

Communication of Retractions, Removals, and Expressions of Concern (CREC) Recommended Practice

FORCE 2024 Conference, 1 August 2024

Todd A. Carpenter

Executive Director, National Information Standards Organization



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◆ Agenda

Retraction and the continued citation of retracted papers
NISO CREC Working Group and summary of
recommendations
Takeaways, next steps, how you can help

Thank you!



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This project was supported by a generous grant from the Alfred P. Sloan Foundation.



◆ About NISO

The National Information Standards Organization (NISO) is a non-profit, membership organization

We create technical standards for the publishing, library and software communities.

Responsible for standards like DOI, ISBN, metadata and interoperability standards, and business processes.

Growing Challenges In Scholarly Ecosystem

PLOS ONE

PUBLISH ABOUT BROWSE SEARCH advanced search

OPEN ACCESS PEER-REVIEWED
RESEARCH ARTICLE

Inconsistent and incomplete retraction of published research: A cross-sectional study on Covid-19 retractions and recommendations to mitigate risks for research, policy and practice

Geoff Frampton, Lois Woods, David Alexander Scott

Published: October 27, 2021 • <https://doi.org/10.1371/journal.pone.0242458>

38 Save	15 Citation
3,725 View	36 Share

JAMA Network

JAMA Network Open JAMA Network Open Enter Search

Abstract

Introduction
Materials and methods
Results
Discussion and recommendations
Conclusions
Supporting information
References

Abstract

Background

Retraction of published research information, but concerns have been raised about the failure to clearly and consistently communicate erroneous research may inform research practices, potentially rendering it unreliable.

Objective

This Issue Views 10,905 Citations 0 Altmetric 62

PDF More CME & MOC Cite Permissions

Research Letter | Medical Journals and Publishing

October 4, 2022

Characteristics of Retracted Research Articles About COVID-19 vs Other Topics

Xiaoting Shi, BMedSci¹; Alison Abrisit, PhD²; Rujvee P. Patel, MBBS, MPH³; et al

» Author Affiliations | Article Information

JAMA Netw Open. 2022;5(10):e2234585. doi:10.1001/jamanetworkopen.2022.34585

COVID-19 Resource Center

Introduction

Manuscript retractions represent attempts to officially withdraw published papers or

THE SCHOLARLY kitchen

ABOUT ARCHIVES COLLECTIONS TRANSLATIONS CHEFS PODCAST FOLLOW

The Secret Life of Retracted Articles

By PHIL DAVIS | AUG 10, 2022 | 25 COMMENTS

AUTHORITY CONTROVERSIAL TOPICS ETHICS HOUSEKEEPING RESEARCH SOCIAL ROLE

Twitter Facebook 28 YouTube

We like to believe that science is self-correcting, that scientific result of sloppy methodology, miscalculation, or worse, intent is eventually detected and expunged from the scientific record. We believe that retraction notices reach their intended audience, that retracted articles are often cited as if they were valid studies after retraction.

Why do retraction notices fail to reach readers? What is it about scientific communication process that allows retracted articles to have a secret life, promulgating inaccurate — and sometimes harmful — information to scientists and the general public? And what, if anything, can be done about it?

Wiley and Hindawi to retract 1,200 more papers for compromised peer review

Hindawi and Wiley, its parent company, have identified approximately 1,200 articles with compromised peer review that the publishers will begin retracting this month.



Jay Flynn, executive vice president and general manager of the research division at Wiley, which acquired Hindawi in 2021, wrote about the forthcoming retractions in a [blog post](#) at Scholarly Kitchen yesterday.

The plan to retract 1,200 articles, which the publisher expects to take a few months, follows Hindawi's [announcement last September](#) that it would retract 511 articles across 16 journals for manipulated peer review.

→ Why should we care about retractions?

→ Why should we care about retractions?

TRUST

What is retraction?

“Retraction is a mechanism for correcting the literature and alerting readers to articles that contain such seriously flawed or erroneous content or data that their findings and conclusions cannot be relied upon.”

RETRACTION GUIDELINES

VERSION 2: November 2019

Summary

Editors should consider retracting a publication¹ if:

- They have clear evidence that the findings are unreliable, either as a result of major error (eg, miscalculation or experimental error), or as a result of fabrication (eg, of data) or falsification (eg, image manipulation)
- It constitutes plagiarism
- The findings have previously been published elsewhere without proper attribution to previous sources or disclosure to the editor, permission to republish, or justification (ie, cases of redundant publication)
- It contains material or data without authorisation for use
- Copyright has been infringed or there is some other serious legal issue (eg, libel, privacy)
- It reports unethical research
- It has been published solely on the basis of a compromised or manipulated peer review process
- The author(s) failed to disclose a major competing interest (a.k.a. conflict of interest) that, in the view of the editor, would have unduly affected interpretations of the work or recommendations by editors and peer reviewers.

