	0.00	20.74	20.74

**RCR Distribution**

**Pubs by Year**

**Weighted RCR by Year**

**Customization**

As you make changes below, the summary information and charts above are updated.

From 2018 To  Only research articles  Only papers cited by clinical articles  Only clinical articles [Clear Filters](#) [Export](#) Total Pubs: 1

<input checked="" type="checkbox"/>	PMID	Y...	Title	Authors	Journal	NIH Percen...	RCR
<input checked="" type="checkbox"/>	2950...	2018	A Universal Influenza Vaccine: The Strategic Plan for the Natio	Emily J Erbeling, Diane J F	J. Infect. Dis.	99.6	20.74

1 to 1 of 1 Page 1 of 1



# Final Thoughts: Relative Citation Ratio (RCR)

**Metric statement:** *This 2020 article by Dr. Fauci has a relative citation ratio of 20.74, indicating it has been cited 20x more than expected when compared to other NIH funded work (iCite).*

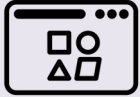
**What that means:** *The actual number of citations that Dr. Fauci's article received is significantly higher than the average expected for a similar document published by funded NIH researchers at the same time.*

Something  
To Think  
About



**Applying for NIH funding?** “Because the RCR makes it straightforward to communicate how a particular article compares to NIH R01-funded works, it has the potential to be a particularly compelling metric among users focused on NIH funding as a primary measure of impact.”

# Altmetric Attention Score



## Use Case

The Altmetric Attention Score is best used by individual researchers to understand the overall volume of attention that research has received online.



## Definition

The Altmetric Attention Score represents a weighted approximation of all the attention that the company Altmetric can find for a research output. The score is based on three main factors, which are volume, sources, and authors. The colors of the Altmetric donut each represent a different source of attention.



## Location

The Altmetric Attention Score is included in some databases and repositories. It can also be accessed via the Altmetric Bookmarklet.



## Caveats

- Score can increase or decrease over time.
- Attention can be positive or negative.
- Score does not include Mendeley readers, Dimensions citation counts and CiteULike bookmarks.



## A Quick Note: Alternative Metrics

- New way to measure engagement with research outputs
- Data that explains both the volume and nature of attention research has received on line
- Provides evidence of engagement with diverse audiences and potential impact



- Can measure how many people have shared or engaged with a scholarly output online (Twitter, news outlets, Wikipedia citations, Mendeley readers, post-publication peer review, citations in policy documents)
- Complementary to bibliometrics (citation-based)

# Where to find it: Altmetric Attention Score

THE LANCET

Log in Register Subscribe

THE LANCET COMMISSIONS | VOLUME 393, ISSUE 10178, P1331-1384, MARCH 30, 2019

Subscribe Save Share

## Building a tuberculosis-free world: The *Lancet* Commission on tuberculosis

Michael J A Reid, MD • Nimalan Arinaminpathy, PhD • Amy Bloom, MD • Prof Barry R Bloom, PhD • Catharina Boehme, MD • Prof Richard Chaisson, MD • et al. [Show all authors](#) [Show footnotes](#)

Published: March 20, 2019 • DOI: [https://doi.org/10.1016/S0140-6736\(19\)30024-8](https://doi.org/10.1016/S0140-6736(19)30024-8) Check for updates

426

- Picked up by 27 news outlets
- Blogged by 1
- Referenced in 1 policy sources
- Tweeted by 304
- On 4 Facebook pages
- Highlighted by 1 platforms

Click for more details

PlumX Metrics

Tuberculosis can be treated, prevented, and cured. Rapid, sustained

Recommend this journal

Close x

426

- Picked up by 27 news outlets
- Blogged by 1
- Referenced in 1 policy sources
- Tweeted by 304
- On 4 Facebook pages
- Highlighted by 1 platform

Click for more details

Altmetric

Building a tuberculosis-free world: The Lancet Commission on tuberculosis

Overview of attention for article published in The Lancet, March 2019

426

About this Attention Score

- In the top 5% of all research outputs scored by Altmetric
- High Attention Score compared to outputs of the same age (99th percentile)
- High Attention Score compared to outputs of the same age and source (96th percentile)

Mentioned by

- 27 news outlets
- 1 blog
- 1 policy source
- 304 tweeters
- 4 Facebook pages
- 1 research highlight platform

Citations

- 109 Dimensions

SUMMARY News Blogs Policy documents Twitter Facebook Research highlights More...

