

# Maximizing Research Impact Webinar Series

# Introduction to Research Impact

Presented by the Local Capacity Development Crosscutting Theme 25 March 2022

Feed the Future Innovation Lab for Livestock Systems











# Presented in collaboration with the University of Florida Libraries

# TERRY KIT SELFE, DC PhD

A Translational Research and Impact Librarian











# Outline

#### Research metrics

- Citation-based
  - Item-level
  - Author-level
  - Journal-level
- Alternative metrics
  - Coverage of item in news and social media
- Responsible use
  - Leiden Manifesto

# Managing and improving impact

- Publish
  - Make publications count
- Maintain your profile
  - Use multiple sources



# Research metrics

#### Standard metrics are citation based

- Item-level
  - Measures reflecting the number of times an individual item was cited
    - Examples: Citation count, Field-Weighted Citation Impact
- Author-level
  - Measures reflecting the times a researcher's body of work was cited
    - Example: H-index
- Journal-level
  - Measures reflecting how many times articles in a particular journal were cited
    - Example: Journal Impact Factor (JIF, IF)



### Citation count

### What is it?

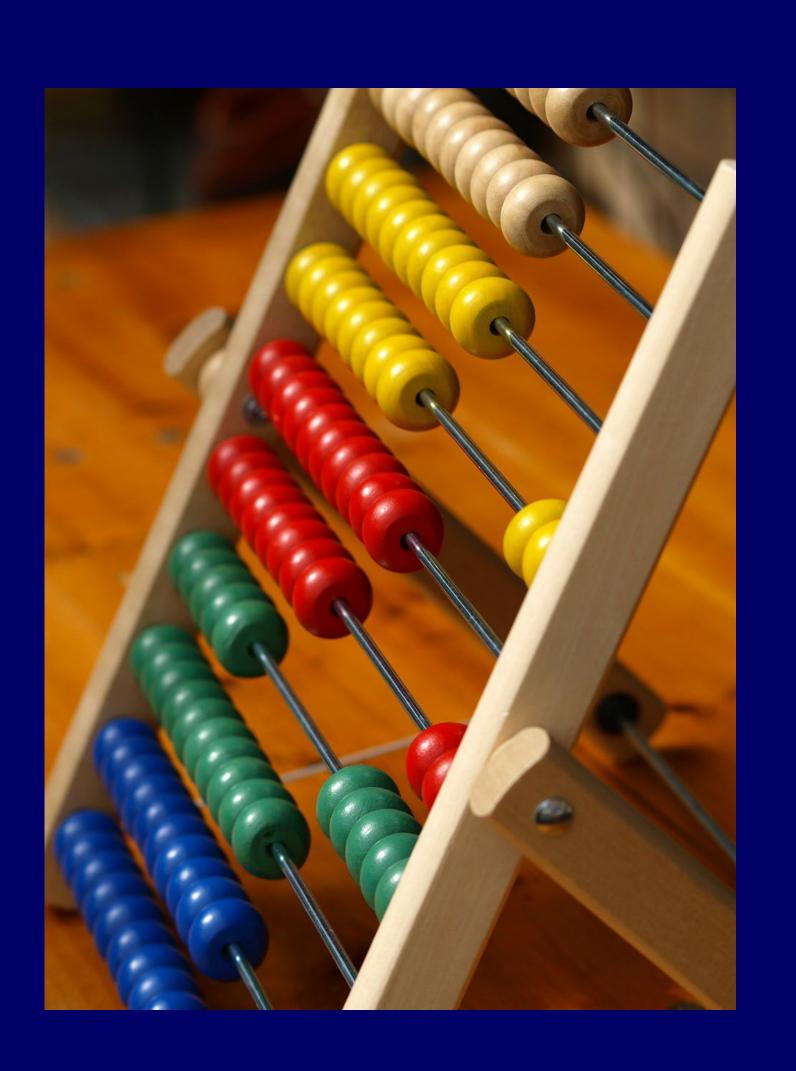
- Item-level metric
- The number of times your article was cited
  - Specific to database

### What are its uses?

- Show that others have used your work
  - Raw numbers

#### Where do I find it?

- Dimensions
- Web of Science
- Google Scholar
- Scopus



### Citation count in Dimensions

#### **Total Citations**

https://www.dimensions.ai/





Save / Export

Support

Register

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< Go back

Publication - Article

Prevalence of restless legs syndrome in North American and Western European populations: A systematic review

Sleep Medicine, 12(7), 623-634 - July 2011 https://doi.org/10.1016/j.sleep.2010.12.018 /

#### **Authors**

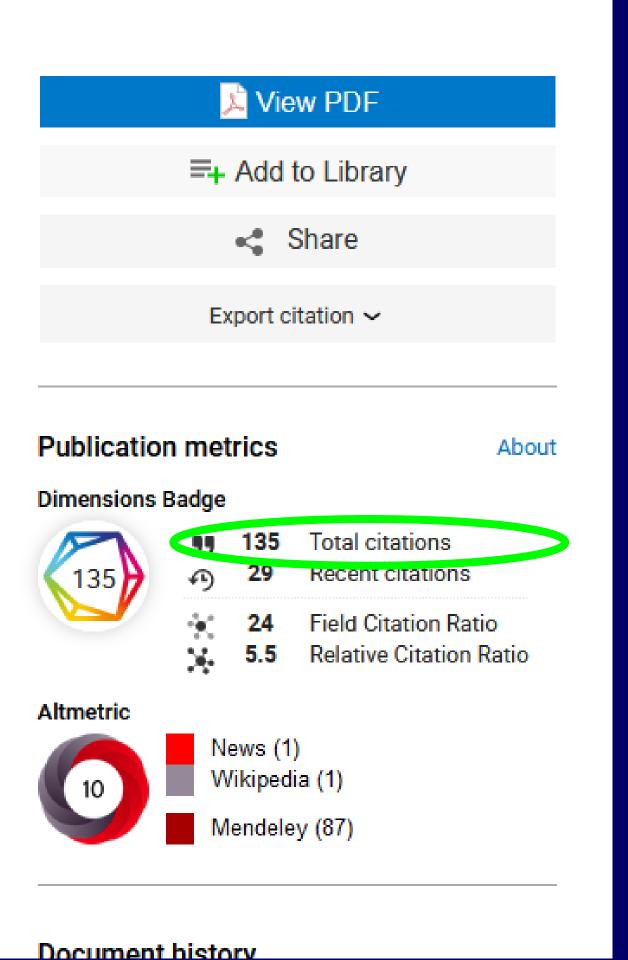
Kim E. Innes - West Virginia University; University of Virginia Health System Corresponding Author

Terry Kit Selfe - West Virginia University; University of Virginia Health System

Parul Agarwal - West Virginia University

#### Abstrac

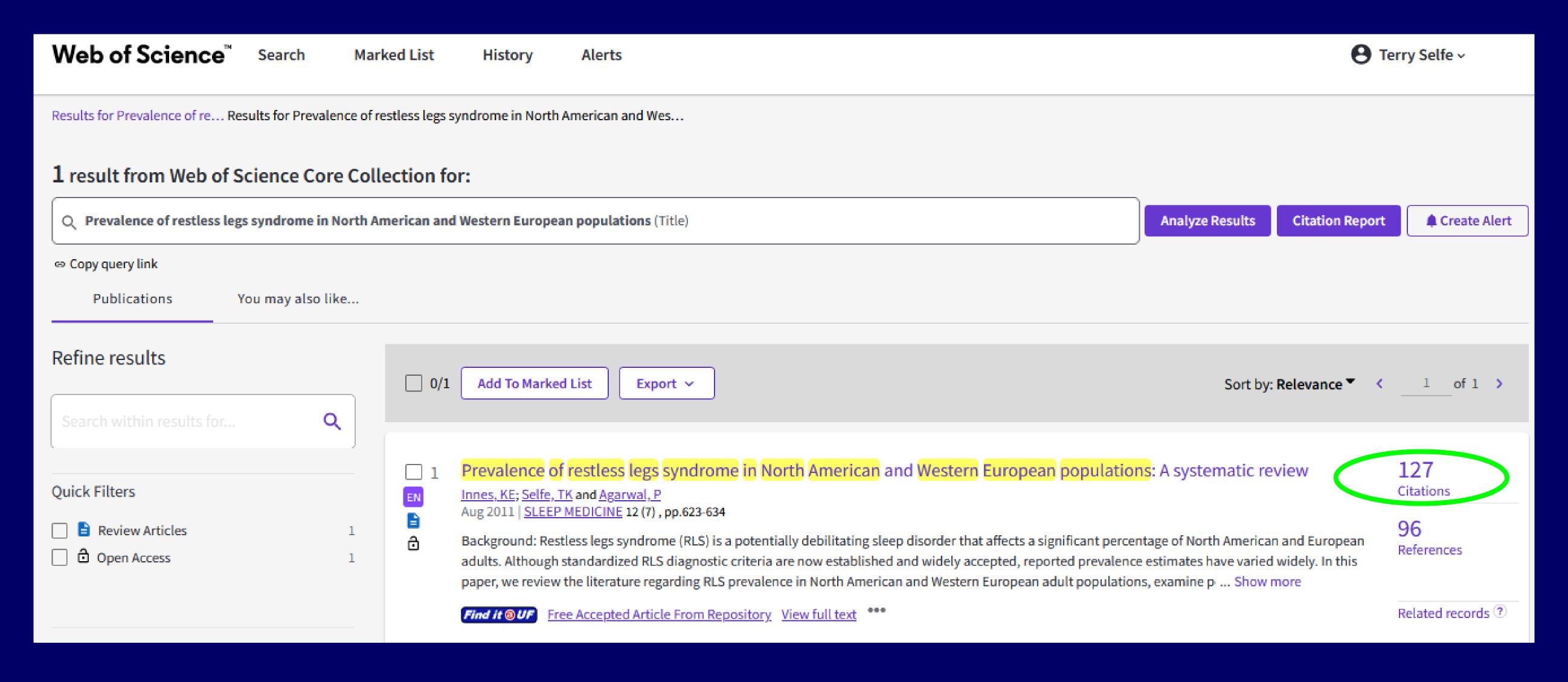
BACKGROUND: Restless legs syndrome (RLS) is a potentially debilitating sleep disorder that affects a significant percentage of North American and European adults. Although standardized RLS diagnostic criteria are now established and widely accepted, reported prevalence estimates have varied widely. In this paper, we review the literature regarding RLS prevalence in North American and Western European adult populations, examine potential sources of variation, briefly discuss the impact of RLS, and offer recommendations for future research. METHODS: To identify qualifying studies, we searched 6 scientific databases and scanned bibliographies of relevant review papers and all identified articles. Studies including fewer than 300 participants, that did not use any of the 4 standard diagnostic criteria, were published prior to 1995 or targeted clinical populations were excluded. RESULTS: Thirty-four papers detailing results of large, population-based studies in 16 North American and Western European countries met our inclusion criteria, including 5 multi-country studies (N=69,992 participants) and 29 single country studies (N=163,188 participants); all but one were cross-sectional. Reported general prevalence rates ranged from 4% to 29% of adults, averaging 14.5±8.0% across studies. Reported prevalence averaged higher in primary care populations than in populations derived from random sampling or geographically defined cohorts (19.5±7.9% vs. 12.3±7.2%). Diagnostic and severity criteria differed considerably among studies, as did inclusion criteria, with corresponding variation in prevalence estimates. Prevalence averaged higher in women and older adults; more limited data suggest race/ethnicity, parity, health status, and other factors may also contribute to the observed variation in prevalence. RLS has profound, negative effects on health, well-being, and quality of life, yet detection rates remain low. CONCLUSIONS: Collectively, these studies indicate that RLS is a common disorder of major clinical and public heal



### Citation count in Web of Science

#### Citations

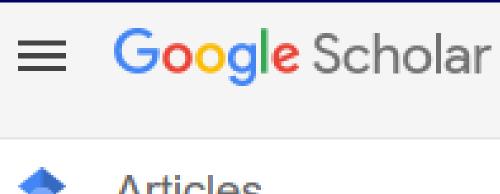
By articles in WOS Core Collection



# Citation count in Google Scholar

# Cited By

- https://scholar.google.com
- Also gives the times cited for Web of Science



Prevalence of restless legs syndrome in North American and Western Europe

#### Articles

#### Any time

Since 2022

Since 2021

Since 2018

Custom range...

#### Sort by relevance

Sort by date

Any type

#### [нтмь] Prevalence of restless legs syndrome in North American and Western European populations: a systematic review

KE Innes, TK Selfe, P Agarwal - Sleep medicine, 2011 - Elsevier

Background Restless legs syndrome (RLS) is a potentially debilitating sleep disorder that affects a significant percentage of North American and European adults. Although standardized RLS diagnostic criteria are now established and widely accepted, reported prevalence estimates have varied widely. In this paper, we review the literature regarding RLS prevalence in North American and Western European adult populations, examine potential sources of variation, briefly discuss the impact of RLS, and offer recommendations ...