COPE Council. COPE Guidelines: Retraction Guidelines. Version 2, Nov 2019
<https://doi.org/10.24318/cope.2019.1.4>

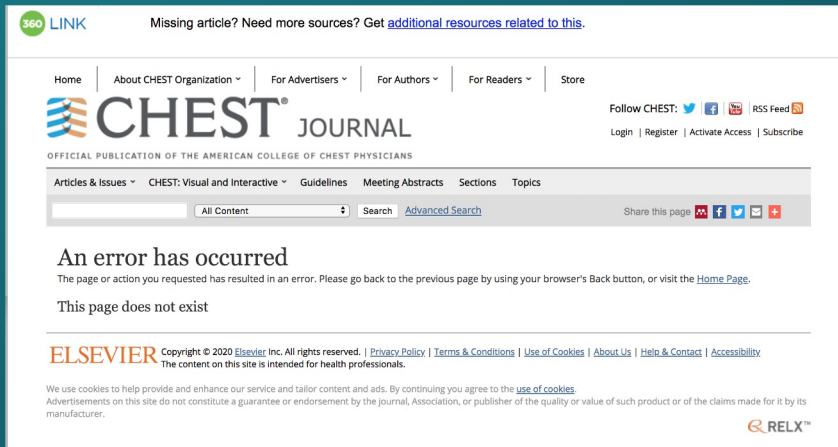
Basics about retraction

Retraction is part of the healthy science ecosystem. Honest error may lead to retraction! This is part of the process of doing robust science.

- Retraction is a mechanism for correcting the literature – when errata and correction notices are insufficient.
- 1 in about 1000 articles is retracted
- Retraction occurs in all fields.
- Reasons for retraction include unethical research, redundant publication, issues with data and/or results.
- **Retraction time frames vary: may take days, months, years, or decades.**
- **Even when results are wrong, people may cite and use retracted work.**

Information systems make it difficult to find out that publications are retracted.

Schneider's team tested 8 databases: Only 1 (EMBASE) had working link to retraction notice!



360 LINK Missing article? Need more sources? Get [additional resources related to this](#).

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Jodi Schneider, Di Ye, Alison M Hill, Ashley S Whitehorn. 2020. "Continued post-retraction citation of a fraudulent clinical trial report, eleven years after it was retracted for falsifying data." In *Scientometrics*. <http://doi.org/10.1007/s11192-020-03631-1>

Inconsistent notification styles make it difficult to find out that publications are retracted.

✓ SCIENTIFIC REPORTS


Article | [Open Access](#) | Published: 01 July 2019


RETRACTED ARTICLE: Doubled haploid production in alfalfa (*Medicago sativa* L.) through isolated microspore culture

Dengxia Yi , Jifeng Sun, Yanbin Su, Zongyong Tong, Tiejun Zhang & Zan Wang 

[Scientific Reports](#) **9**, Article number: 9458 (2019) | [Cite this article](#)

1470 Accesses | 1 Citations | [Metrics](#)

 This article was [retracted](#) on 13 September 2019

 This article has been updated

▼ SCIENTIFIC REPORTS


[Open Access](#) | Published: 21 February 2012


A therapeutic method for the direct reprogramming of human liver cancer cells with only chemicals


Hisashi Moriguchi, Yue Zhang, Makoto Mihara & Chifumi Sato


[Scientific Reports](#) **2**, Article number: 280 (2012) | [Cite this article](#)

197 Accesses | 5 Citations | **75** Altmetric | [Metrics](#)

 An Addendum to this article was published on 18 October 2012

 An Addendum to this article was published on 18 October 2012

 A Retraction to this article was published on 09 November 2012

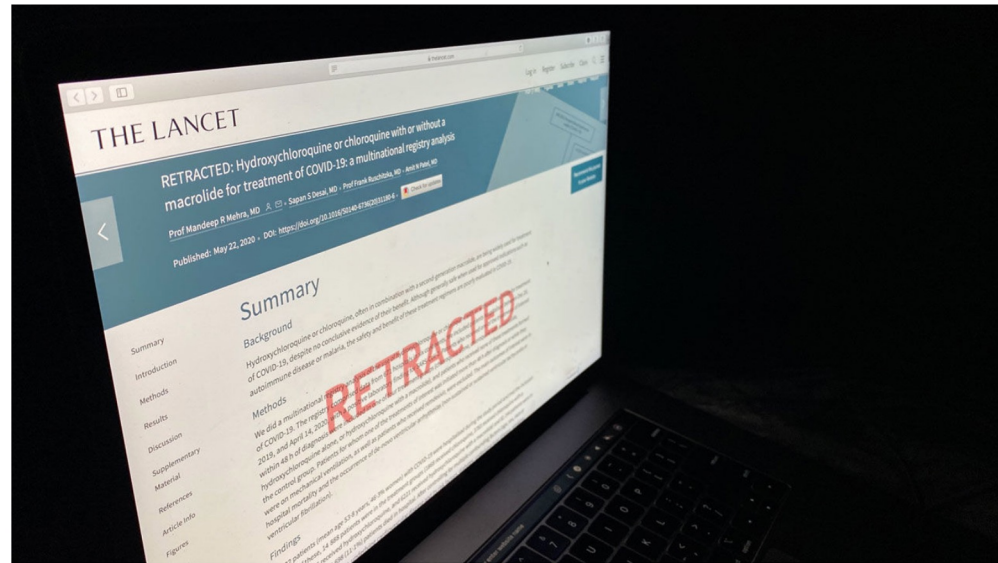
 This article has been updated

Elizabeth M.Suelzer, Jennifer Deal, Karen L. Hanus. Challenges in discovering the retracted status of an article. <http://hdl.handle.net/2142/108367>
See also their article: *JAMA Netw Open*. 2021;4(6):e2115648 <http://doi.org/10.1001/jamanetworkopen.2021.15648>

Continued citation of retracted papers

Two COVID-19 articles retracted a month after they were published have over 1700 citations each.