Title Building a tuberculosis-free world: The Lancet Commission on tuberculosis

Published in The Lancet, March 2019

DOI 10.1016/s0140-6736(19)30024-8

Pubmed ID 30904263

Authors Michael J A Reid, Nimalan Arinaminpathy, Amy Bloom, Barry R Bloom, Catharina Boehme, Richard... [show]

View on publisher site

Alert me about new mentions

TWITTER DEMOGRAPHICS MENDELEY READERS ATTENTION SCORE IN CONTEXT

The data shown below were collected from the profiles of 304 tweeters who shared this research output. [Click here to find out more about how the information was compiled.](#)

Geographical breakdown

Country	Count	As %
USA	55	18.1%
UK	15	4.9%
Canada	10	3.3%
Other	164	53.7%

Demographic breakdown

Type	Count	As %
Academic	150	49.3%
Journalist	100	33.0%
Other	54	17.7%

THE LANCET COMMISSIONS | VOLUME 393, ISSUE 10178, P1331-1384, MARCH 30, 2019

## Building a tuberculosis-free world: The *Lancet* Commission

Michael J A Reid, MD • Nimalan Arinaminpathy, PhD • Amy Bloom, MD • Prof Barry R F

Catharina Boehme, MD • Prof Richard Chaisson, MD • et al. [Show all authors](#) • [Show footnotes](#)

Published: March 20, 2019 • DOI: [https://doi.org/10.1016/S0140-6736\(19\)30024-8](https://doi.org/10.1016/S0140-6736(19)30024-8) Check for updates

### Citations

Citation Indexes: **92**

### Captures

Exports-Saves: **2**

Readers: **283**

### Mentions

Blog Mentions: **1**

News Mentions: **7**

References: **1**

### Social Media

Shares, Likes &

Comments: **272**

Tweets: **398**

[see details](#)

PlumX Metrics

PlumX Metric

Tuberculosis can be treated, prevented, and cured. Rapid, sustained declines in tuberculosis deaths in many countries during the past 50 years provide compelling evidence that ending the pandemic is feasible. Yet this disease—which has plagued humanity since before recorded history and has killed hundreds of millions of people over the past two centuries—remains a relentless scourge. In 2017, 1·6 million people died from tuberculosis, including 300 000 people with HIV, representing more deaths than any other infectious disease. Moreover, in many parts of the world, drug-resistant forms of tuberculosis threaten struggling control efforts. The world can no longer ignore the enormous pall cast by the tuberculosis epidemic. Going forward, the global tuberculosis response must be an inclusive, comprehensive response within the broader sustainable development agenda. No one-size-fits-all approach



Scopus

Search Sources Lists SciVal

## Document details

< Back to results | < Previous 4 of 14 Next >

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Find it at NU Find it @ NU (opens in a new window) View at Publisher

The Lancet  
Volume 393, Issue 10178, 30 March - 5 April 2019, Pages 1331-1384

### Building a tuberculosis-free world: The Lancet Commission on tuberculosis (Review) (Open Access)

Reid, M.J.A.<sup>1,2</sup>, Arinaminpathy, N.<sup>3</sup>, Bloom, A.S.<sup>4</sup>, Bloom, B.R.<sup>1</sup>, Boehme, C.<sup>5</sup>, Chaisson, R.<sup>1</sup>, Chin, D.P.<sup>6</sup>, Churchyard, G.<sup>7</sup>, Cox, Dibu, L.<sup>8</sup>, Dylbul, M.<sup>9</sup>, Farrar, J.<sup>10</sup>, Fiebigel, A.S.<sup>11</sup>, Fekadu, E.<sup>12</sup>, Fujiwara, R.I.<sup>13</sup>, Hallett, T.B.<sup>14</sup>, Hanson, C.L.<sup>15</sup>, Harrington, M.<sup>16</sup>, Herbert, N.<sup>17</sup>, Hoggewill, P.C.<sup>18</sup>, Ikeda, C.<sup>19</sup>, Jamison, D.T.<sup>20</sup>, Khan, A.J.<sup>21</sup>, Koek, I.<sup>22</sup>, Krishnan, N.M.<sup>23</sup>, Motosoaedi, A.<sup>24</sup>, Pai, M.<sup>25</sup>, et al.

View additional authors

<sup>1</sup>Department of Medicine, University of California San Francisco, San Francisco, CA, United States  
<sup>2</sup>Department of Epidemiology and Biostatistics, University of California San Francisco, San Francisco, CA, United States  
<sup>3</sup>Institute for Global Health Sciences, University of California San Francisco, San Francisco, CA, United States

View additional affiliations

Abstract [No abstract available] View references (434)

SciVal Topic Prominence

Topic: Pulmonary Tuberculosis | Multidrug Resistant Tuberculosis | Directly Observed Therapy

Prominence percentile: 97.947

Reaxys<sup>®</sup> Chemistry database information  
Substances

Metrics

92 Citations in Scopus

Field-Weighted Citation Impact

PlumX Metrics Usage, Captures, Mentions, Social Media and Citations beyond Scopus

Citations  
Citation Indexes: 92

Captures  
Exports-Saves: 2  
Readers: 283


Mentions  
Blog Mentions: 1  
News Mentions: 7  
References: 1

Social Media  
Shares, Likes & Comments: 272  
Tweets: 398

see details

## PlumX Metrics

Sign in Embed PlumX Metrics



### Building a tuberculosis-free world: The Lancet Commission on tuberculosis

Citation Data: The Lancet, ISSN: 0140-6736, Vol: 393, Issue: 10178, Page: 1331-1384  
Publication Year: 2019

Metric Options:  Counts  1 Year  3 Year

92 Citations	459 Usage	285 Captures
9 Mentions	670 Social Media	

Home Overview

#### Highlights

- News Mentions
- Blog Mentions
- Wikipedia References
- Twitter

#### Metrics Details

<b>CITATIONS</b>	92
Citation	92
Indexes	
CrossRef	92
Scopus	91
<b>USAGE</b>	459
Abstract	406
Views	
*EBSCO	406
Historical data only	
Clicks	32
Bitly	31
Bitly	1
Link-outs	21
*EBSCO	21

#### Most Recent Tweets

See all tweets

**The Lancet HIV** @TheLancetHIV  
Replying to @TheLancetHIV  
The Lancet Commission on Building a tuberculosis-free world is available here [thelancet.com/journals/lance...](http://thelancet.com/journals/lance...)