\$\text{\text{Cited by 180}} Related articles All 10 versions Web of Science: 127

[HTML] sciencedirect.com Find it @ UF

# Citation count in Scopus

# Cited by

Also gives percentile



# Normalized metrics

# What are they?

- Metrics that indicate citation performance relative to similar articles (e.g., same subject, age, article type, funder)
  - Examples: Field Citation Ratio (FCR), Field-Weighted Citation Impact (FWCI), Category Normalized Citation Impact (CNCI), Relative Citation Ratio (RCR)

#### What are their uses?

- When being compared across fields
  - E.g., promotion packet being evaluated by faculty from other fields

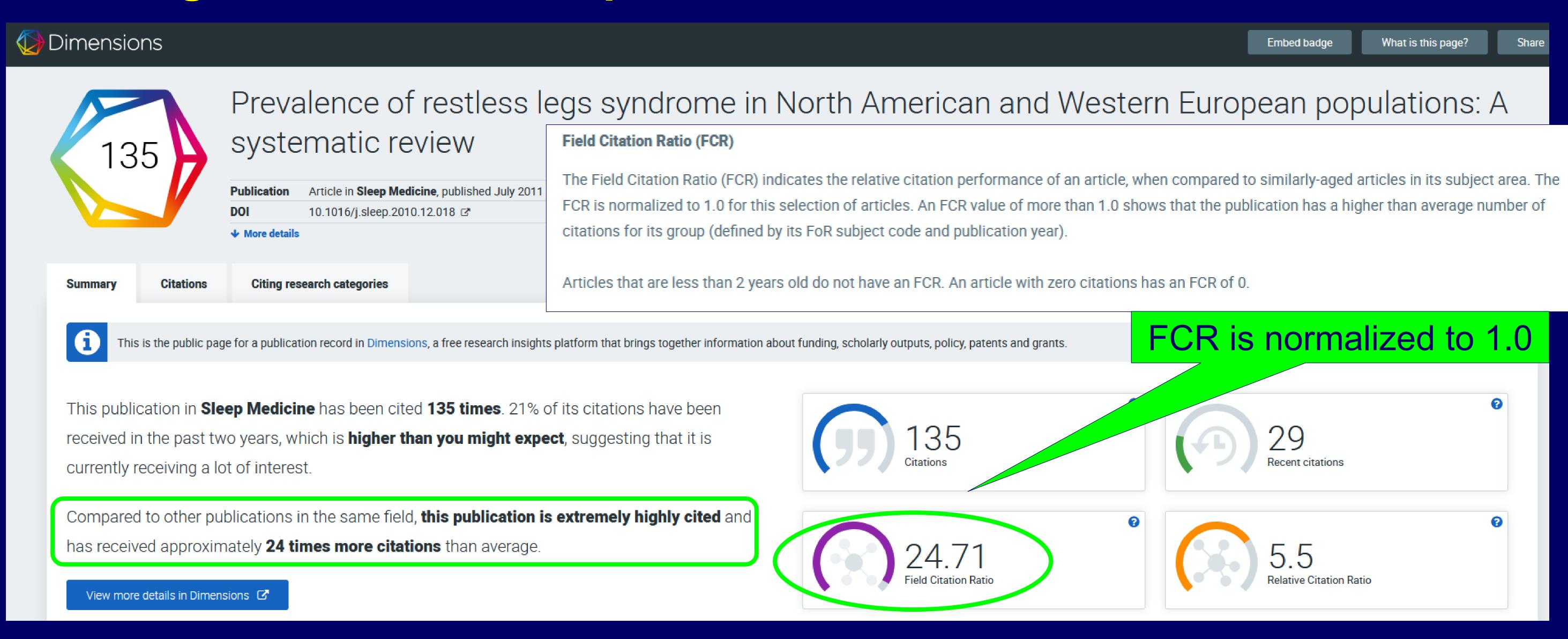
#### Where do I find them?

- Dimensions has FCR and RCR
- Scopus has FWCI
- Web of Science InCites has CNCI

# Field Citation Ratio

# https://www.dimensions.ai/

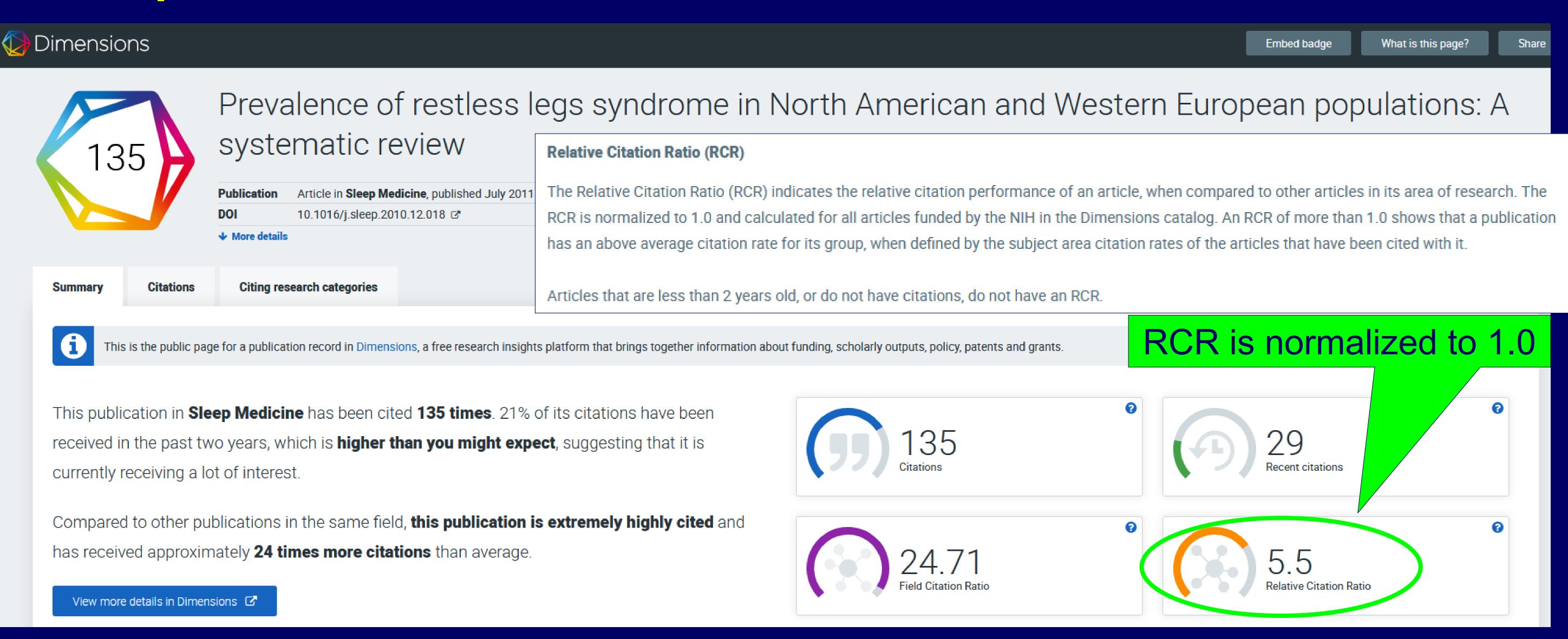
Also gives verbal description



# Relative Citation Ratio

# https://www.dimensions.ai/

Compared to NIH-funded research articles in Dimensions



# Field-Weighted Citation Impact

# Scopus



Search

1 of 1

L Download ☐ Print ☑ E-mail ☑ Save to PDF ☆ Add to List More... >

Find it @ UF

Sleep Medicine • Open Access • Volume 12, Issue 7, Pages 623 - 634 • August 2011

Document type
Review • Green Open Access

Source type Journal

ISSN

18785506

DOI

10.1016/j.sleep.2010.12.018

View more ∨

Prevalence of restless legs syndrome in North American and Western European populations: A systematic review

Innes K.E.<sup>a, b</sup> ⋈ , Selfe T.K.<sup>a, b</sup> ⋈ , Agarwal P.<sup>a</sup> ⋈

Save all to author list

<sup>a</sup> Department of Community Medicine, West Virginia University School of Medici, , w√ 26506-9190, P.O. Box 9190, United States

<sup>b</sup> Center for the Study of Complementary and Alternative There wersity of Virginia Health System, Charlottesville, VA 22908-0782, P.O. Box 800782, McLanall, United States

128 98th percentile Citations in Scopus 6.91 FWCI @

1/
Views count < ? </p>

View all metrics >

#### **FWCI**

Field-Weighted Citation Impact shows how well cited this document is when compared to similar documents. A value greater than 1.00 means the document is more cited than expected according to the average. It takes into account:

- The year of publication
- · Document type, and
- Disciplines associated with its source.

The FWCI is the ratio of the document's citations to the average number of citations received by all similar documents over a three-year window. Each discipline makes an equal contribution to the metric, which eliminates differences in researcher citation behavior.

Elrassas, H.H., Elsayed, Y.A.R., Abdeen, M.S.

(2022) Human Psychopharmacology

Restless legs syndrome in patients with multiple sclerosis: evaluation of risk factors and clinical impact | Síndrome de piernas inquietas en esclerosis múltiple: evaluación de factores de riesgo y repercusión clínica.

#### FWCI is normalized to 1.0

Neurologia

Effects of aromatherapy massage on the severity of restless legs syndrome in hemodialysis patients: A randomized clinical trial

Amrollahi, A., Rafiei, A., Bahri, A. (2022) Therapeutic Apheresis and Dialysis

View all 128 citing documents

# H-index

#### What is it?

- Author-level metric
- H-index: the highest number of articles you have published that have at least that number of citations
  - e.g., an h-index of 12 means you have 12 articles which have each been cited at least 12 times
  - Database specific

#### What are its uses?

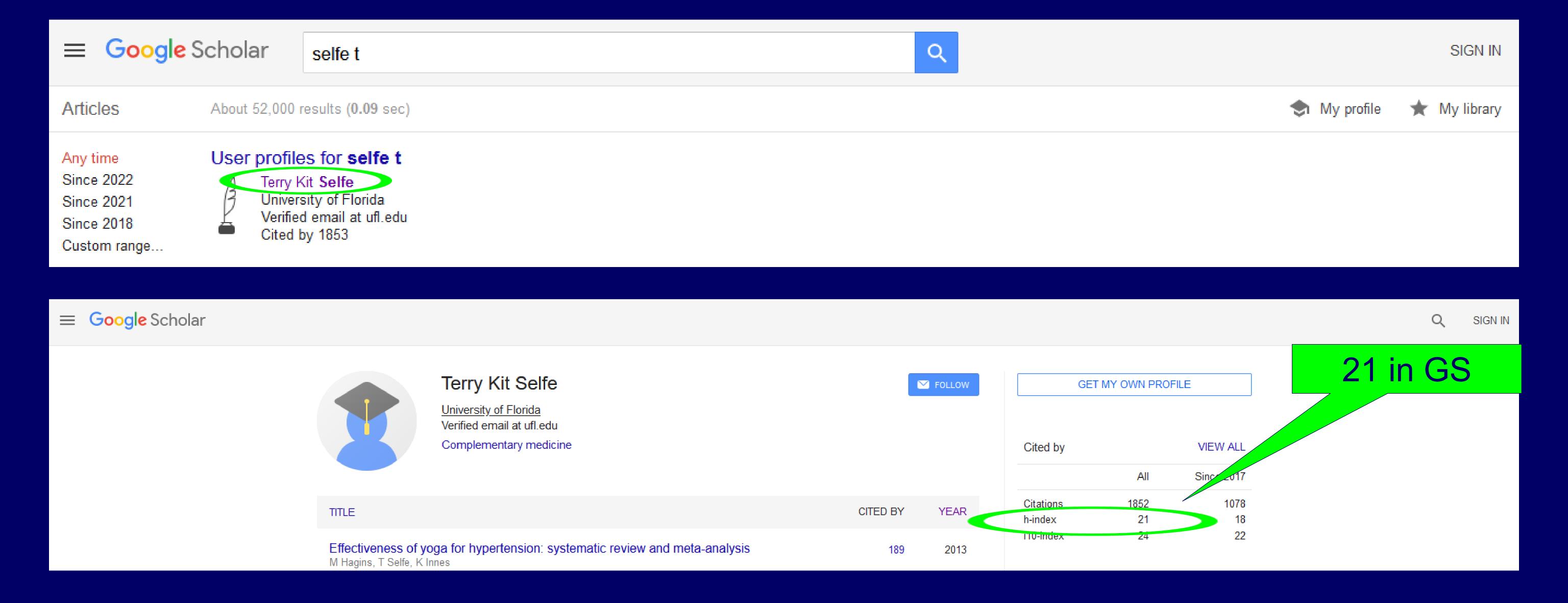
Funding, P & T committees sometimes want