Science magazine examined 200 of the post-retraction citations to these papers and concluded that over half inappropriately cited the retracted articles.



E. PETERSEN/SCIENCE

Many scientists citing two scandalous COVID-19 papers ignore their retractions

By Charles Pillar | Jan. 15, 2021, 8:00 AM

<https://doi.org/10.1126/science.abg5806>



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Continued citation is not rare!

◆ Schneider's team examined over 13,000 post-retraction citations in PubMed Central to 7813 retracted papers in PubMed as of August 2020 and concluded that 94% inappropriately cited the retracted article.

Examples:

- A clinico-histopathologic study in rabbits confirmed that PRP treatment can achieve a faster wound healing rate [retracted cite].
- However, to date, only one human study has demonstrated an induction of SIRT1 mRNA level in PBMCs [retracted cite].

Tzu-Kun Hsiao & Jodi Schneider. Continued Use of Retracted Papers- Temporal Trends in Citations and (Lack of) Awareness of Retractions Shown in Citation Contexts in Biomedicine. In *Quantitative Science Studies* https://doi.org/10.1162/qss_a_00155



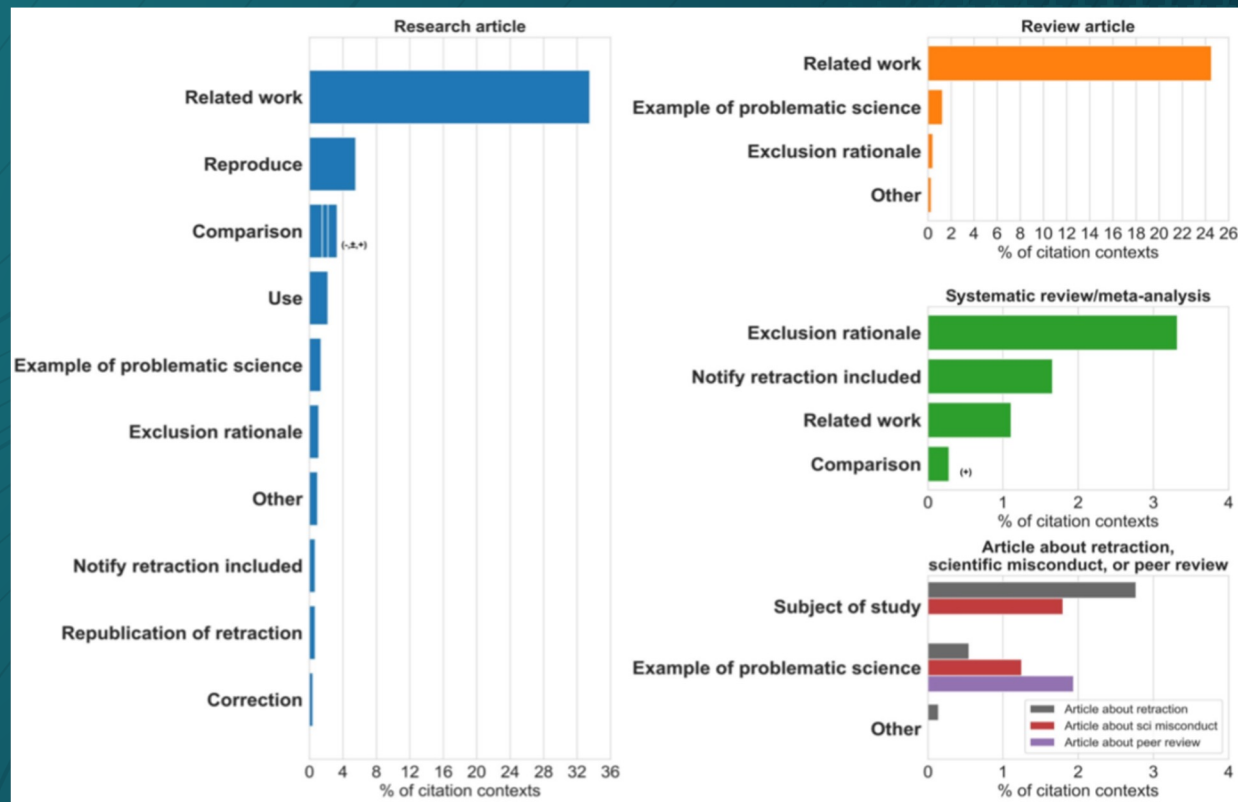
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Why intentionally cite retracted papers? (5% of post-retraction citations)