7:42 AM · Mar 11, 2020

1 See The Lancet HIV's ott

#### Review Description

The Lancet

#### Bibliographic Details

PMID: 30904263  
DOI: 10.1016/s0140-6736(19)30024-8

#### AUTHOR(S):

Reid, Michael J A; Arinaminpathy, Nimalan; Bloom, Amy; Bloom, Barry R; Boehme, Catharina; Chaisson, Richard; Chin, Daniel P; Churchyard, Gav

8



# Final Thoughts: Altmetric Attention Score

**Metric statement:** *The Attention Score for this 2019 review by Dr. Fauci indicates that it is in the 99<sup>th</sup> percentile when compared to outputs of the same age (Altmetric).*

**What that means:** *This review received significantly more on-line attention when compared to all other reviews published in 2019.*

*Something  
To Think  
About*



**More impact statement options include:**

- There are 4 policy documents that reference this research output.
- There have been 395 tweets from 303 users, with an upper bound of 4,919,556 followers.
- There have been 38 news stories from 27 outlets about this output.



# Article Level Metrics – the others

## Category Normalized Citation Impact (CNCI)

---

Calculated by dividing the actual count of citing items by the expected citation rate for documents with the same document type, year of publication and subject area.

Found in the InCites.

Is field normalized.

## Field Citation Ratio (FCR)

---

Calculated by dividing the number of citations a paper has received by the average number received by documents published in the same year and in the same Fields of Research (FoR) category.

Found in the Dimensions database.

Is field normalized.



# Pop Quiz!

Trick question:

Paper A received 2000 citations, paper B received 100 citations, which paper has the highest citation impact?

# Pop Quiz!

Which of the following are good uses for the Field Weighted Citation Impact metric?



A. To identify highly impactful papers in a field.



B. To identify highly impactful publications regardless of the year they were published.



C. To review papers in a small field.



D. All of the above.

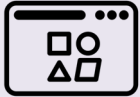


# Journal Level Metrics

Journal level metrics measure the impact, reach, or prestige of a journal or a group of journals.

Author Level Metrics	Article or Book Level Metrics	Journal Level Metrics
g-index	Altmetrics Attention Score	CiteScore
h-index	Category Normalized Citation Impact	Eigenfactor
i10-index	Citation Count	Immediacy Index
m-quotient	Field Citation Ratio (FCR)	Journal Impact Factor (JIF)
	Field Weighted Citation Impact (FWCI)	SCImago Journal Rank (SJR)
	Relative Citation Ratio (RCR)	Source Normalized Impact per Paper (SNIP)

# Journal Impact Factor (JIF)



## Use Case

The JIF is useful in comparing the relative influence of journals within a discipline, as measured by citations.



## Definition

The JIF is calculated by taking all citations to the journal in the current JCR year to items published in the previous two years, divided by the total number of scholarly items (these comprise articles, reviews, and proceedings papers) published in the journal in the previous two years.

$$\text{2019 JIF} = \frac{\text{Citations in 2019 to items published in 2017 + 2018}}{\text{Number of citable items in 2017 + 2018}}$$



## Location

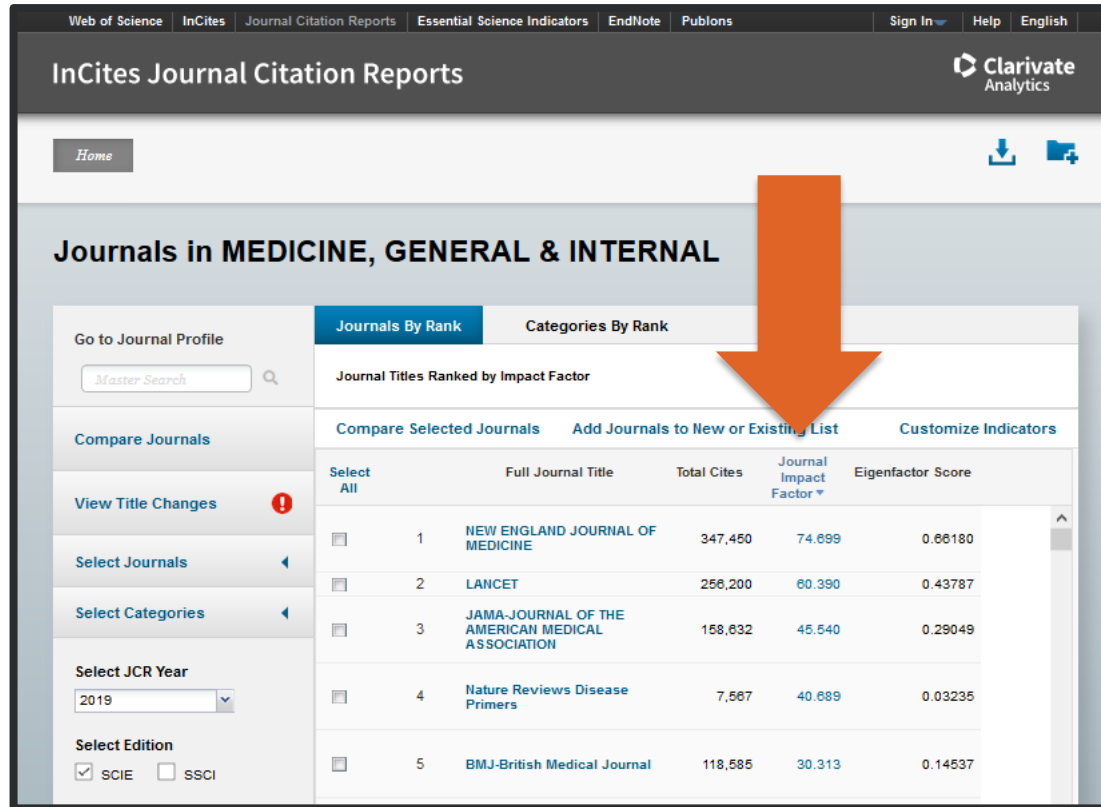
The JIF is located in the Journal Citation Reports (WOS).