### Where do I find it?

- Google Scholar
- Scopus
- Web of Science

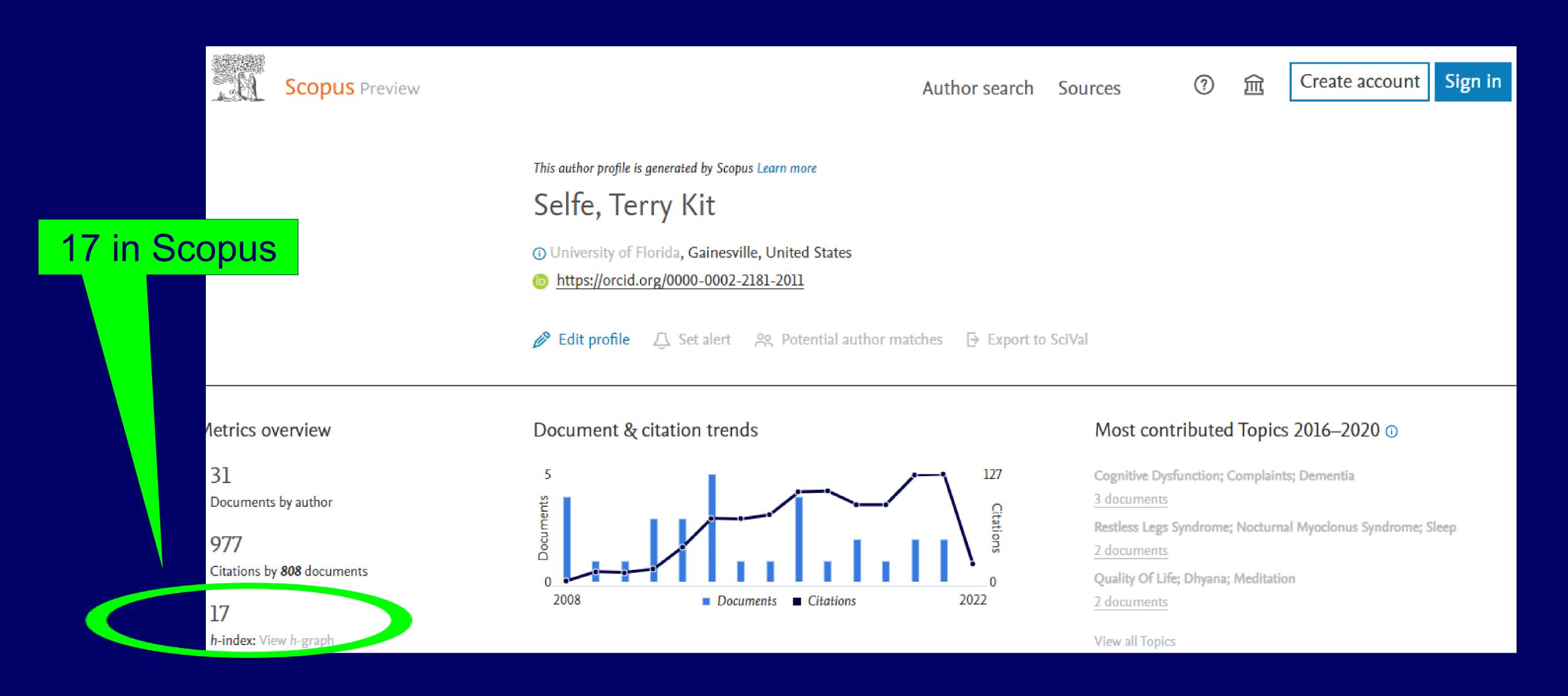
# H-index in Google Scholar

# Search for profile in Google Scholar <a href="https://scholar.google.com">https://scholar.google.com</a>



# H-index in Scopus

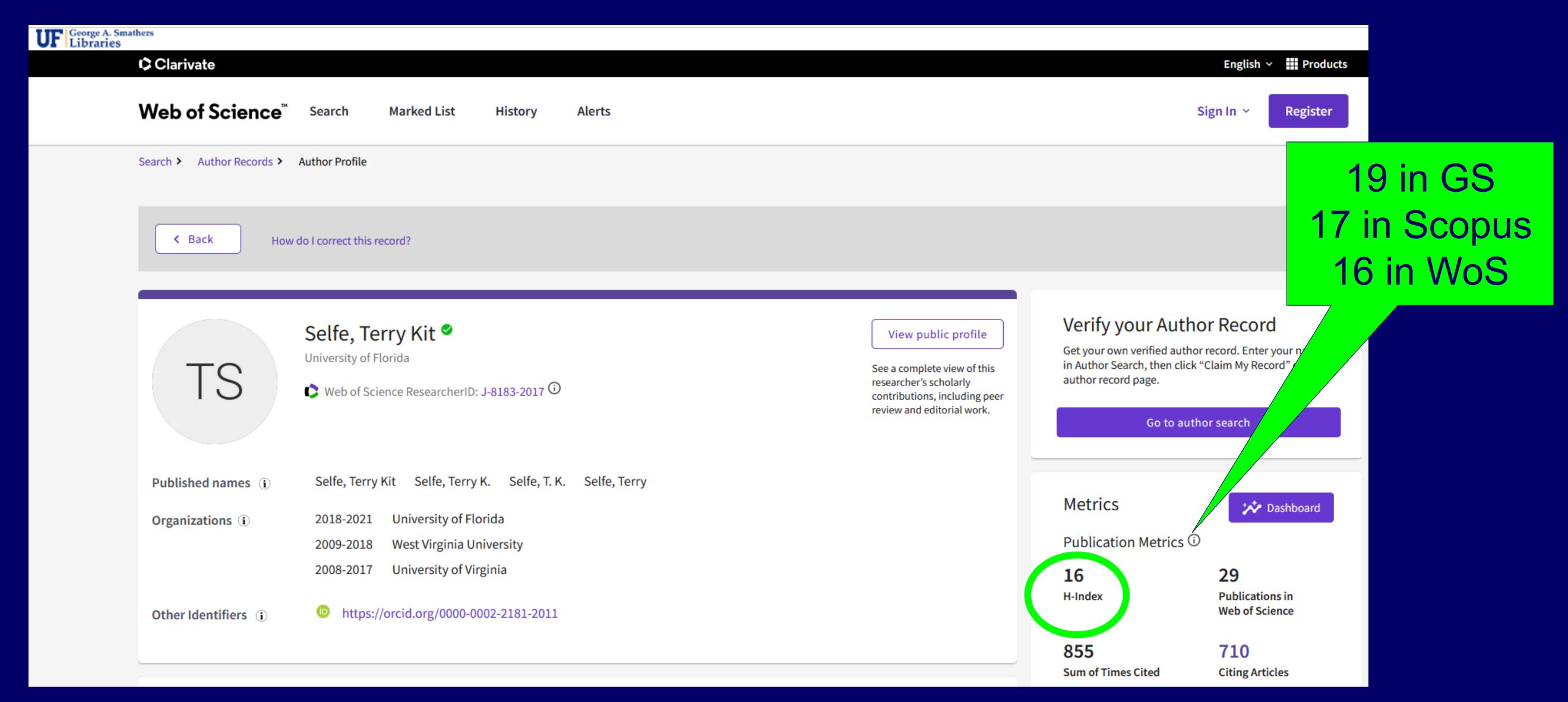
Search Scopus Preview by author name or ORCID ID <a href="https://www.scopus.com/freelookup/form/author.uri">https://www.scopus.com/freelookup/form/author.uri</a>



### H-index in Web of Science

# Web of Science requires subscription

Search by author name or ORCID ID to find your author record



# Journal Impact Factor (JIF, IF)

### What is it?

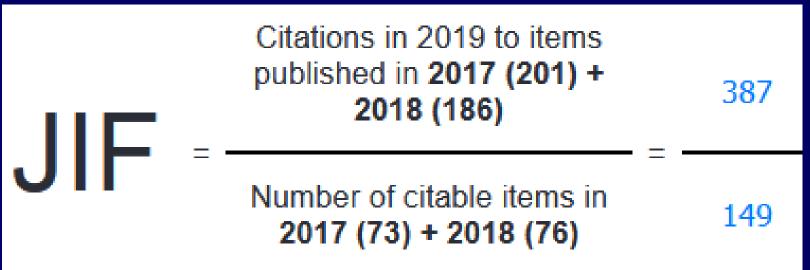
- Journal-level metric
- A measure of the average number of citations to articles published in that journal over past 2 years

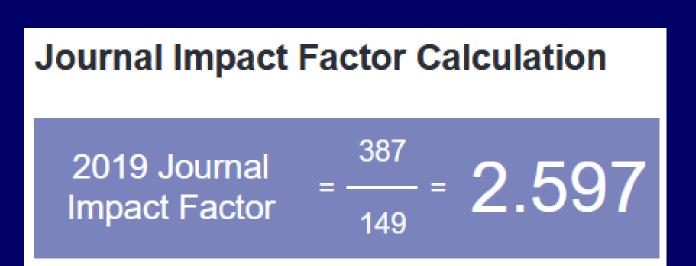
### What are its uses?

- Inform choice of journals
- Supervisors may want
- Promotion & Tenure research narrative

# Where do I find it?

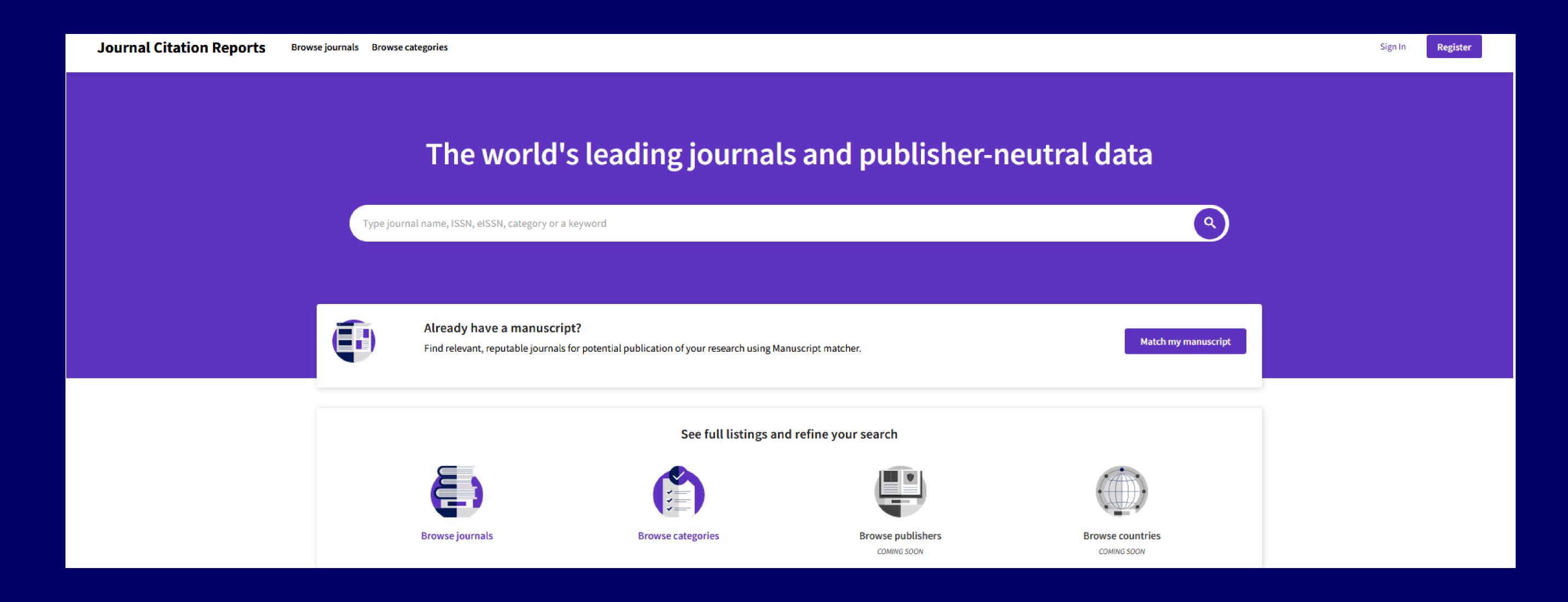
- Journal Citation Reports
- Journal website