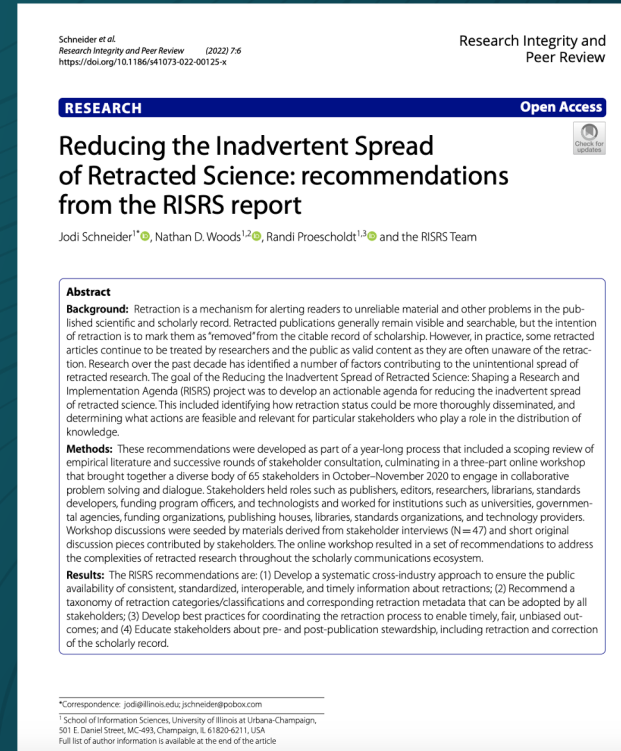
Tzu-Kun Hsiao & Jodi Schneider. Continued Use of Retracted Papers- Temporal Trends in Citations and (Lack of) Awareness of Retractions Shown in Citation Contexts in Biomedicine. In *Quantitative Science Studies* https://doi.org/10.1162/qss_a_00155

Goals of the RISRS Project

Develop an actionable agenda for reducing the inadvertent spread of retracted science.

Identify how retraction status could be more thoroughly disseminated

Determining what actions are feasible and relevant for particular stakeholders who play a role in the distribution of knowledge.



Schneider, J., Woods, N.D., Proescholdt, R. et al. Reducing the Inadvertent Spread of Retracted Science: recommendations from the RISRS report. Res Integr Peer Rev 7, 6 (2022). <https://doi.org/10.1186/s41073-022-00125-x>



RISRS2020 recommendations

<http://doi.org/10.31222/osf.io/ms579>

1. Develop a systematic cross-industry approach to ensure the **public availability of consistent, standardized, interoperable, and timely information about retractions.**
2. Recommend a **taxonomy of retraction categories/classifications and corresponding retraction metadata** that can be adopted by all stakeholders.
3. Develop **best practices for coordinating the retraction process** to enable timely, fair, unbiased outcomes.
4. **Educate stakeholders** about publication correction processes including retraction and about pre- and post-publication stewardship of the scholarly record.



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RISRS Project Recommendations

Table 2 Reducing the Inadvertent Spread of Retracted Science (RISRS) Recommendations

	Publishers/Journals	Standards organizations	Researchers	Other stakeholders
Develop a systematic cross-industry approach to ensure the public availability of consistent, standardized, interoperable, and timely information about retractions	(1) Adopt standards for citation of retracted papers, and for labeling retracted papers, (2) use software solutions, (3) invest in metadata quality	Develop standards for (1) retraction labeling in databases and publisher websites, (2) best practices for availability of retraction information in databases	Use citation software to flag retractions	Citation software developers: develop flags for retracted papers
Recommend a taxonomy of retraction categories/classifications and corresponding retraction metadata that can be adopted by all stakeholders	Adopt, and participate in developing, a retraction taxonomy	Develop and maintain retraction taxonomy	Become aware of taxonomy and pay attention to classifications of articles being cited	Working group composed of a variety of stakeholders: develop retraction taxonomy
Develop best practices for coordinating the retraction process to enable timely, fair, and unbiased outcomes	Reserve the right to retract in legal agreements; provide clear instructions for inquiries/concerns	Clarify best practices	Follow CLUE report recommendations	Funders, research institutions: follow CLUE report recommendations; Research integrity organizations: clarify best practices
Educate stakeholders about pre- and post-publication stewardship, including retraction and correction of the scholarly record	Develop education aimed at multiple groups; build awareness of existing resources	Develop best practices for emerging concerns such as preprints; support authors in identifying authoritative sources for checking citations	Evaluate and assess references; clearly indicate if cited work is retracted; notify publisher if cited work in evidence synthesis is retracted; notify publisher, institution, and coauthors of issues with a published article	Scholarly societies, government agencies, and local institutional programming: develop education aimed at multiple groups

NISO PLUS Project Idea



Schneider presented her results during the NISO Plus Conference in February 2021.

CREC was selected as one of the output ideas to be advanced from the Conference.

A meeting was held in May 2021 to develop a project proposal, which was approved in the fall of 2021.

