Vol. 38 / No. 1

FORENSIC SCIENCE REVIEW

Jan. 2026

FORENSIC SCIENCE REVIEW

SINCE 1989

Volume 38 ■ Number 1 ■ Jan. 2026

www.forensicsciencereview.com

Objectives and Scope

The discipline of forensic science has nurtured many publications oriented toward research and case reports, as well as broad-based formal treatises. Rapid advances in forensic science have created a need for a review journal to bridge the gap between research-oriented journals and reference volumes.

The goal of *Forensic Science Review* is to fill this void and provide a base for authors to extrapolate state-of-the-art information and to synthesize and translate it into readable review articles. The addition of this journal extends the spectrum of forensic science publications.

Articles bring into focus various narrowly defined topics whose literature has been widely scattered. Articles are presented to stimulate further research on one hand and worthwhile technological applications on the other. The publisher's aim is to provide forensic scientists with a forum enabling them to accomplish this goal.

Technological applications based on basic research are emphasized. Articles address techniques now widely used in forensic science as well as innovations holding promise for the future.

FORENSIC SCIENCE REVIEW

VOLUME THIRTY-EIGHT ■ NUMBER ONE ■ JAN. 2026

Forensic Science Review

Arlington, Texas • Birmingham, Alabama
United States of America

Forensic Science Review (*http://www.forensicsciencereview.com*; ISSN 1042-7201; US Library of Congress Control No. 90649976; indexed and included in MEDLINE / PubMed, Scopus) is a bi-annual review journal devoted to the timely publication of current topics in the field of forensic science. Beginning July 2025, each issue includes three sections (**Commentary**, **Professional Review & Historical Perspective**, and **Review Article**). Issues are published in January and July of each year.

The journal, originally founded by President Shih-Si Yen, President of the Central Police University (Taoyuan, Taiwan), is currently published by Forensic Science Review with executive editorial offices located in Arlington (Texas, US) and the Department of Criminal Justice, University of Alabama at Birmingham (Alabama, US).

Articles published in all three sections of **Forensic Science Review** are mostly invited contributions. Review articles are peer-reviewed. The invitation process normally originates from the recommendations of members of the Editorial Board. Unsolicited articles from the general readership are also welcomed but should be preceded by a query letter to the Editor-in-Chief for presentation to the Editorial Board. Query letters and editorial correspondence should be addressed to: Editor-in-Chief, **Forensic Science Review**, P. O. Box 153034, Arlington, TX 76015, US, preferably through E-mail to rayliu@uab.edu. Honoraria are presented to authors and reviewers upon distribution of the issue in which the article appears. All published articles represent the opinions of the authors and do not represent the official policy of the publisher or the institution with which the author is affiliated, unless clearly specified.

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Forensic Science Review

Date of Inauguration: June 1989
Founding Publisher: Shih-Si Yen

Current Issue: Issue 1, Volume 38
Publication Date: January 2026
Publisher: Forensic Science Review
Founding Editor: Ray H. Liu
Editorial Office: Univ. of Alabama at Birmingham

Production Copy Editor: Mikael Thompson
Cover Design: Cindy Bonds; L.-J. Chen
Layout Design: The Town Crier
Printing/Binding: Lea-Hsiung, Inc.
Kaohsiung, Taiwan

FORENSIC SCIENCE REVIEW

VOLUME THIRTY-EIGHT ■ NUMBER ONE ■ JAN. 2026

Commentary

A. W. Jones

Division of Clinical Chemistry and Pharmacology
Department of Biomedical and Clinical Sciences, Faculty of Medicine
Linköping University
Linköping
Sweden

Professional Review and Historical Perspective

Review Article

Y.-C. Cheng

Department of Forensic Science
The George Washington University
Washington, District of Columbia
United States of America

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Review Article (Continued)

B. A. Best

Best Forensics
Maplesvile, Alabama
United States of America

Forthcoming Articles

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Commentary[a]

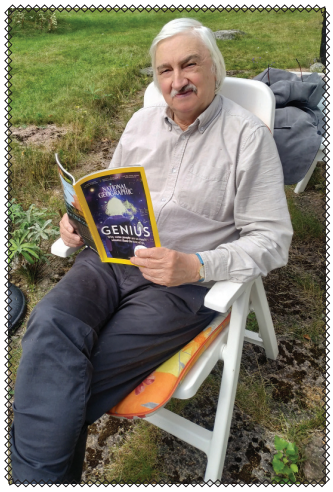
Forensic Sci Rev 38:1–12
January 2026

Using Citation Metrics and Bibliometric Indicators for the Appraisal of Published Work by Forensic Scientists