## Caveats

- Not field normalized.
- Only available for journals indexed in the Science Citation Index and Social Sciences Citation Index in the Web of Science Core Collection.
- Numerator can be inflated by items not counted in the denominator.
- Can be affected by self-citations or highly cited articles within the journal.

# Where to find it: Journal Impact Factor (JIF)



The screenshot displays the InCites Journal Citation Reports interface. The main heading is "Journals in MEDICINE, GENERAL & INTERNAL". The page is divided into a left sidebar and a main content area. The sidebar includes options like "Go to Journal Profile", "Compare Journals", "View Title Changes", "Select Journals", "Select Categories", "Select JCR Year" (set to 2019), and "Select Edition" (with SCIE checked). The main content area shows "Journal Titles Ranked by Impact Factor" with a table of results. An orange arrow points to the "Journal Impact Factor" column in the table.

Select		Full Journal Title	Total Cites	Journal Impact Factor	Eigenfactor Score
<input type="checkbox"/>	1	NEW ENGLAND JOURNAL OF MEDICINE	347,450	74.699	0.86180
<input type="checkbox"/>	2	LANCET	256,200	60.390	0.43787
<input type="checkbox"/>	3	JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	158,632	45.540	0.29049
<input type="checkbox"/>	4	Nature Reviews Disease Primers	7,567	40.689	0.03235
<input type="checkbox"/>	5	BMJ-British Medical Journal	118,585	30.313	0.14537



# Final Thoughts: Journal Impact Factor (JIF)

**Metric statement:** *The Lancet has a JIF of 60.39, which is the second highest journal impact factor of the 165 journals in the category of Medicine, General & Internal (InCites JCR). Of the 688 documents authored by Dr. Fauci that are indexed in Web of Science, 10 of them were published in The Lancet.*

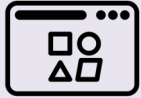
**What that means:** *This means that documents published in The Lancet in the most recent two years should receive on average 60.4 citations in the most recent year.*

**Something  
To Think  
About**



“The JIF was devised to measure the influence of journals but has been widely used to judge individual articles. This use is based on the specious assumption that all articles in a journal are equally influential, as reflected by their number of citations. This misuse can lead to weak articles being overvalued and important work being undervalued.”

# CiteScore



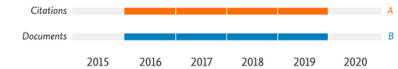
## Use Case

The CiteScore is useful in comparing the relative influence of journals within a discipline, as measured by citations.



## Definition

The CiteScore is equivalent to the number of citations to documents (articles, reviews, conference papers, book chapters, and data papers) by a journal over four years, divided by the number of the same document types indexed in Scopus and published in those same four years.



$$\text{CiteScore 2019} = \frac{A}{B}$$



## Location

The CiteScore is located in Scopus.



## Caveats

- Not field-normalized.
- Only available for journals indexed in Scopus.
- Can be affected by self-citations or highly cited articles within the journal.

# Where to find it: CiteScore

The screenshot shows the Scopus interface for the journal 'The Lancet'. The CiteScore 2019 value of 73.4 is highlighted with a large orange arrow. Below this, the CiteScoreTracker 2020 value is shown as 88.4. The CiteScore rank 2019 is also displayed, showing a rank of #1529 and a percentile of 99th in the General Medicine category.