NISO Communication of Retractions, Removals and Expressions of Concern (CREC) Working Group

◆ Membership: group appointed May 2022

Members:

Caitlin Bakker, University of Regina (co-chair)

Rachael Lammey, Crossref (co-chair)

Alyssa Conaway, ASTM International

Joanna Czerepowicz, Taylor & Francis Group

Tilla Edmunds, Clarivate

Annette Flanigan, JAMA & the JAMA Network

Stephen Flockton, IOP Publishing

Joyce Griffin, Wiley

Patrick Hargitt, Atyon

Emily Hazzard, Silverchair

Sylvia Hunter, Inera

Rolf Kwakkelaar, Elsevier

Luigi Longobardi, IEEE

Marie McVeigh, Mary Ann Liebert

Ivan Oransky, Retraction Watch

Francois Renaville, University of Liege

Michael Roberts, Emerald Publishing Group

Rachel Safer, Oxford University Press

Jodi Schneider, University of Illinois Urbana-Champaign

Jessie Slater, AAAS

Pauline Starley, Springer Nature

Heather Tierney, American Chemical Society

Elizabeth Wolf, Copyright Clearance Center

David Wright, Modern Language Association

Jen Wright, Cambridge University Press

Maria Zalm, PLoS

Former members:

Hendia Edmund, American Society for Microbiology

Hannah Heckner Swain, Silverchair

Catherine Nancarrow, California Digital Library

Deborah Poff, Journal of Scholarly Publishing

Teodoro Pulvirenti, American Chemical Society

Sonal Shukla, Springer Nature

Maja Choma, Springer Nature

Emily Kean, ProQuest

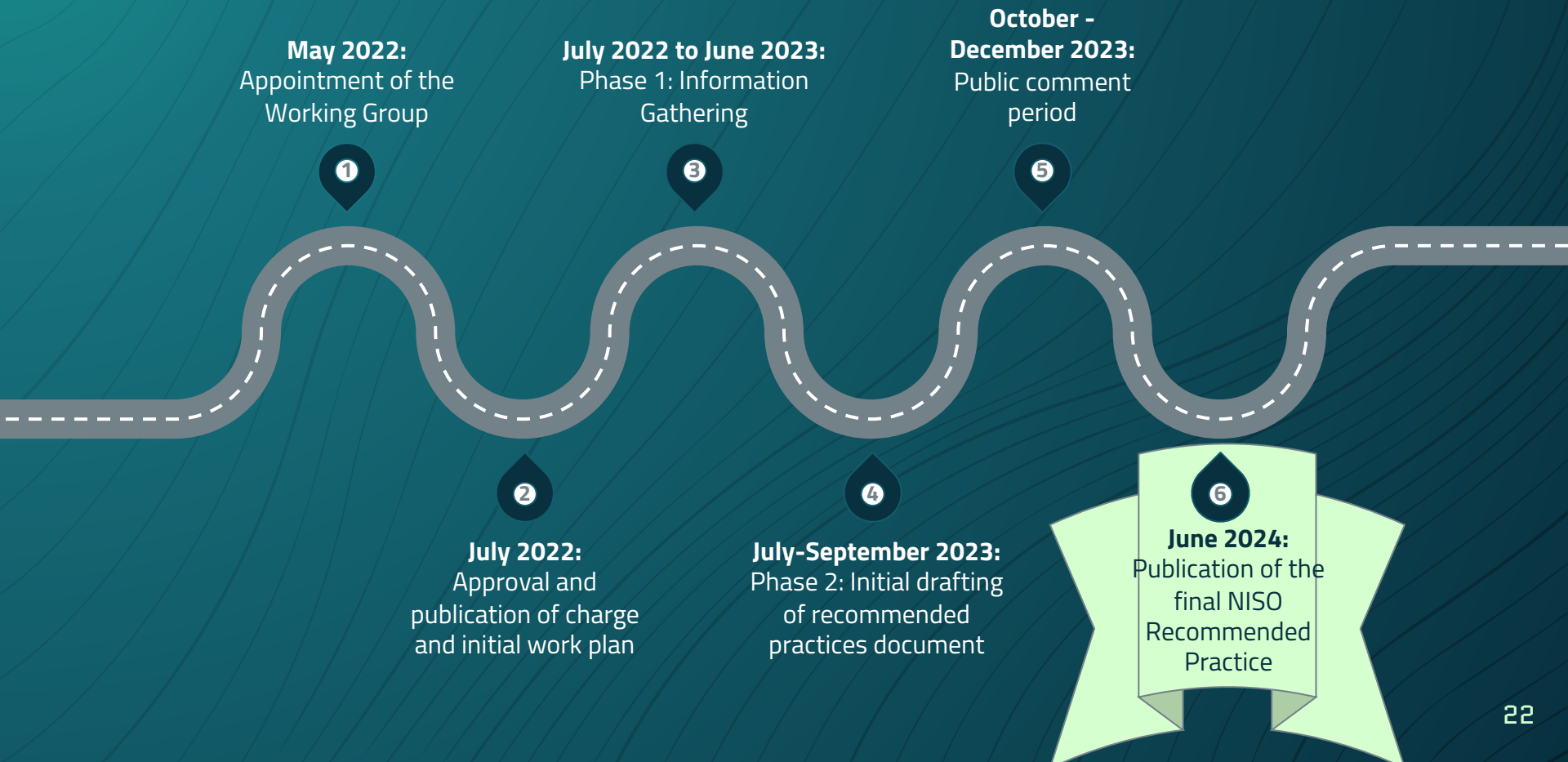
With support from:

Keondra Bailey, NISO

Nettie Lagace, NISO



After a decision is made to retract, to withdraw, or to publish an expression of concern by an appropriately authorized organization, how do the scholarly communications ecosystem and other information consumers become aware of and share information about the status of the original object?