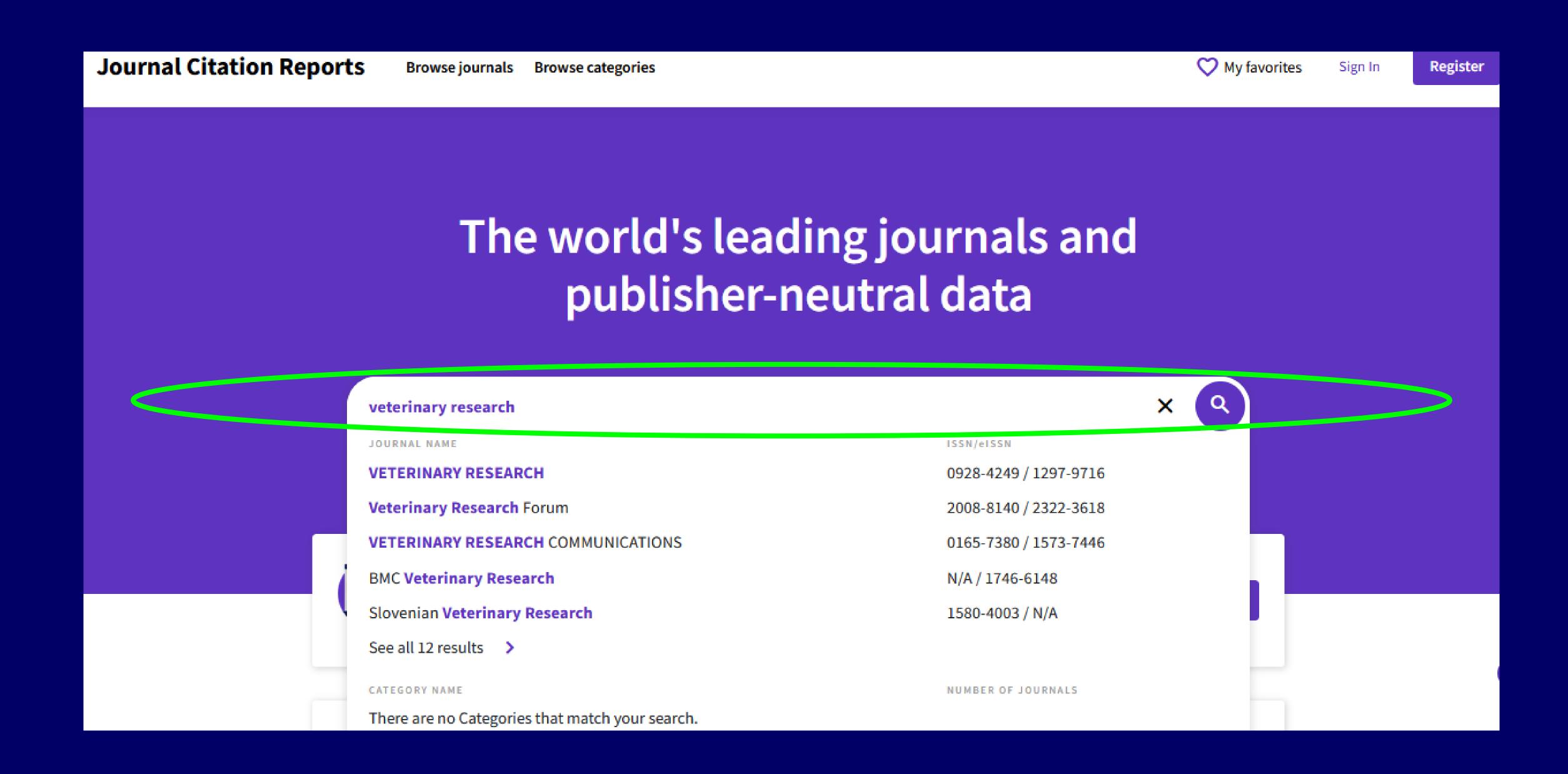
# Journal Citation Reports

Requires subscription



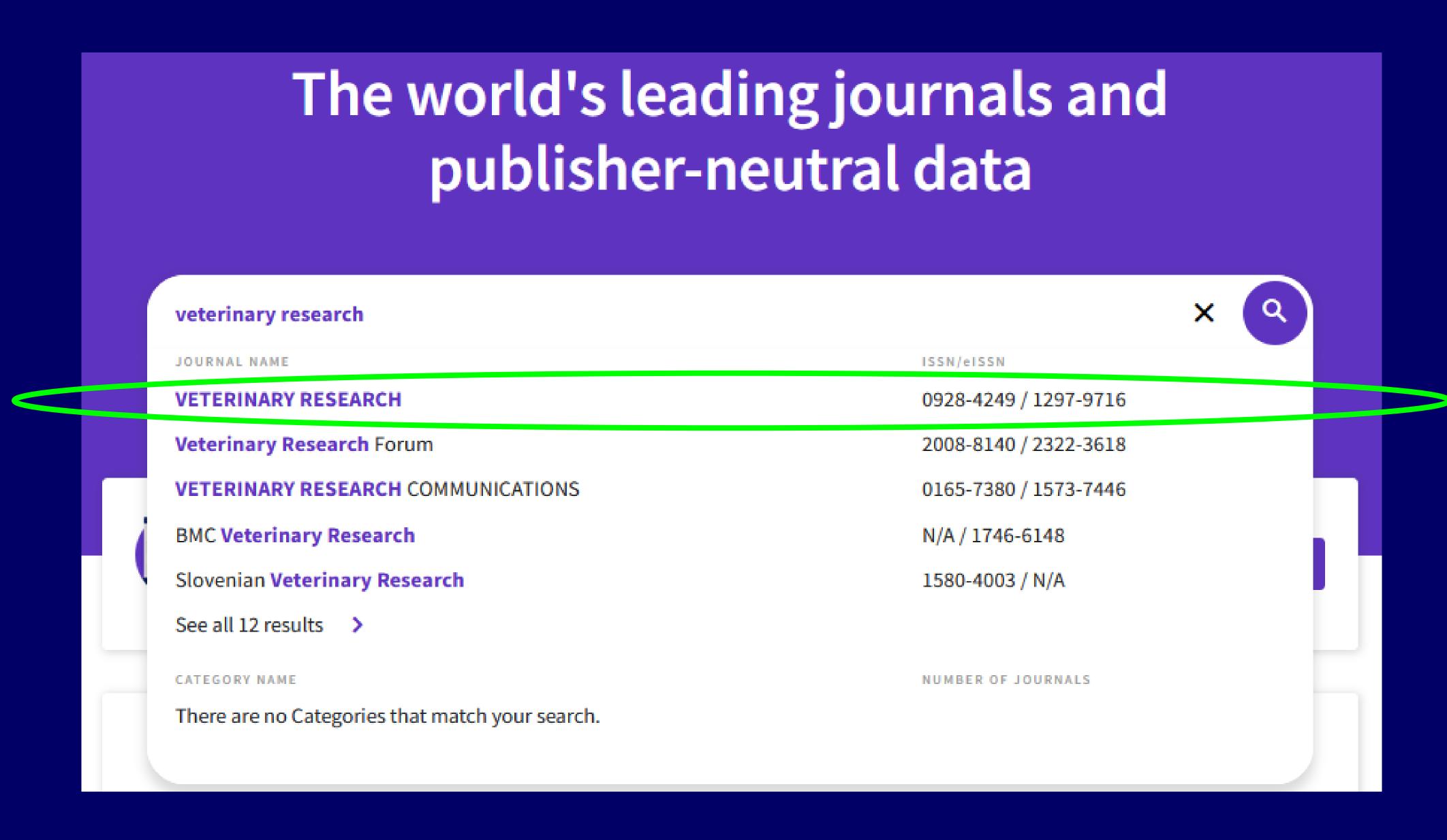
# Journal Citation Reports

To find the JIF for a particular journal: Search by journal title



# Journal Citation Reports

To find the JIF for a particular journal: Search by journal title



# Journal Citation Reports

• E.g., JCR record for Veterinary Research, 2020 JIF=3.699



# Journal Citation Reports

- Scroll down to see rank information to see how that JIF compares to other journals in that category, e.g.,
  - Rank 7<sup>th</sup> out of 146 titles, first quartile, 95<sup>th</sup> %ile

#### Rank by Journal Impact Factor

Journals within a category are sorted in descending order by Journal Impact Factor (JIF) resulting in the Category Ranking below. A separate rank is shown for each category in which the journal is listed in JCR. Data for the most recent year is presented at the top of the list, with other years shown in reverse chronological order. Learn more

#### EDITION

Science Citation Index Expanded (SCIE)

CATEGORY

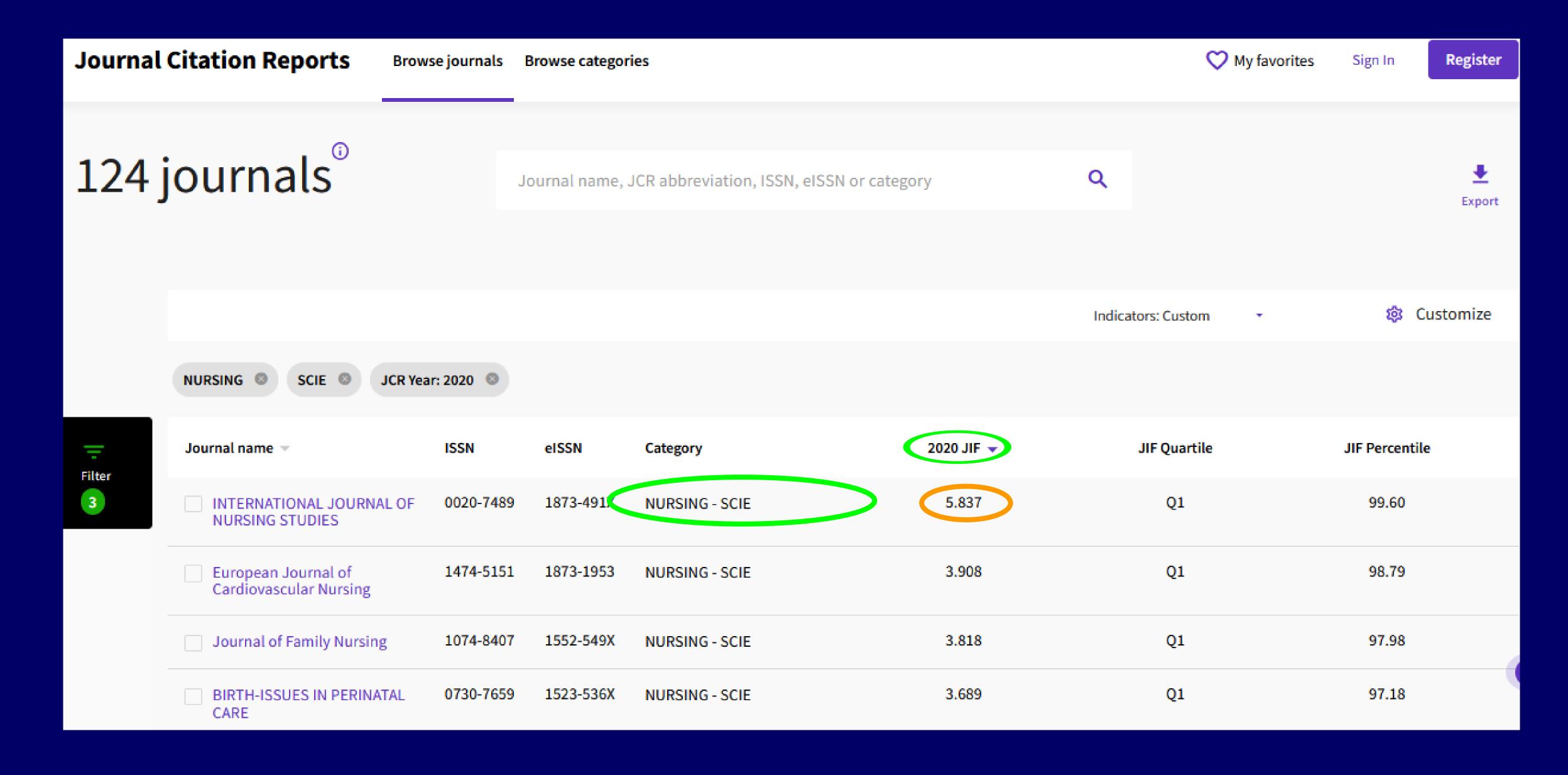
**VETERINARY SCIENCES** 

7/146

JCR YEAR	JIF RANK	JIF QUARTILE	JIF PERCENTILE	
2020	7/146	Q1	95.55	
2019	6/141	Q1	96.10	
2018	4/141	Q1	97.52	
2017	4/140	Q1	97.50	
2016	5/136	Q1	96.69	