A. Wayne Jones

Division of Clinical Chemistry and Pharmacology
Department of Biomedical and Clinical Sciences
Faculty of Medicine
Linköping University
Linköping
Sweden

Wayne.jonese@liu.se



Retired since 2013 from his appointment as a senior scientist at the National Laboratory of Forensic Genetics and Forensic Toxicology (Linköping, Sweden), Dr. A. Wayne Jones continues to write and publish scientific papers as guest professor at the University of Linköping (Department of Clinical Chemistry and Pharmacology). Since his first publication in 1974, Prof. Jones' bibliography currently includes 530 items, comprising journal articles, literature reviews, several books, book chapters, and other material. His scientific papers have appeared in over 100 different academic journals, with Prof. Jones the sole author of more than half of these works. On the remainder of these publications his name is mostly listed as first, last, or corresponding author.

Prof. Jones has had considerable experience as an ad hoc peer reviewer of manuscripts submitted for publication to ~100 scientific journals, and he has served on the editorial boards of a dozen others that specialize in analytical and forensic toxicology, legal medicine, and substance abuse. According to Google Scholar, Dr. Jones' current H-index is 71 and his papers have been cited over 15,500 times. His composite citation score (up to the end of 2023), based on six different citation metrics, was 3.978, placing him in fifth place worldwide in the subject category of legal and forensic medicine.

Introduction

Throughout their lives, people are continuously subjected to a variety of evaluations and/or grading processes, starting with examinations in school to test students' knowledge and learning abilities. People who embark on a career in academia can expect to be regularly judged in some way, such as for their administration ability, teaching skills, and research activity, the last of these depending upon their publications in academic journals. Also important is the ability of a university scientist to attract external funding to support research activities. A person's publication and citation track record are especially relevant when they are being considered for promotion or tenure, and for the award of research grants and/or scholarships. Election to membership in a national academy of science or the award of other scientific accolade (such as medals or prizes) depends to a large extent on the person's publication and citation track record.

In jurisprudence, the qualifications, training, and past experience of a person proposed to serve as an expert witness need to be carefully evaluated [1,2]. In this connection, it is important to note whether they have conducted their own research and can document this with their name on publications appearing in academic journals [3,4]. The task of an expert witness in criminal and civil litigation is to explain the meaning of scientific, technical, or medical evidence to non-scientists, such as the judge and jury [1]. An expert's credentials are enhanced if they are credited with having published relevant articles in peer reviewed journals, and if these works are subsequently highly cited they become even more authoritative [5,6].

This commentary takes an in-depth look at various on-line databases and how they can be used to evaluate a person's publications and their importance. The number of articles listed on a person's CV gives an indication of how

[a]The views expressed are those of the author and do not necessarily reflect the view, the position, or the policy of *Forensic Science Review* or members of its editorial board.

prolific they have been, but the pattern of co-authorship on these works also needs to be considered. Furthermore, an item listed on a person's CV might be an original research paper, a review of the literature, a chapter in a textbook, a letter to the editor, commentary, discussion, or debate material. Success in science is tightly linked to prolific authorship (number of papers), especially if the papers appeared in prestigious academic journals and are later highly cited.

Embarking on a Scientific Career

After one has decided to pursue a career in science, the importance of publishing articles in academic journals quickly becomes evident as early as research for the PhD degree [7]. The process of searching for and finding scholarly articles and summarizing and indexing them into subject categories forms an essential part of the PhD training program. When an article is accepted for publication in a scientific journal, the information it contains enters the public domain and is available to be read, reviewed, criticized, and cited by other scientists. Indeed, writing up and publishing the results of one's research is how scientists communicate with their peers and spread new knowledge and ideas in the scientific community [8].

Writing and publishing scientific papers disseminates the research results and increases the visibility of the authors of the articles, as well as the places where they work, whether at universities, government laboratories, or private companies. A person's list of publications is carefully scrutinized when they apply for a new job in academia, and having many papers published in well-respected "peer-reviewed" journals is considered meritorious [9]. Success in moving up the academic ladder from assistant to associate or from associate to full professor rests heavily on a person's publication track record and the quality and quantity of their published work [10].

Also important is the supervision of students toward a higher degree (MS or PhD); such information also needs to be included and highlighted in one's CV. Finally, it is increasingly important these days to be successful in attracting external funding to support your own research activities, because this helps the university budget and enhances its reputation and ranking worldwide [11].