Publisher subgroup: investigated workflows including if and how metadata and articles were updated and how statements of retraction were issued

Aggregator/end user subgroup: investigated what metadata were received, how those metadata were formatted, and how data transfer occurred

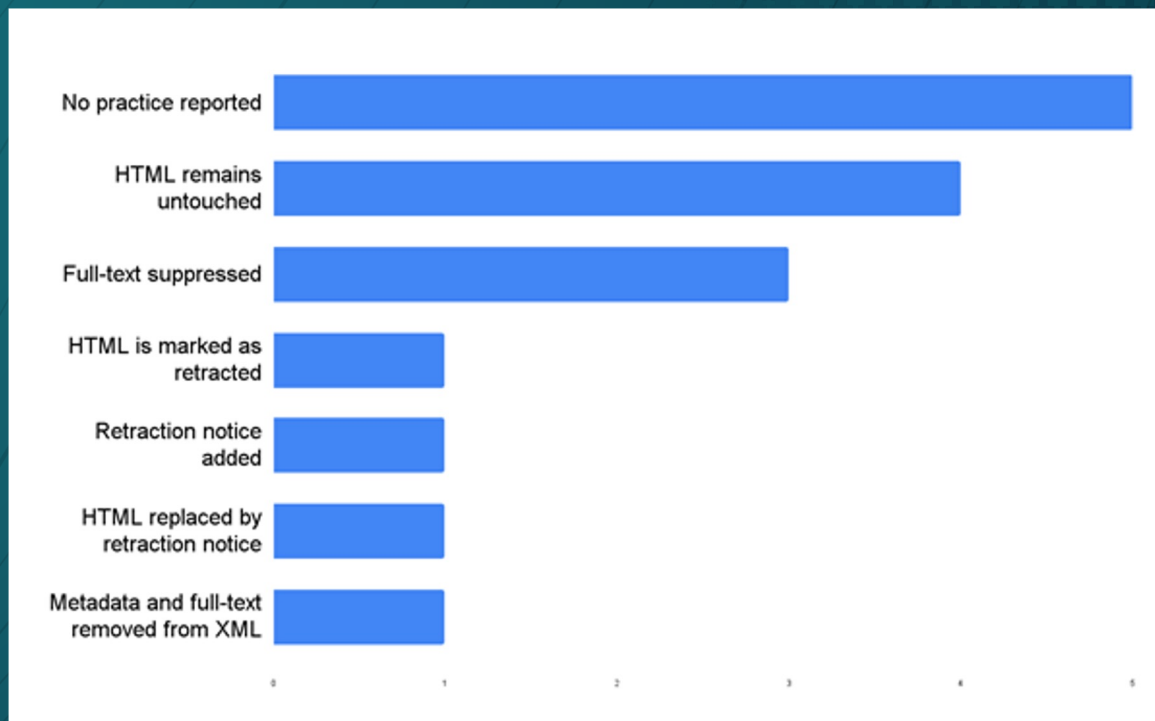
What happens to the PDF?

> 60% add a watermark

Other strategies included:

- Adding the retraction notice as a cover page
- Removing the PDF entirely
- Replacing the PDF with the retraction notice
- Replacing the abstract with the retraction notice

What happens to the HTML?



What does this mean for aggregators?

- Metadata are received in a wide variety of formats and through different channels
- Timing, quality and terminology all vary
- Identification of and linkage to the original article may or may not be possible

Not unique to CREC participants

- 50% of database records not marked as retracted
- 13% of HTML not marked as retracted
- 57% of PDFs not marked as retracted

Bakker, C.J., et al. Identification of retracted publications and completeness of retraction notices in public health. *Journal of Clinical Epidemiology*, 173 (2024): 111427.
<https://doi.org/10.1016/j.jclinepi.2024.111427>

Published on
June 27, 2024



NISO RP-45-2024

Communication of Retractions, Removals, and Expressions of Concern (CREC)

*A Recommended Practice of the
National Information Standards Organization*

Approved June 26, 2024
Prepared by the NISO CREC Working Group

◆ Scope of Recommended Practice

Out of scope:

- Rationale for editorial decision

- Editorial decision making process

In scope:

- Metadata transfer, communication, and display

- Implementation and operationalization

Considers both articles that are the Version of Record, as well as other scholarly outputs

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◆ Summary recommendations

Receipt, display and meta-data distribution

Metadata elements

Utilizing existing metadata schema, defines Essential, Essential if Available, and Recommended metadata

Implementation

Known complexities

Includes a responsibility assignment (RACI) matrix elements

◆ Summary recommendations (continued)

Essential and Essential if available: minimum metadata elements necessary to identify affected work and relevant editorial notice, and to allow fulfillment of items outlined in sections 3 & 4.

Recommended: metadata elements that expedite or streamline identification of the affected work and provide more robust representation of the editorial decision.