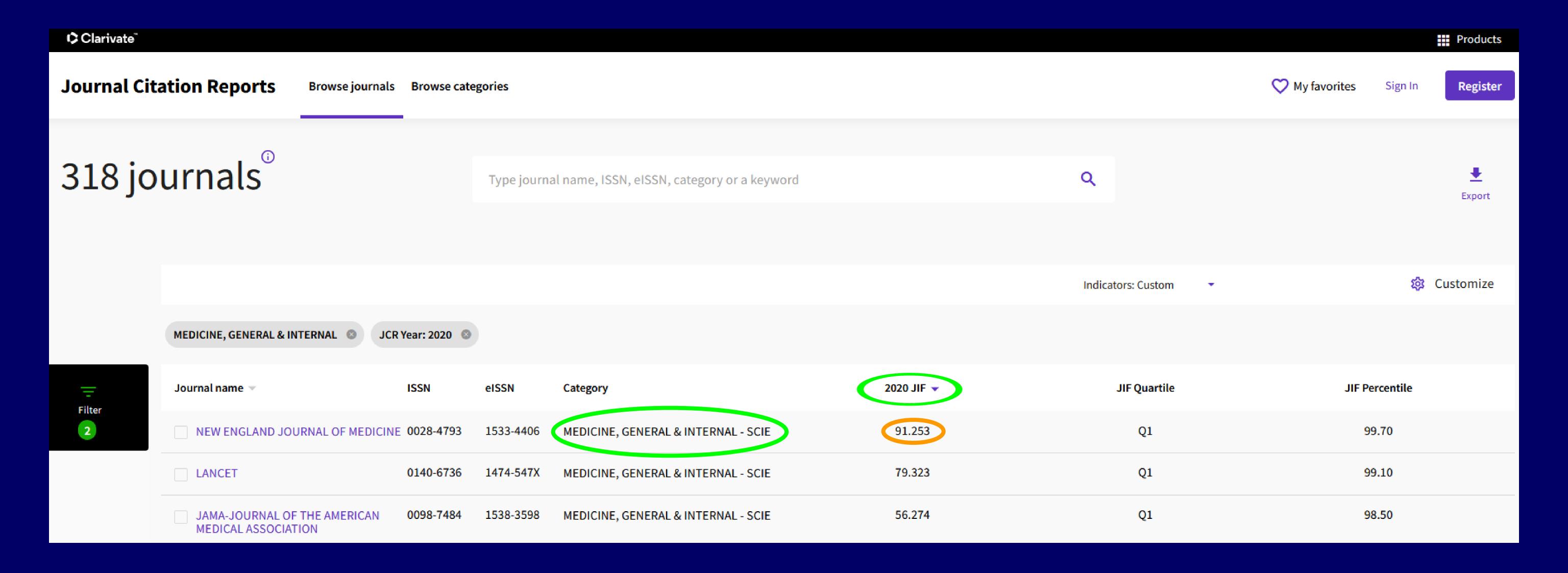
# Varies widely by field

• E.g., Highest JIF in Nursing category: 5.8



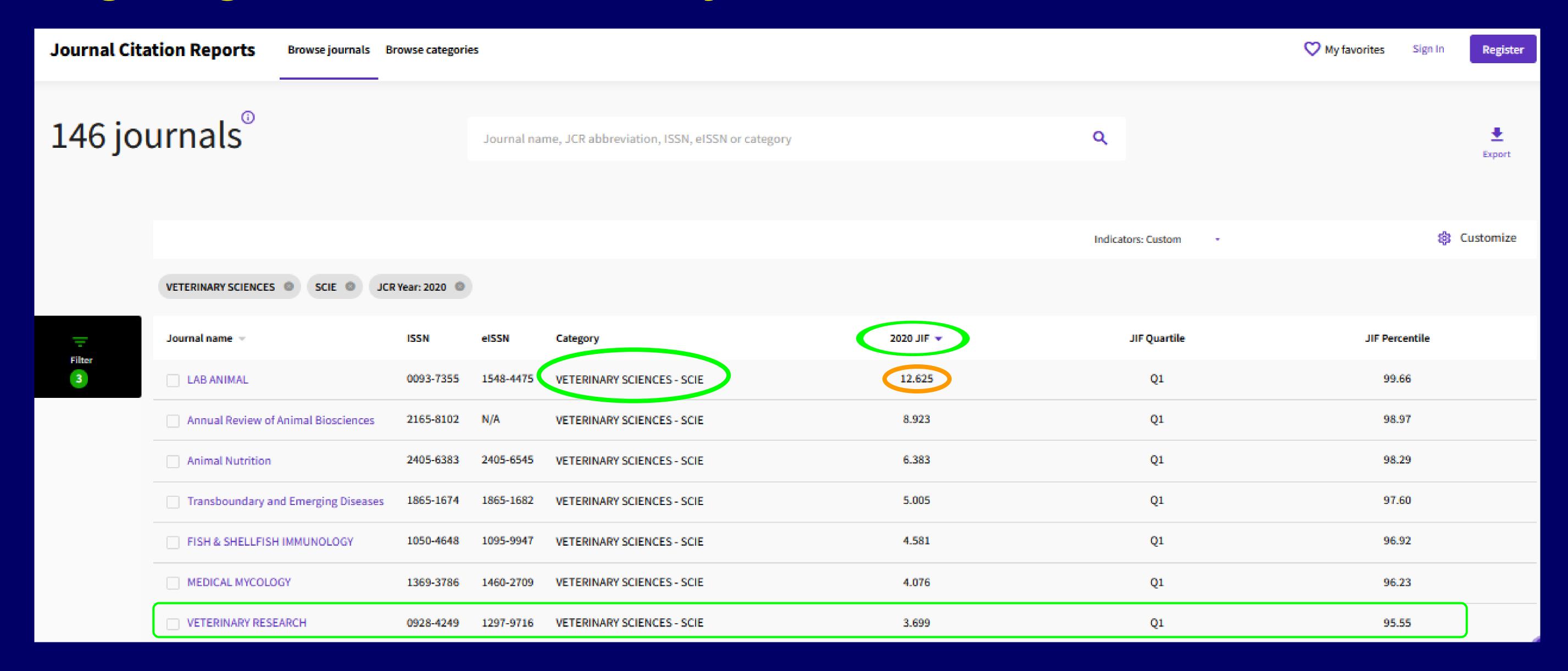
# Varies widely by field

• E.g., Highest JIF in Medicine, General & Internal: 91.3



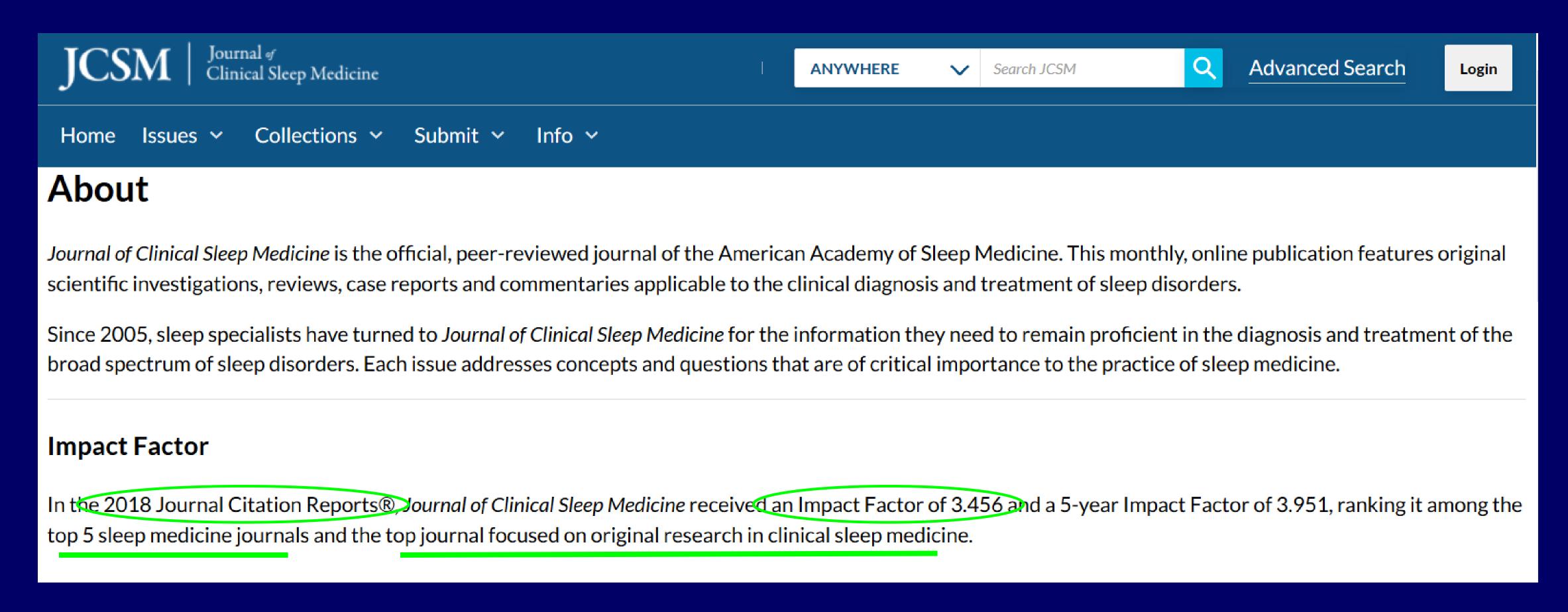
# Varies widely by field

• E.g., Highest JIF in Veterinary Sciences: 12.6



#### Journal website

- Make sure they give the source
  - Some also put the number in context
    - E.g., ranked in top 5



# Alternative metrics



https://twitter.com/tomgauld/status/808268915335897088

# Altmetric Attention Score

#### What is it?

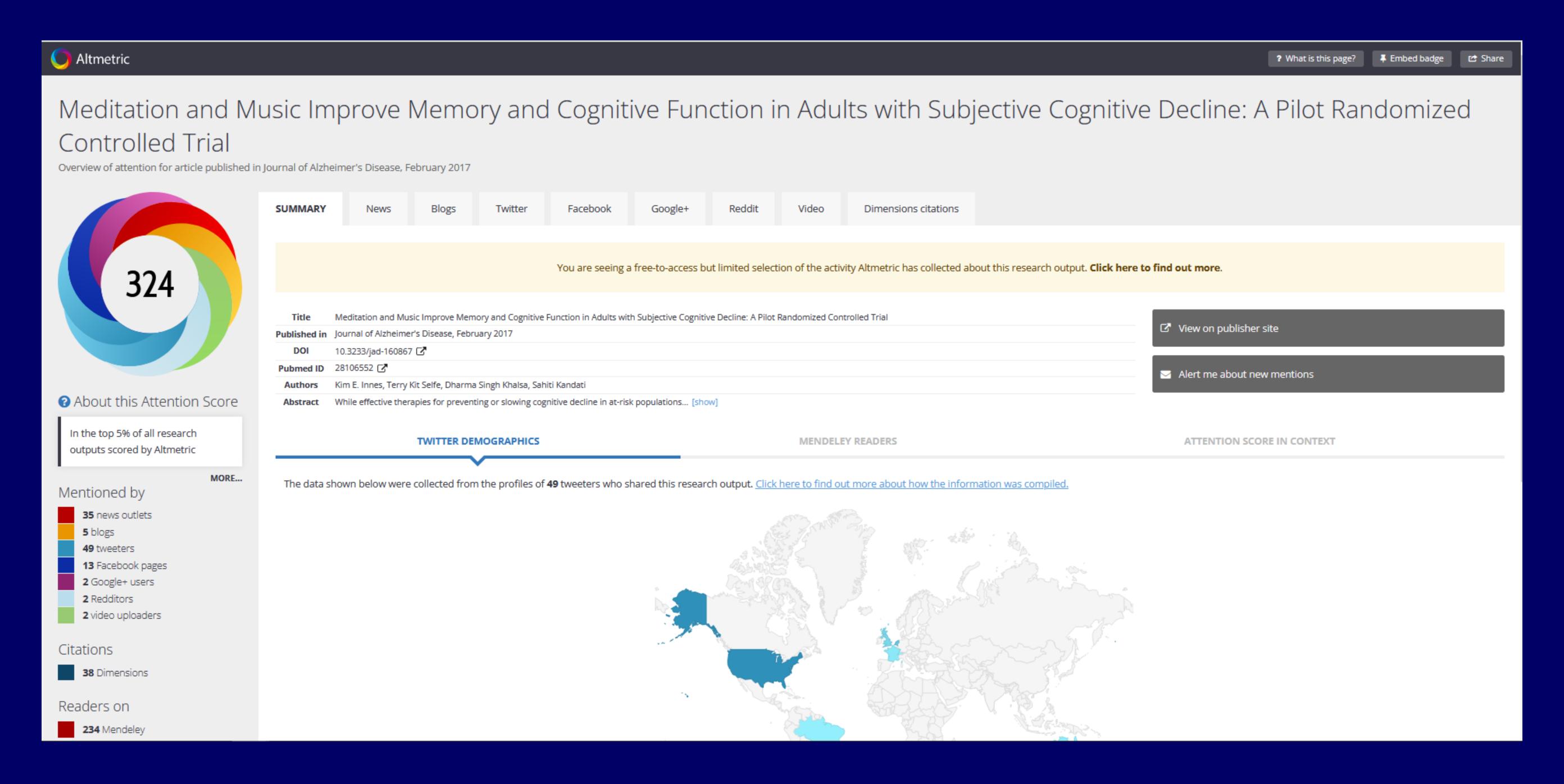
 A metric that reflects the attention an item has received in news sources, blogs, social media such as Twitter

#### What are its uses?

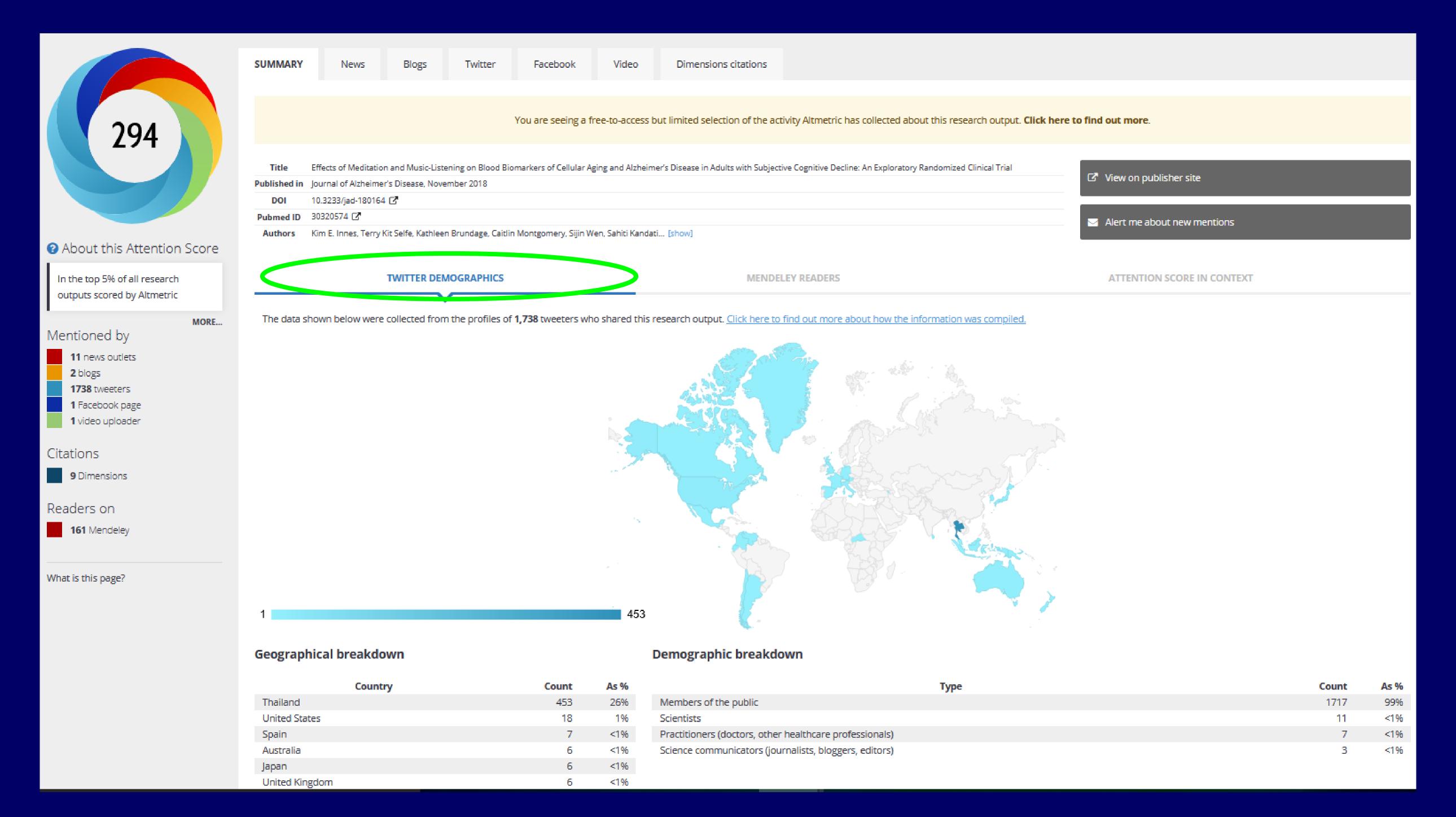
- Show how your work has been covered
  - More immediate feedback re: interest in article
  - Can reflect impact beyond the academy