**Source details**

**The Lancet**  
Scopus coverage years: from 1823 to Present  
Publisher: Elsevier  
ISSN: 0140-6736 E-ISSN: 1474-547X  
Subject area: [Medicine: General Medicine](#)

[View all documents >](#) [Set document alert](#) [Save to source list](#) [Journal Homepage](#) [Find it at NU](#)

**CiteScore 2019**  
73.4

**SJR 2019**  
14.554

**SNIP 2019**  
21.313

**CiteScore** CiteScore rank & trend Scopus content coverage

**Improved CiteScore methodology**  
CiteScore 2019 counts the citations received in 2016-2019 to articles, reviews, conference papers, book chapters and data papers published in 2016-2019, and divides this by the number of publications published in 2016-2019.  
[Learn more >](#)

**CiteScore 2019**  $73.4 = \frac{122,642 \text{ Citations 2016 - 2019}}{1,671 \text{ Documents 2016 - 2019}}$   
Calculated on 06 May, 2020

**CiteScoreTracker 2020**  $88.4 = \frac{142,131 \text{ Citations to date}}{1,608 \text{ Documents to date}}$   
Last updated on 10 January, 2021 • Updated monthly

**CiteScore rank 2019**

Category	Rank	Percentile
Medicine	#1529	99th
General Medicine		



## Final Thoughts: CiteScore

**Metric statement:** *The Lancet has a CiteScore of 73.4, which is the highest CiteScore of the 529 journals in the category of General Medicine (Scopus). Of the 1,174 documents authored by Dr. Fauci that are indexed in Scopus, 14 of them were published in The Lancet.*

**What that means:** *The documents published in The Lancet in the most recent four years should receive on average 73.4 citations in the most recent year.*

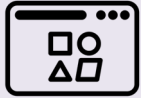
**Something  
To Think  
About**



### Consider using the journal quartile

Both CiteScore and JIF offer quartile ranks for journals in their fields, which are derived by assigning each journal a percentile rank. Journals with a percentile rank of 0.25 or below occupy the top quartile of their field.

# Immediacy Index



## Use Case

The Immediacy Index can provide a useful perspective when comparing journals specializing in cutting-edge research.



## Definition

The Immediacy Index indicates the average number of times an article is cited in the year it is published. It is calculated by dividing the number of citations to articles published in a given year by the number of articles published in that year.

$$\text{Immediacy Index} = \frac{\text{Citations from JCR year to items in JCR year}}{\text{Citable Items in JCR year}}$$



## Location

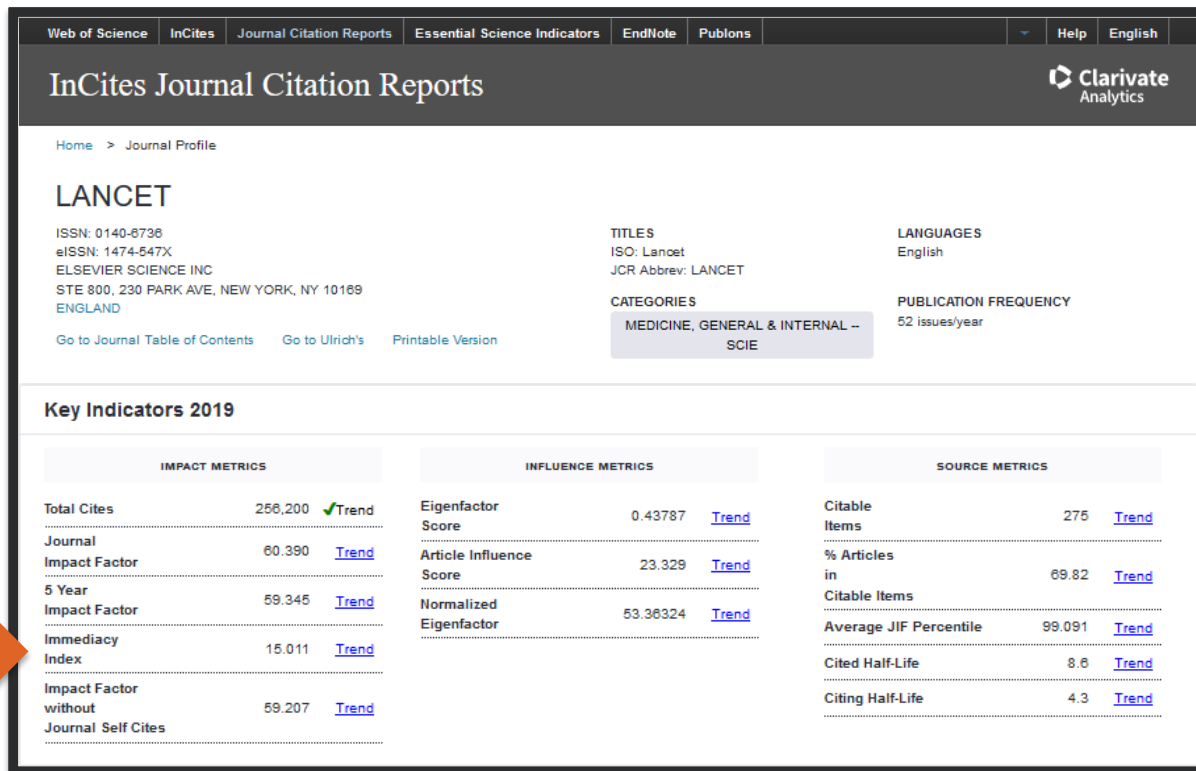
The Immediacy Index is located in the Journal Citation Reports (WOS).



## Caveats

- Not field normalized.
- May not predict ultimate citation performance.
- Not reliable for items published very late in the year.