◆ Summary recommendations (continued)

Retracted publications: 23 elements (8 essential, 14 essential if available, 1 recommended)

Retraction notices: 20 elements (8 essential, 2 essential if available, 10 recommended)

Essential Metadata Elements for the Retracted Publication [5.1]

- ◆ Work Title

- ◆ Date of Publication

- ◆ Publisher

- ◆ Publication Source (and identifiers)

- ◆ First Author's Full Name

- ◆ Indication of Corresponding Author

- ◆ Link Between Retraction Notice/EoC and Original Publication

- ◆ Article Type

5.1 Metadata Elements for the Retracted Publication

Metadata Element	Essential/ Recommended/ Essential if Available	Description	JATS Element/Attribute
Work Title	Essential	<p>“RETRACTED:” is inserted (in all caps) at the beginning of the title so it is clear to users that the work is retracted. If applicable, include all titles that are available (e.g., transliterated, translated, official titles in every language printed on document).</p> <p>Use “RETRACTED:” (in English), whatever the language, the script, or the writing direction (left-to-right or right-to-left) of the retracted work or the publication source. Include the equivalent word in the</p>	<pre><article-meta> <title-group> <article-title> RETRACTED: Original Title</article- title> </title-group> </article-meta></pre>

Metadata Element	Essential/ Recommended/ Essential if Available	Description	JATS Element/Attribute
			<pre><article-meta> <elocation-id> article number </elocation-id> </article-meta></pre>
Title of Retraction Notice/EoC	Essential	<p>Repeatable field. If applicable, include all titles that are available (e.g., transliterated, translated, official titles in every language printed on document).</p> <p>The retraction notice title should clearly identify the retracted publication, e.g., by including the retracted publication title in the phrase “RETRACTION OF: [publication title]”³¹</p> <p>The EoC title should clearly identify the concerned publication, e.g., by including the concerned publication title in the phrase “Expression of concern for: [publication title]”³²</p>	<pre><title-group> <article-title> Retraction Notice Title/ Expression of Concern Title </article-title> </title-group></pre>
Date of Retraction Notice/EoC Publication	Essential	Retraction notice/EoC publication date.	<pre><article-meta> <pub-date></pre>

Summary recommendations (continued)

Implementation Guidance

- For publishers and journals
- For web vendors
- For full-text hosts
- For aggregators
- For library services platforms (LSPs)

Complex Scenarios

- epub ahead of print
- Journals that have ceased publication
- Journals that have been transferred
- Single notice for multiple events



Numéro courant Archives Annonces À propos ▾

Accueil / Archives / Vol. 1 No 2 (2019): Juillet - Décembre 2019 / Articles

RETRACTED ARTICLE (article rétracté): Enseignement de grammaire d'une langue étrangère

Doumpa Mian-asmbaye
Université de N'Djaména

Mots-clés: enseignement, apprentissage, grammaire, langue maternelle, langue étrangère



Figure 4: Example of article published in French, where article title has not been translated into English
© 2019. This work is openly licensed via [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/).



ARTICLE

Neural stem cell conditioned medium alleviates A β 25-35 damage to SH-SY5Y cells through the PCMT1/MST1 pathway

Jia, Guoyong ; Yang, Hongna ; Diao, Zengyan ; Liu, Ying ; Sun, Congcong
European journal of histochemistry, 2020, Vol.64 (s2)

RETRACTED PUBLICATION

PEER REVIEWED

Retracted Article! [✕](#)

Retracted Article! [✕](#)

[Available Online](#) >

Top

View It

Send to

Details

Tags

Links

Altmetrics

View It

PubMed Central
Available from 2009 vol 53.



DOAJ Directory of Open Access Journals
Available from 2010.



Publicly Available Content Database
Available from 01/01/2000 until 30/06/2020.



In Open Access via Unpaywall



Figure 1: Primo VE example.⁴³
Source: Primo, provided by Ex Libris, part of Clarivate.

Fielded Search > Results for Physiological co... > Results for Physiological comparative study of six wild grapevine (Vitis sylve...

2 results from Web of Science Core Collection for:

[Analyze Results](#)[Citation Report](#)[Create Alert](#)

🔍 Physiological comparative study of six wild grapevine (Vitis sylvestris) accession responses to salinity (Title)

[Search](#)[+ Add Keywords](#)

Publications

You may also like...

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Refine results



Quick Filters

None of the results contain data in this field.

Publication Years ⓘ

☐ 2017 2

Document Types

☐ Article 1
☐ Retracted Publication 1
☐ Retraction 1

Researcher Profiles

☐ 0/2[Add To Marked List](#)[Export ▾](#)

Sort by: Relevance ▾

< 1 of 1 >

- ☐ 1 **RETRACTED: Physiological comparative study of six wild grapevine (*Vitis sylvestris*) accession responses to salinity** (Retracted article. See vol. 10, Artn 402, 2017)
- Retracted Publication**
- [Askri, H; Gharbi, F; \(-\); Ghorbel, A](#)
- Jun 2017 | [ARABIAN JOURNAL OF GEOSCIENCES](#) 10 (11)
- Salinity problems for vineyards are in concerns, especially in coastal areas where several aquifers are reported to be affected by seawater intrusion and agricultural contamination. Saline irrigation affects growth, yield, and fruit quality of grapevines. Exploring germplasm base through wild ancestors of the target species is a novel adopted strategy to increase crop tolerance to irrigation wi ... [Show more](#)
- [Full Text at Publisher](#) ...