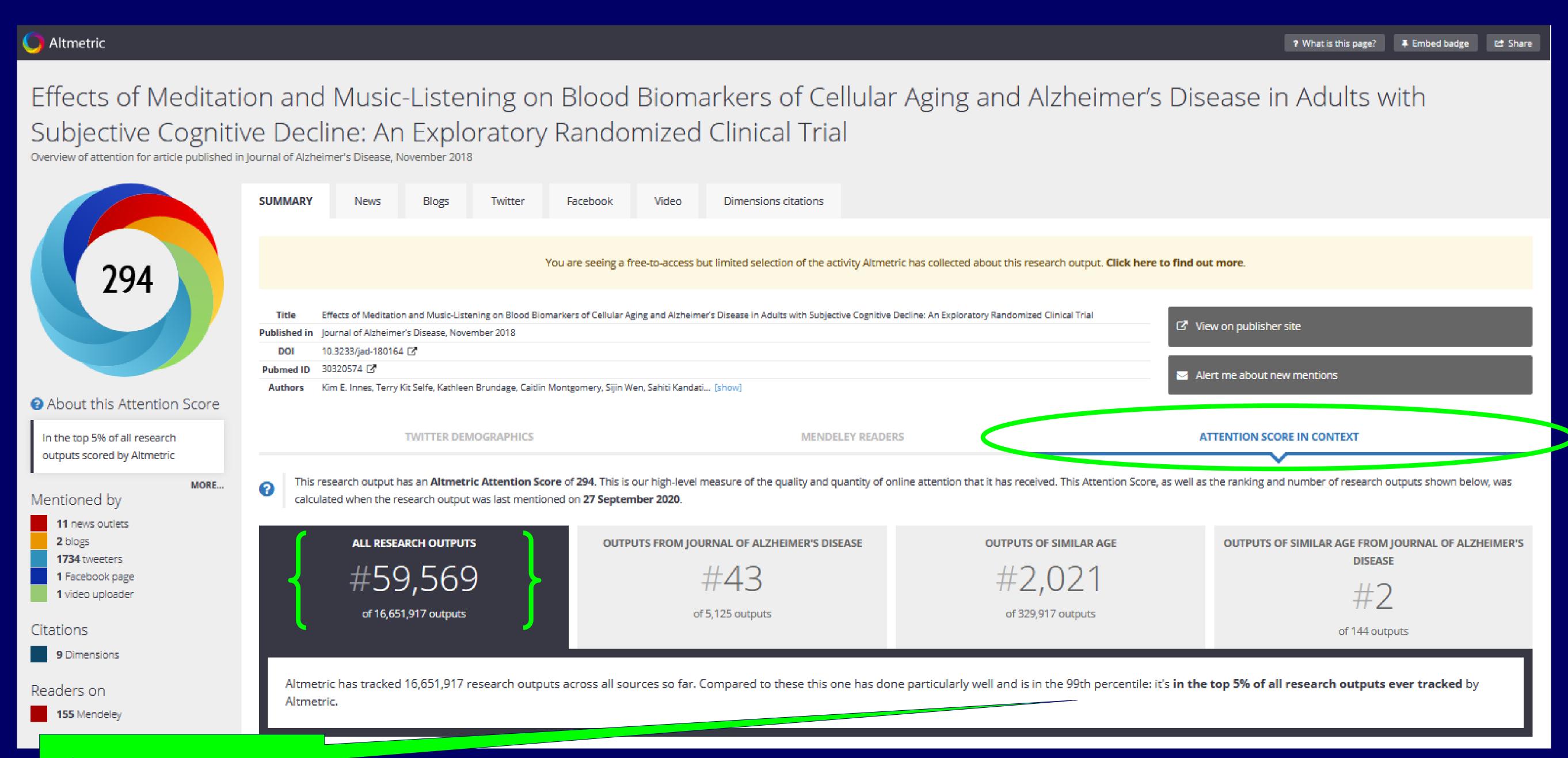
# Where do I find it?

- Dimensions
- Altmetric Bookmarklet



https://dimensions.altmetric.com/details/15647083

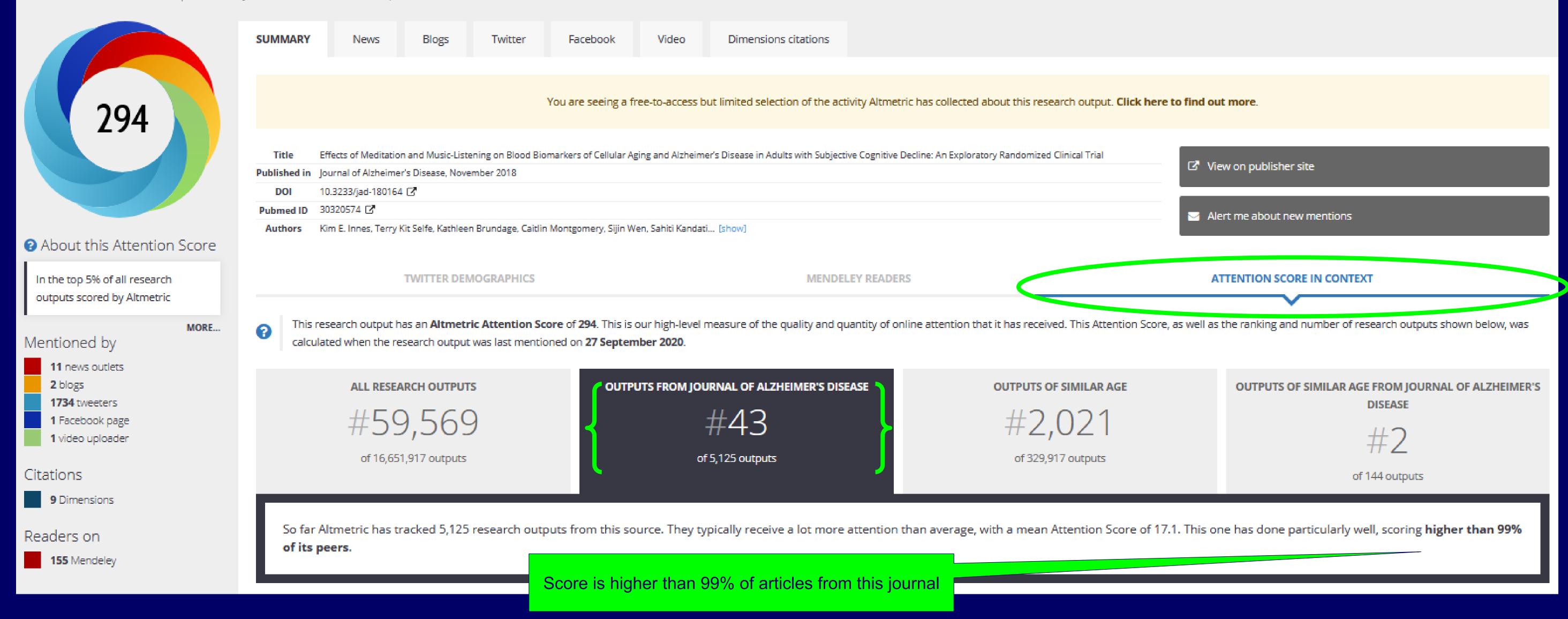




99<sup>th</sup> percentile across all sources

Effects of Meditation and Music-Listening on Blood Biomarkers of Cellular Aging and Alzheimer's Disease in Adults with Subjective Cognitive Decline: An Exploratory Randomized Clinical Trial

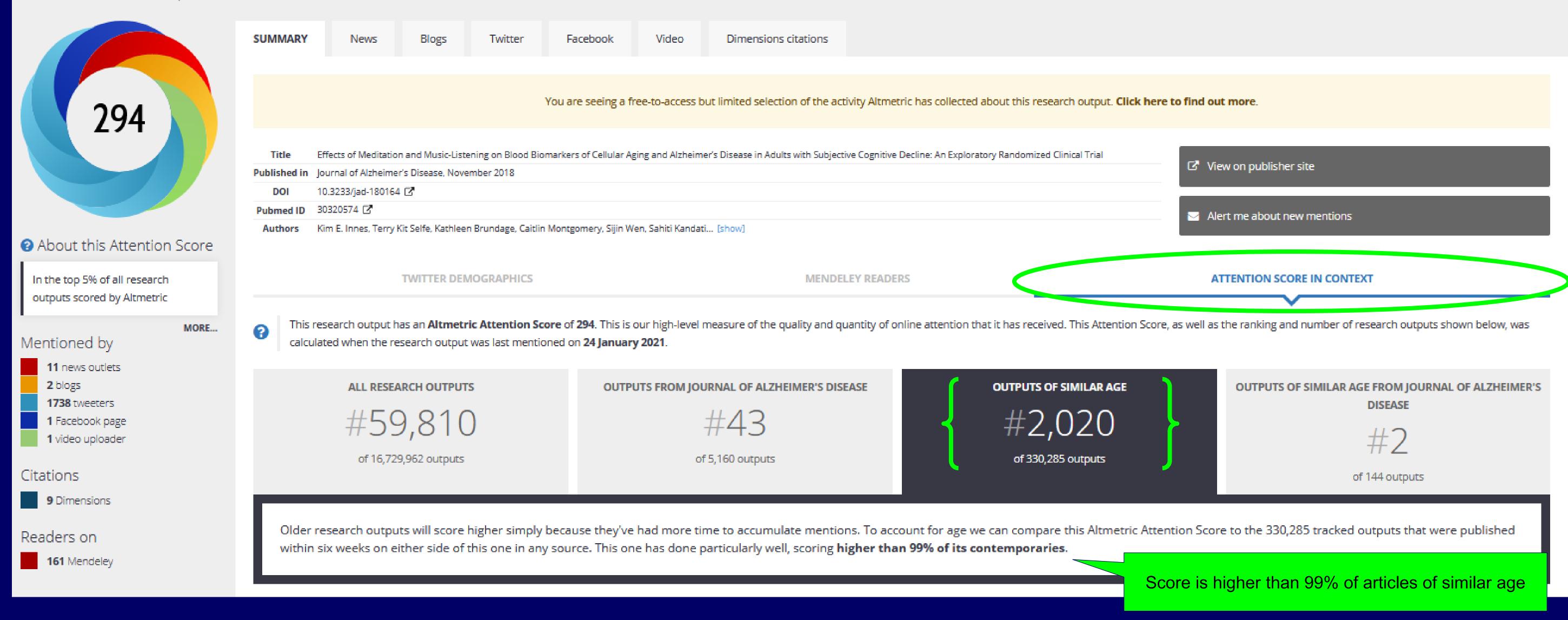
Overview of attention for article published in Journal of Alzheimer's Disease, November 2018



https://dimensions.altmetric.com/details/49869269#score

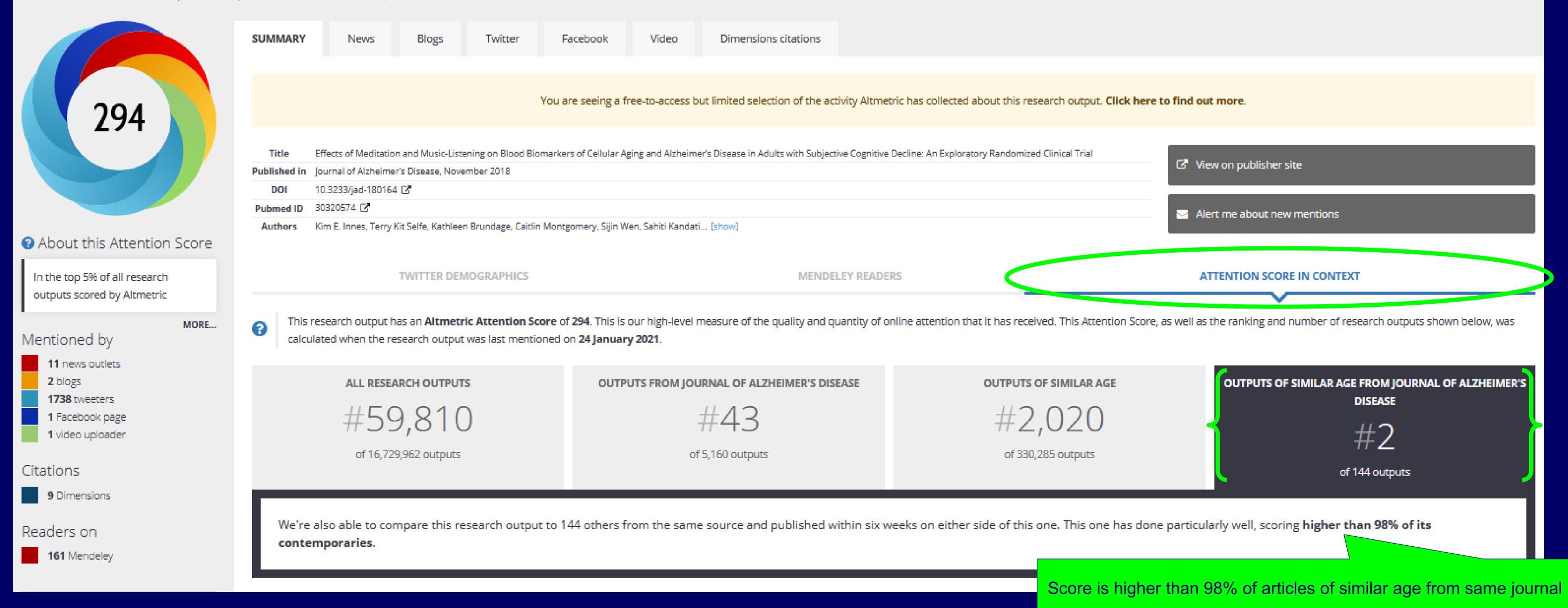
Effects of Meditation and Music-Listening on Blood Biomarkers of Cellular Aging and Alzheimer's Disease in Adults with Subjective Cognitive Decline: An Exploratory Randomized Clinical Trial