# Where to find it: Immediacy Index



Web of Science | InCites | Journal Citation Reports | Essential Science Indicators | EndNote | Publons | Help | English

## InCites Journal Citation Reports

Clarivate Analytics

Home > Journal Profile

### LANCET

ISSN: 0140-6736  
eISSN: 1474-547X  
ELSEVIER SCIENCE INC  
STE 800, 230 PARK AVE, NEW YORK, NY 10169  
ENGLAND

Go to Journal Table of Contents | Go to Ulrich's | Printable Version

TITLES  
ISO: Lancet  
JCR Abbrev: LANCET

LANGUAGES  
English

CATEGORIES  
MEDICINE, GENERAL & INTERNAL -- SCIE

PUBLICATION FREQUENCY  
52 issues/year

### Key Indicators 2019

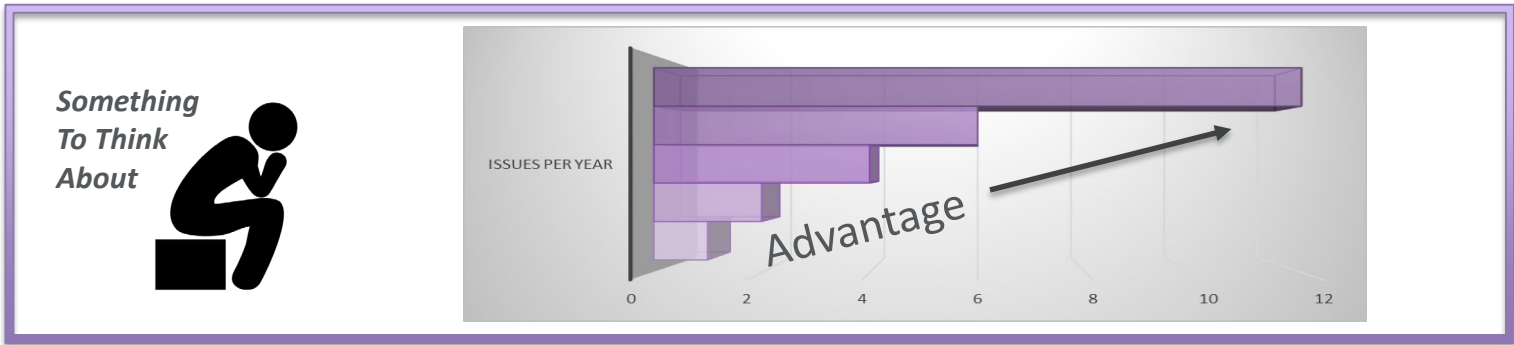
IMPACT METRICS		INFLUENCE METRICS		SOURCE METRICS	
Total Cites	256,200 <a href="#">Trend</a>	Eigenfactor Score	0.43787 <a href="#">Trend</a>	Citable Items	275 <a href="#">Trend</a>
Journal Impact Factor	60.390 <a href="#">Trend</a>	Article Influence Score	23.329 <a href="#">Trend</a>	% Articles in Citable Items	69.82 <a href="#">Trend</a>
5 Year Impact Factor	59.345 <a href="#">Trend</a>	Normalized Eigenfactor	53.36324 <a href="#">Trend</a>	Average JIF Percentile	99.091 <a href="#">Trend</a>
<b>Immediacy Index</b>	<b>15.011 <a href="#">Trend</a></b>			Cited Half-Life	8.6 <a href="#">Trend</a>
Impact Factor without Journal Self Cites	59.207 <a href="#">Trend</a>			Citing Half-Life	4.3 <a href="#">Trend</a>



# Final Thoughts: Immediacy Index

**Metric Statement:** *The Lancet has an Immediacy Index of 15 (InCites JCR). A 2015 article co-authored by Dr. Fauci published in Lancet was cited 21 times (Web of Science) that same year.*

**What that means:** *On average documents published in this journal will receive 15 citations in their first year of publication.*





# Journal Level Metrics – the others

## Eigenfactor

---

Attempts to calculate a percentage estimate of the total time that all journal users spend with that journal compared to all other journals. The numbers are normalized so that the total of all Eigenfactors is 100.

Can be found on the Eigenfactor.org website and on the Journal Citation Report.

## SCImago Journal Rank (SJR)

---

Based on the transfer of prestige from a journal to another one; such prestige is transferred through the references that a journal does to the rest of the journals and to itself.

Available in on the SCImago Journal & Country Rank website as well as in Scopus.

## Source Normalized Impact per Paper (SNIP)

---

Calculated as the number of citations given in the present year to publications in the past three years divided by the total number of publications in the past three years.

Is field normalized.

Can be found on the CWTS Journal Indicators website and in Scopus.





# Pop Quiz!

## True or False:

- You can use the Journal Impact Factor to compare journals in different fields.
- The average JIF for an author is a good indication of the quality of their work.