2
Citations

26
References

[Related records ?](#)

- ☐ 2 **RETRACTION: Retraction of Physiological comparative study of six wild grapevine (*Vitis sylvestris*) accession responses to salinity** (vol 10, 246, 2017) (Retraction of Vol 10, art no 246, 2017)
- [Askri, H; Gharbi, F; \(-\); Ghorbel, A](#)
- Sep 2017 | [ARABIAN JOURNAL OF GEOSCIENCES](#) 10 (18)
- [Full Text at Publisher](#) ...

1
Reference

[Related records](#)

23



Appendix A

Proposed Flowcharts and Scenarios

A visual representation of the recommendations for retractions is shown below.

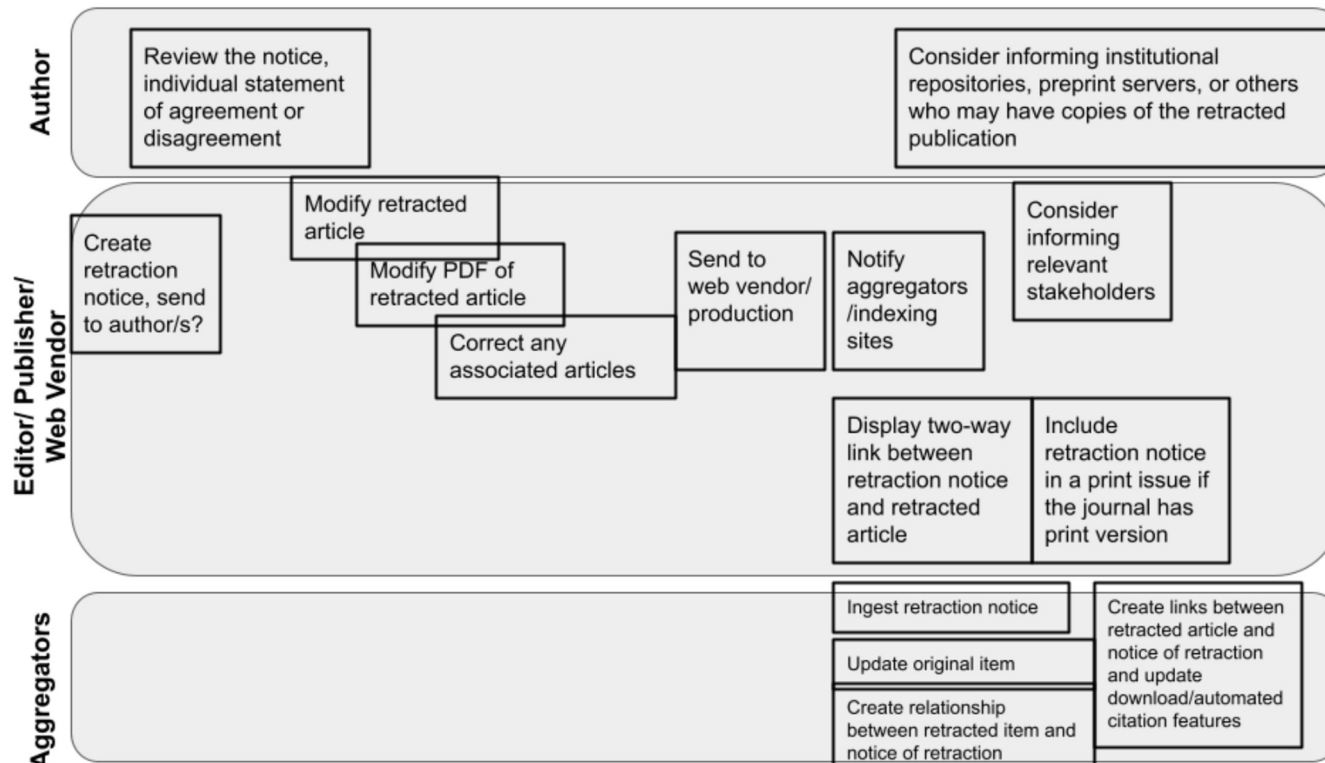


Figure A-1: Retraction communication flowchart

Standing Committee



Will be responsible for support, education, and marketing of the CREC Recommended Practice Working Group is now sunset; Standing Committee to be formed by September 2024

Will be made up of some Working Group members and some new members

If you're interested in joining, let us know!

nisohq@niso.org

◆ Takeaways for publishers

Work with your production team and vendors to implement the NISO CREC recommended practise

Examine your current practises. What changes should be implemented?

Can you work around changes that cannot be implemented? Report difficulties to NISO.

Ensure retracted article meta-data are updated quickly

Encourage other publishers to implement the NISO CREC recommended practice

◆ Takeaways for librarians

Ask your vendors during negotiations!

And tell your vendors when there are problems

Surface metadata in your discovery systems

Educate your faculty and students

Develop procedures to account for retractions in core library services

Takeaways for vendors

Investigate your current holdings and practices

What records are connected to retracted publications?

How are those records found?

How do you update previously received or distributed metadata?

Examine your metadata flows

Consider how you can align your practices with the NISO RP

Thank you!
Questions?

<https://www.niso.org/standards-committees/crec>

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