Overview of attention for article published in Journal of Alzheimer's Disease, November 2018



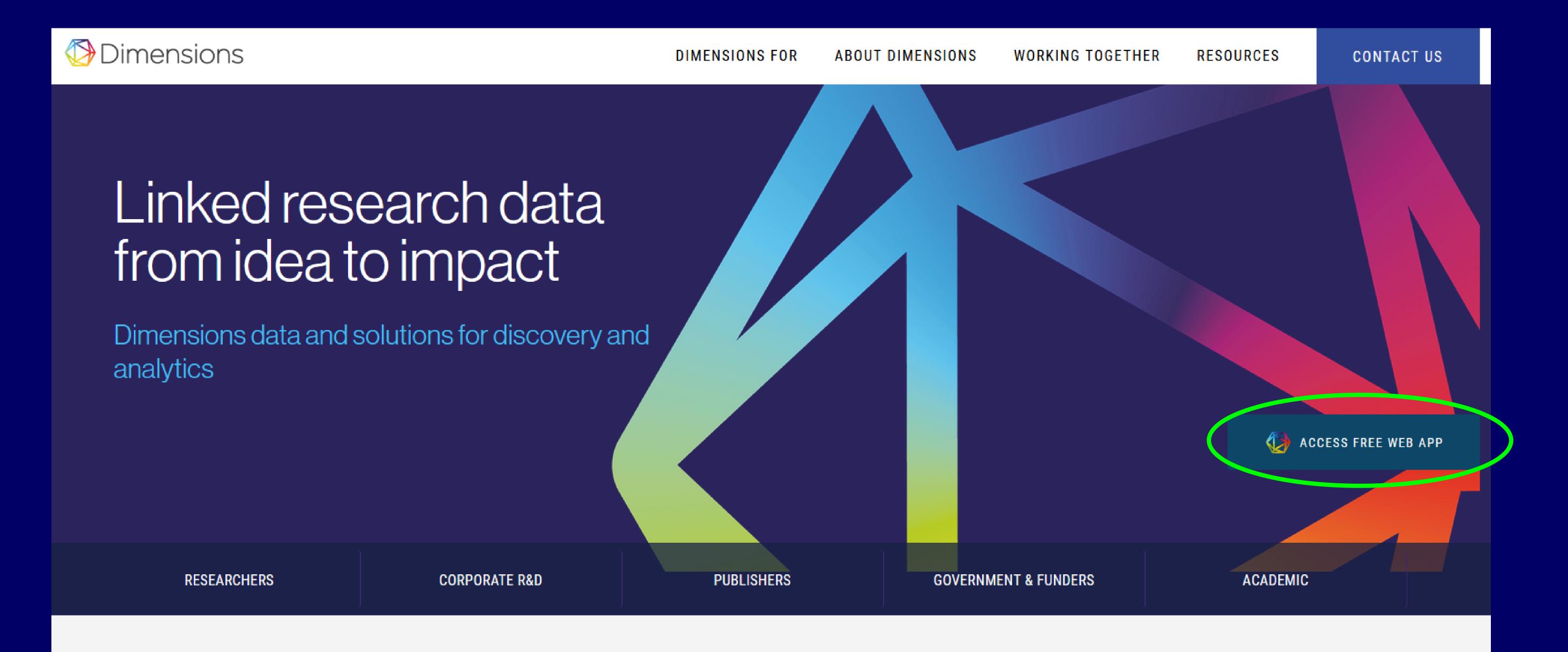
Effects of Meditation and Music-Listening on Blood Biomarkers of Cellular Aging and Alzheimer's Disease in Adults with Subjective Cognitive Decline: An Exploratory Randomized Clinical Trial

Overview of attention for article published in Journal of Alzheimer's Disease, November 2018



https://dimensions.altmetric.com/details/49869269#score

# Altmetrics in Dimensions



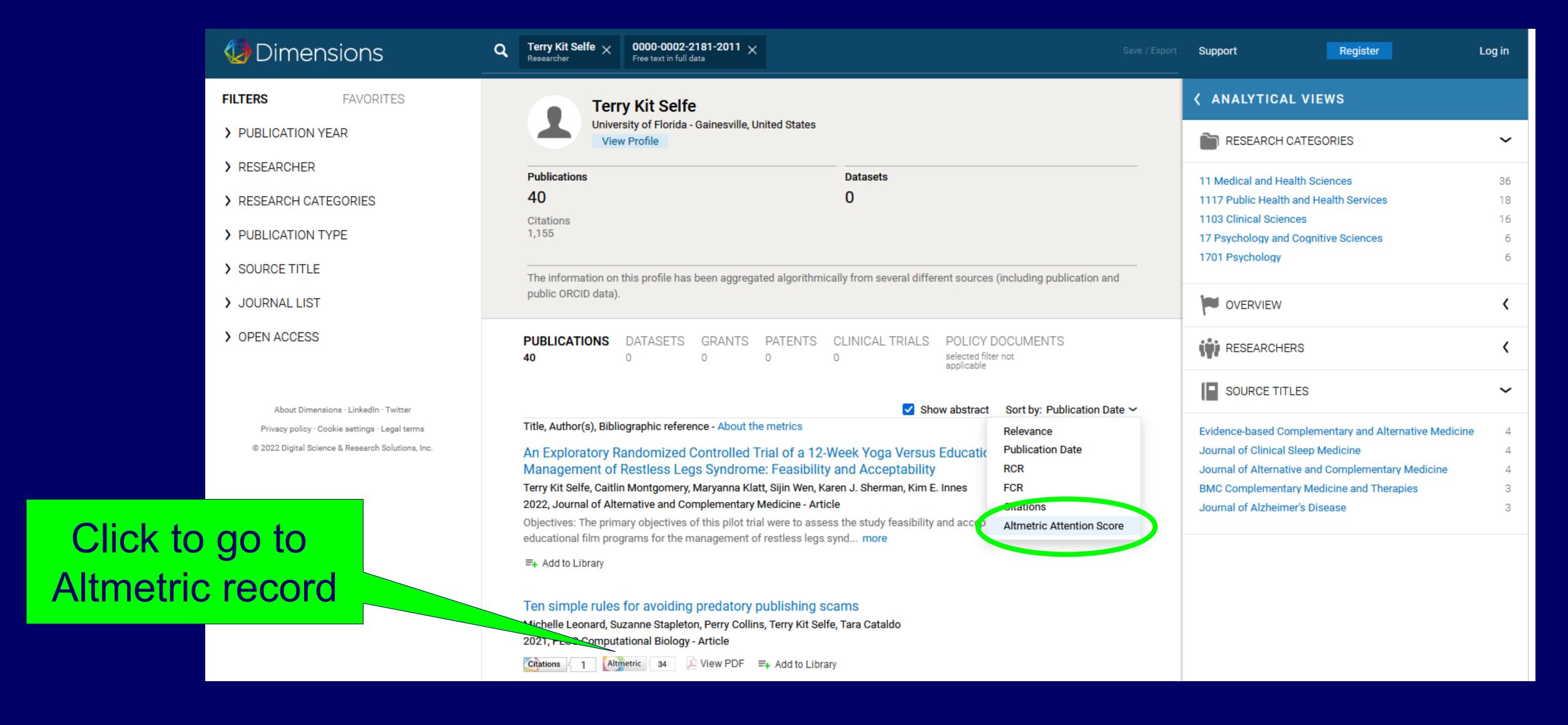
The world's largest linked research information dataset

https://www.dimensions.ai/

### **Altmetrics in Dimensions**

# Find your publications in Dimensions

- Search by name and/or ORCID
  - Can sort by Altmetric Attention Score



## Altmetrics in Dimensions





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Log in

Publication - Article

Effects of Meditation and Music-Listening on Blood Biomarkers of Cellular Aging and Alzheimer's Disease in Adults with Subjective Cognitive Decline: An Exploratory Randomized Clinical Trial

Journal of Alzheimer's Disease, Preprint(Preprint), 1-25 - November 2018 https://doi.org/10.3233/jad-180164 /

#### Authors

Kim E. Innes - University of Maryland, Baltimore

Terry Kit Selfe - University of Maryland, Baltimore; University of Florida

Kathleen Brundage - West Virginia University

6 more

#### Abstract

BACKGROUND: Telomere length (TL), telomerase activity (TA), and plasma amyloid-β (Aβ) levels have emerged as possible predictors of cognitive decline and dementia. OBJECTIVE: To assess the: 1) effects of two 12-week relaxation programs on TL, TA, and AB levels in adults with subjective cognitive decline; and 2) relationship of biomarker changes to those in cognitive function. psychosocial status, and quality of life (QOL). METHODS: Participants were randomized to a 12-week Kirtan Kriya meditation (KK) or music lister minutes/day. Plasma Aβ(38/40/42) and peripheral blood mononuclear cell TL and TA were measured at baseline and 3 months. Cognition, stres 3 months, and 6 months. RESULTS: Baseline blood samples were available for 53 participants (25 KK, 28 ML). The KK group showed significantly

More

Publication references - 144 Show all

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Sorted by: Date

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#### Publication metrics

About

#### Dimensions Badge



Total citations Recent citations

Field Citation Ratio Relative Citation Ratio

#### Altmetric



News (11) Blogs (2)

Twitter (1734) Facebook (1)

Video (1)

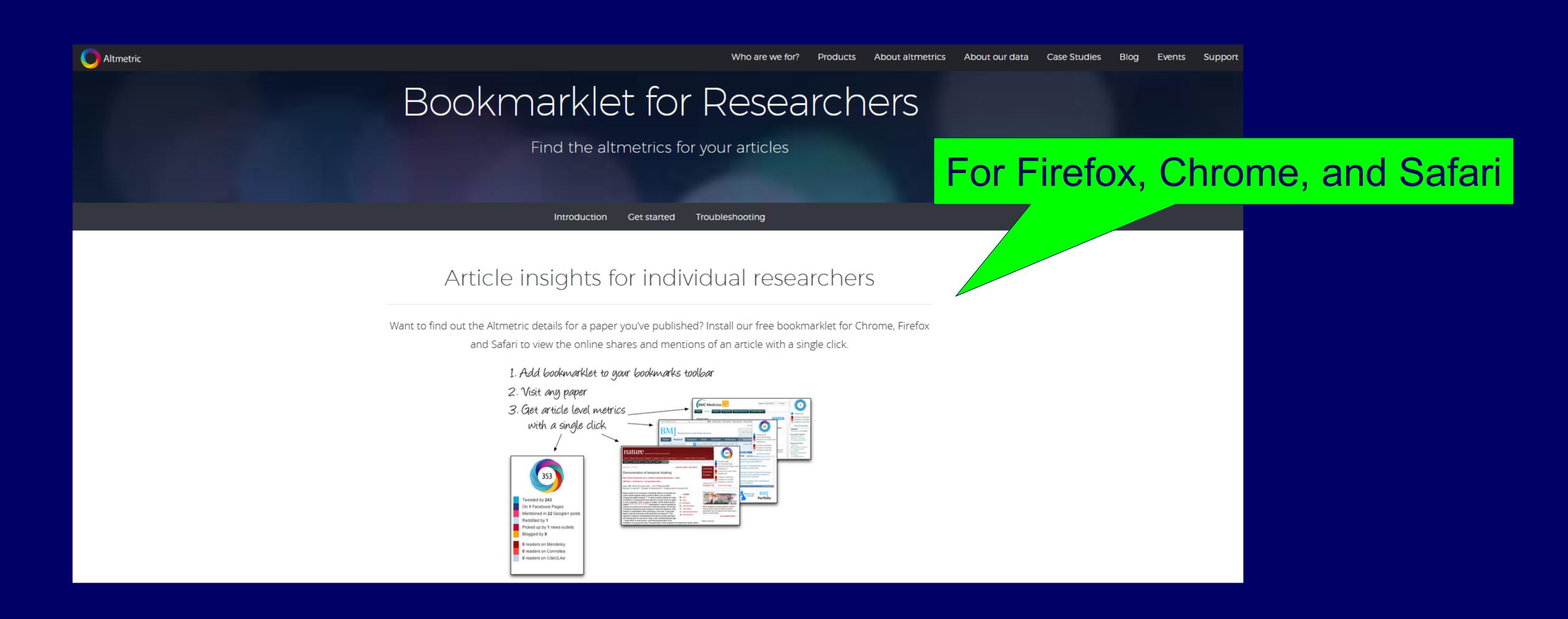
Mendeley (155)