# Metrics – Where to find them

	g-index	h-index	i10-index	m-quotient	Altmetric Attention Score	Category Normalized Citation Impact (CNCI)	Citation Count	Field Citation Ratio (FCR)	Field Weighted Citation Impact (FWCI)	Relative Citation Ratio (RCR)	CiteScore	Eigenfactor	Immediacy Index	Journal Impact Factor (JIF)	SCImago Journal Rank (SJR)	Source Normalized Impact per Paper (SNIP)
Altmetric Bookmarklet					X											
CWTS Journal Indicators																X
Dimensions					X		X	X								
Google Scholar		X	X				X									
iCite							X			X						
InCites						X										
Journal Citation Reports												X	X	X		
Microsoft Academic							X									
SCImago Journal & Country Rank															X	
SciVal		X					X		X		X				X	X
Scopus		X					X		X		X				X	X
Web of Science		X					X							X		

Author Level Indicator

Article Level Indicator

Journal Level Indicator



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# How to talk about metrics





# Sample metric statements

Metric statements can include both traditional bibliometrics and alternative metrics. For example:

- *My work has been cited over 1,000 times by authors in over 30 countries, demonstrating the global impact of my work. Ten of my papers are in the top 1% when compared to articles of the same age, field and document type. (Scopus)*
- *This group of papers has been collectively cited over 5,500 times by authors publishing in a diverse range of subject areas including Medicine, Engineering, and Social Services. These 200 papers have a weighted RCR of 305, indicating that this is a highly influential set of papers relative to the average NIH-funded paper. (Scopus, iCite)*
- *Our work has been collectively tweeted over 600 times by the medical community, legal community, and patient advocacy organizations. This activity indicates the successful dissemination our work beyond academia and demonstrates public engagement. Our work was cited in policy documents from the CDC, demonstrating that our work is influencing policy at a national level. (Altmetric)*

# Where to add metric statements

Metric statements can be a valuable tool for showcasing the story of your research in your professional profile and a variety of other academic contexts.

John Doe, M.D.  
*Curriculum Vitae*

1601 Fifth Avenue, Suite 1000 Seattle, WA 98101 Ph: 206-448-4082 Fax: 206-448-4193 Email: jdoo@quorumreview.com

**Education**

Medical/Graduate:	1985-1989	Doctor of Medicine	Univ. of Washington	Seattle, WA
Residency:	1989-1992	Internal Medicine	Oregon Health & Sci. Univ.	Portland, OR
Fellowship:	1992-1995	Cardiology	Univ. of Washington	Seattle, WA
Other:	Yr.-Yr.	Degree/Specialty	Institution	Institution City, State
Other:	Yr.-Yr.	Degree/Specialty	Institution	Institution City, State

**Licensure/Certifications**

State of Oregon	1989-1992	201010	MD - Inactive
State of Washington	1992-Present	36-A-4526	MD-Active
American Board of Internal Medicine			Internal Medicine
American Board of Internal Medicine			Cardiovascular Disease

**Practice Area**

Cardiology

**Profession**

Cardiologist  
Occupation  
Institution City, State  
Institution City, State

**Professional Affiliations, Appointments**

American College of Cardiology	Fellow
Department of Cardiology, Univ. of Wash.	Adjunct Asst. Professor
Seattle Heart Institute	Medical Director
Organization	Role

**Research Studies**

DORADO - Fixed Doses of Danurantan as Compared to Placebo in Resistant Hypertension, Principal Investigator, 2005-Present  
Effect of Ibesartan on Insulin Sensitivity in Chronic Heart Failure, Sub Investigator, 2003-Present

**CV**

**Application summary**

**Application title**  
The application title should be descriptive and concise. It should contain keywords relevant to the project.

*If this application is successful, we will make this information publicly available. It should not contain any proprietary information.*

**Proposed duration of funding (months)**  
This should be the total length of the project including activities such as the writing of final reports.

**Proposed start date**

**Administering organisation type**  
Select the relevant administering organisation type.

*We welcome applications from academic, not-for-profit or commercial organisations based anywhere in the world but subject to eligibility checks. Contact [grantenquiries@wellcome.org](mailto:grantenquiries@wellcome.org) if you are unsure whether your organisation is eligible.*

**Name of administering organisation**  
If your application is successful, this is the organisation that will be responsible for administering the award (including receiving the funds).

**Grant Application**

OMB No. 0925-0001 and 0925-0002 (Rev. 03/2020 Approved Through 02/28/2023)

**BIOGRAPHICAL SKETCH**  
Provide the following information for the Senior/key personnel and other significant contributors. Follow the format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME:

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE:

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	POSITION	FIELD OF STUDY

**NIH Biosketch**

A. Personal Statement

B. Positions and Honors

C. Contributions to Science

D. Additional Information: Research Support and/or Scholastic Performance



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# Metrics Support



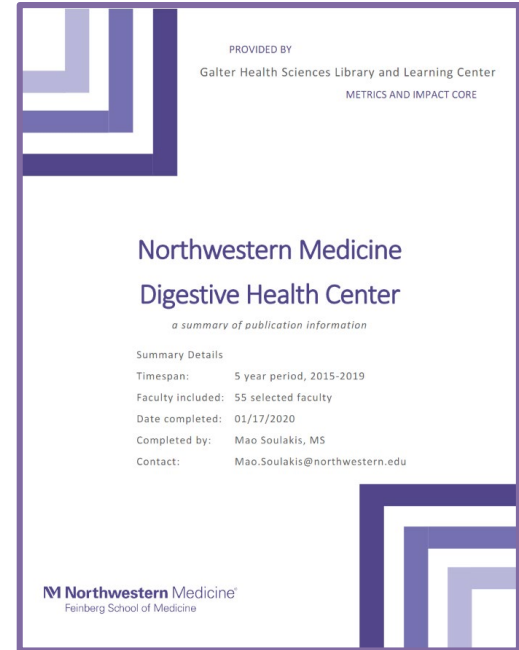


# Reports

The Metrics and Impact Core has created a suite of reports that can be generated for you, your team, or your department. These formalized reports capture and visualize productivity, contribution and dissemination of a body of work.