Subjective cognitive decline and risk of MCI

## Altmetric Bookmarklet

#### For browser

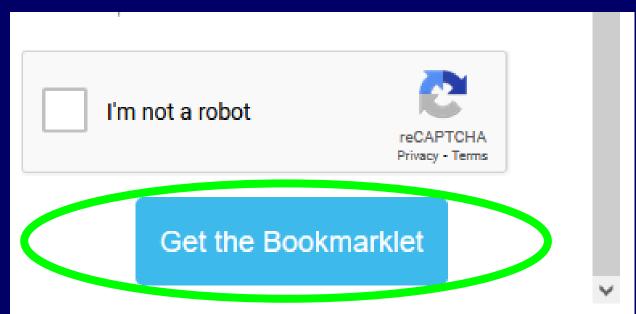
- Requires an email address from institution/organization
- Only works on PubMed, arXiv, or pages with a DOI and Google Scholar friendly citation metadata



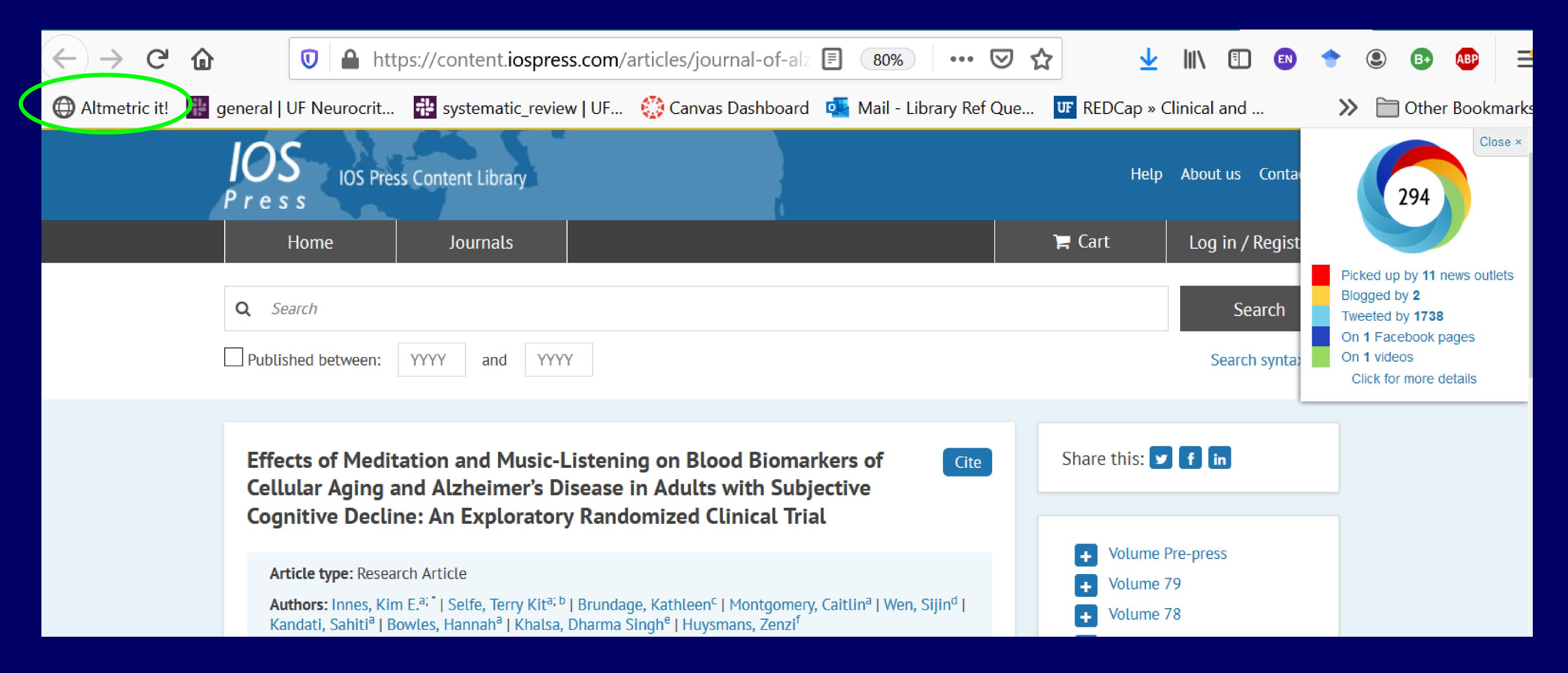
# Altmetric Bookmarklet

https://www.altmetric.com/products/free-tools/bookmarklet/

First Name *		^	
Last Name *			
Email *			
Job Title *			
Organization *			
Organization Type *			
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Would you like to join our mailing l		T I	m not a robot
Yes! Sign me up for Altmetric up	odates		
Yes! Sign me up for Digit	al Science		Get the Bo
updates			



## Altmetric Bookmarklet



https://content.iospress.com/articles/journal-of-alzheimers-disease/jad180164

# Guidance re: Responsible Use of Metrics

### LEIDEN MANIFESTO FOR RESEARCH METRICS

Home

Video version Translations

Blog

# 10 principles to guide research evaluation with 23 translations, a video and a blog

Research evaluation has become routine and often relies on metrics. But it is increasingly driven by data and not by expert judgement. As a result, the procedures that were designed to increase the quality of research are now threatening to damage the scientific system. To support researchers and managers, five experts led by Diana Hicks, professor in the School of Public Policy at Georgia Institute of Technology, and Paul Wouters, director of CWTS at Leiden University, have proposed 10 principles for the measurement of research performance: the Leiden Manifesto for Research Metrics published as a comment in Nature.

Hicks, Wouters, Waltman, de Rijcke, Rafols, Nature, April 23, 2015

http://www.leidenmanifesto.org/

# Guidance re: Responsible Use of Metrics

# Leiden Manifesto: 10 principles to guide research evaluation

- 1) Quantitative eval should support qualitative, expert assessment
- 2) Measure performance against the research missions of the institution, group, or researcher.
- 3) Protect excellence in locally relevant research.
- 4) Keep data collection and analytical processes open, transparent and simple.
- 5) Allow those evaluated to verify data and analysis.

https://www.nature.com/news/bibliometrics-the-leiden-manifesto-for-research-metrics-1.17351

# Guidance re: Responsible Use of Metrics

# Leiden Manifesto (cont.)

- 6) Account for variation by field in publication and citation practices.
- 7) Base assessment of individual researchers on a qualitative judgement of their portfolio.
- 8) Avoid misplaced concreteness and false precision.
- 9) Recognize the systemic effects of assessment and indicators.
- 10) Scrutinize indicators regularly and update them.

When a measure becomes a target, it ceases to be a good measure.

- Goodhart's Law

https://www.nature.com/news/bibliometrics-the-leiden-manifesto-for-research-metrics-1.17351

# Things you can do to increase and manage impact



### Publish

# Publish high quality articles

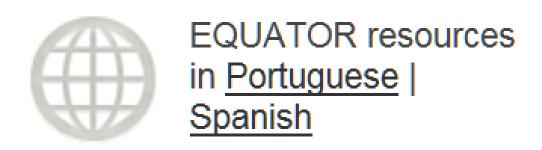
- To have impact, news of your research needs to reach others
   Make use of reporting standards
- Guidelines re: content to report in research article
- Improve the quality and completeness of reporting
- Where to find http://www.equator-network.org/



# Find Reporting Standards



# Enhancing the QUAlity and Transparency Of health Research



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Your one-stop-shop for writing and publishing high-impact health research

find reporting guidelines | improve your writing | join our courses | run your own training course | enhance your peer review | implement guidelines



# Library for health research

#### reporting

The Library contains a comprehensive searchable database of reporting guidelines and also links to other resources relevant to research reporting.



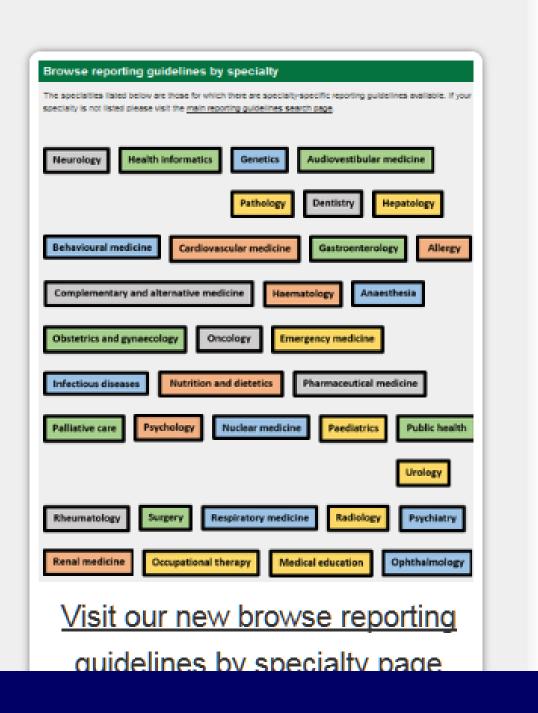
Search for reporting guidelines



studies

# Reporting guidelines for main study types

Randomised trials	CONSORT	Extensions	<u>Other</u>
Observational studies	STROBE	<u>Extensions</u>	<u>Other</u>
Systematic reviews	<u>PRISMA</u>	<u>Extensions</u>	<u>Other</u>
Case reports	CARE	<u>Extensions</u>	<u>Other</u>
Qualitative research	SRQR	COREQ	<u>Other</u>
Diagnostic /	STARD	TRIPOD	<u>Other</u>
prognostic studies			
<b>Quality improvement</b>	<u>SQUIRE</u>		<u>Other</u>



http://www.equator-network.org/

# Make your publications count

Publish in journals that reach your intended audience

- Journals indexed in databases commonly searched in that field
  - Your article can't have impact if it can't be found

If particular metrics are important to you, publish in journals that support them

 If Journal Impact Factor is important, be sure the journal has one and it ranks where you want it to be

# Use your ORCID ID

Include your ORCID ID whenever you submit a manuscript

# Maintain your researcher profile

## Numerous profiles are available

• E.g., ORCID, Google Scholar, Scopus, Web of Science

# Some profiles will be more complete than others

- Each database covers different journals and other publication types, so not all of your publications will be in each profile
- May lack some metrics of interest to you
- ORCID allows you to enter all of your publications
  - Not a citation database, so no metrics

# If you have a preferred database for your profile, publish in journals that are indexed in that database

Cannot add items not indexed in that database to your profile

# Recap

Metrics should support, not replace qualitative assessment Use metrics appropriate to level

- JIF is journal-level, not article-level metric
- Metrics can differ widely across fields
- Do not compare across fields unless using a normalized metric Provide context when reporting non-normalized metric values
  - E.g., rank, percentile
- Increase your impact by publishing high quality, citable work
  - Reporting standards can help ensure completeness of content
  - Publish in journals that reach your audience
- Maintain your researcher profile
  - Use multiple sources as profiles differ
  - ORCID allows you to add records from multiple sources

# Upcoming Webinars

# Fridays at 8 a.m. Eastern Time

#### **April 8: ORCID and Friends**

This webinar will cover creating your ORCID ID and linking it to Dimensions to add articles to your researcher profile with one click (open access, free). You will receive step-by-step instructions which you can actively follow to register for an ORCID ID by the end of the session.

# April 29: Publish, Don't Perish: Tools to make writing and publishing your article easier

This webinar will be a broad introduction to writing a manuscript for submission to a peer-reviewed journal. It will cover selecting a journal, types of articles, and locating appropriate reporting standards.

# May 13: From First Draft to Published Article: Navigating the publishing process

This webinar will cover the steps involved in getting a journal article published. The focus will be on the manuscript submission process including choosing a journal for your article, submitting the manuscript, understanding editorial decisions, revising the manuscript based on reviewer comments, and approving final page proofs.

# Upcoming Webinars

# Fridays at 8 a.m. Eastern Time

#### June 10: Avoiding Predatory Journals: Make your publication count

This webinar will introduce the participants to predatory journals, how and why to avoid publishing in one, and best practices for determining where to publish.

#### June 24: Tools for Managing Your Researcher Profile

This webinar will introduce a number of tools participants can use to manage their researcher profile, including Google Scholar, Dimensions, Scopus, Web of Science, and Publons.

# Questions?





# Q&A

### Acknowledgements:

- University of Florida George A. Smathers Libraries

This presentation is archived on the website of the Feed the Future Innovation Lab for Livestock Systems <a href="https://livestocklab.ifas.ufl.edu">https://livestocklab.ifas.ufl.edu</a>









# Next session on April 8th

# ORCIDAND FRIENDS

8:00 a.m. EST or UTC-04:00

Connect by **Zoom** 













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