Reports include:

- Group Publication Metrics Report
- Funding Support Impact Statements
- Funding Support Bibliometric Networks
- Student or Trainee Publication Report
- Member Collaboration Report



PROVIDED BY  
Galter Health Sciences Library and Learning Center  
METRICS AND IMPACT CORE

**Northwestern Medicine**  
**Digestive Health Center**  
*a summary of publication information*

Summary Details  
Timespan: 5 year period, 2015-2019  
Faculty included: 55 selected faculty  
Date completed: 01/17/2020  
Completed by: Mao Soulakis, MS  
Contact: Mao.Soulakis@northwestern.edu

**Northwestern Medicine**  
Feinberg School of Medicine

# Review

An annual NIH Biosketch Review is offered by your liaison librarian as well as members of the Metrics and Impact Core team.

To find your liaison librarian visit the Research Services guide on the library website. This site provides contact information of the liaisons of departments, institutes, centers and programs of the Feinberg School of Medicine.

The screenshot shows the website interface for the Galter Health Sciences Library & Learning Center. The header includes the Northwestern Medicine logo and navigation links. The main content area is titled 'Find my Liaison Librarian' and contains a table of departments and their corresponding liaison librarians.

Departments	Liaison
Anesthesiology	Linda O'Dwyer
Biochemistry and Molecular Genetics	Pamela Shaw
Cell and Molecular Biology	Pamela Shaw
Dermatology	Corinne Miller
Emergency Medicine	Annie Wescott
Family and Community Medicine	Annie Wescott
Medical Education	Molly Beestrup
Medicine	Jonna Peterson & Corinne Miller
Allergy-Immunology	Jonna Peterson & Corinne Miller
Cardiology	Jonna Peterson & Corinne Miller
Endocrinology, Metabolism, and Molecular Medicine	Jonna Peterson & Corinne Miller



# Instruction



The staff at the Galter Health Sciences Library & Learning Center provide instruction on a wide array of library topics.

The Metrics and Impact Core is building out their course offerings and you can register for them on the Galter website.

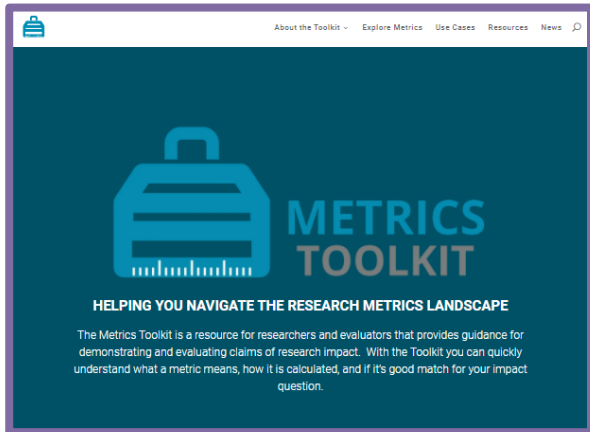
Our team is also available to present on topics in your department meetings, either in person or virtually.



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Additional Information

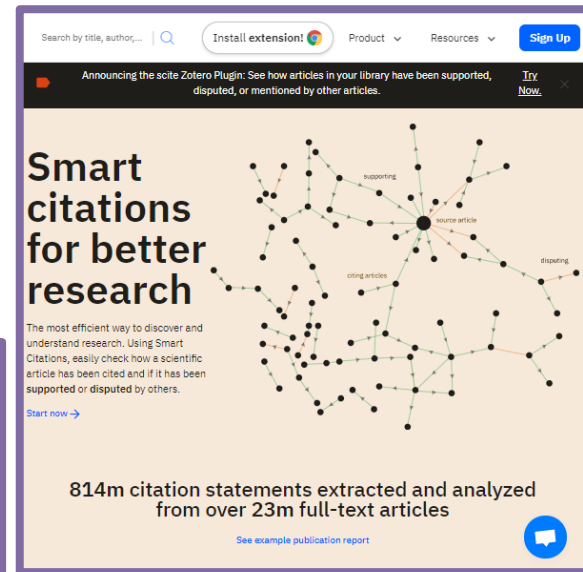
# Other resources



<https://www.metrics-toolkit.org/>



<https://www.journalindicators.com/>



<https://scite.ai/>



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The following people are instrumental in developing research impact and dissemination materials and training, and from whose guidance we have greatly benefited.

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Becker Medical Library, Washington University in St. Louis

**Patty Smith**

Previously at Galter Library, Northwestern University, now at Altmetric.com

**Amy Suiter**

Becker Medical Library, Washington University in St. Louis



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# Questions?

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