Organizing Scientific Publications

The most important part of a scientist's CV is the list of publications, which should be prepared diligently and organized in a way that is easy to comprehend. How best to organize a list of publications is not a trivial matter and deserves considerable thought, because there is no standard format. The list should provide the reader with a quick overview of total output of papers without unnecessary "padding" or "inflation," e.g., by including duplicate publications or allowing conference abstracts to masquerade as journal articles. Book chapters should be included, but listed only once on the CV if no significant updates were made when new editions of the same book were published.

Perhaps the simplest and most logical way to arrange publications is chronologically by the date (year) of first publication. However, because one might publish many different types of material in the same year, such as original articles, reviews of the scientific literature, chapters in books and/or encyclopedia, letters-to-the-editor, commentary, book reviews, and debate material, it is advantageous to prepare a secondary list subdivided by the type of contribution.

Listing conference abstracts intermingled with original journal articles and reviews is not a good idea and should be discouraged. By attending meetings of scientific societies a person becomes known in the field, which is important for future career development, although any presentations made at these meetings should be listed separately, if at all. However, if one is lucky enough to have been invited to present a keynote or plenary lecture and this is later written up and published in the conference proceedings, this can legitimately be added to one's bibliography.

One way to present a bibliography of published papers is according to category, such as:

- Original articles published in peer-reviewed journals.
- Review articles appearing in peer-reviewed journals.
- Chapters published in an edited book or monograph.
- Articles appearing in published proceedings of conferences.
- Letters to the editor subdivided into original research material, commentary, and/or critique of material already published in the same journal.
- Invited commentary and debate articles.
- Book reviews.

To reiterate, the titles of abstracts and poster presentations should not be jumbled up with those of journal articles and review papers in the list of publications, because these items are rarely cited and are also difficult to find via a library or Internet search. However, attending annual conferences is crucial for one's scientific and personal development, and a record of attendances and any papers or posters presented should be kept as a separate record in another part of the person's CV.

Authorship Attribution

Trying to figure out who did what in a multi-authored article or book chapter can be a difficult task [12]. The average number of authors on scientific papers has increased

appreciably over the past 50 years, and this trend continues unabated [13]. Some articles have mega-authorships of 50–100 names listed as authors or contributors, and some of these articles appear in prestigious journals [14].

With single-author papers it is obvious to whom the credit, accountability, and responsibility belong, but single authors are an endangered species. The person listed as the first author on a multi-authored article deserves more credit than the other names, because it is generally accepted that this person made the largest contribution by writing the first draft of the manuscript. The last name listed on a paper is also conceived as a prestige position, and is usually reserved for the senior scientist in the group, the head of the department, or the person who secured research funding [15] (*see* further discussion on this practice at the end of this section and in the "Concluding Remarks" section).

The person listed as the "corresponding author" deserves extra credit because he/she is the one responsible for submitting the article to the journal and maintaining contact with the editor and the journal office. The peer review reports and decisions for acceptance or rejection of the manuscript are sent to the corresponding author, which is now all done electronically. Close attention should thus be given to the person listed as corresponding author, because they vouch for the integrity and correctness of the material submitted for publication [16].

When concerns are raised about the authenticity of a published article, this might result in retraction of the work, and whenever this happens, all people listed as authors bear responsibility, not just the first or corresponding author [17]. Such irregularities as the fabrication of data, invention of non-existent patient information, plagiarism, and outright fraud do occur in science [18], and this might attract significant negative publicity, especially when a senior scientist is among the co-authors and the paper appears in a prestigious journal. When such articles appear in citation databases, they usually carry a retraction notice giving further explanation and comment about what the problems were. Obviously, publishing a fake article is embarrassing, not only for the journal itself, but also the peer-reviewers who approved the article and the university and department where the work originated [19]. For many years there has been an open-access database called Retraction Watch that follows and indexes retracted articles, along with the names of the authors and the reasons for the retraction (*https://retractionwatch.com/*).

Notwithstanding the importance of being listed as the first or last author on a publication, nowadays one sometimes notices an asterisk above the names of first and second authors on a paper directing readers to a footnote stating something like "these two individuals contributed equally to the work presented."

Before a submitted article is sent for peer review, it is customary for the journal to remove the names and addresses of the authors to ensure a double-blind process. After an article has been peer-reviewed and accepted for publication, the authors are asked to declare in writing exactly what each person listed as an author contributed to the completion of the work. This falls under the rubric CRediT, although the explanations given tend to be "boiler plating," with wording such as conceptualization, methodology, formal analysis, validation, investigation, resources, writing the original draft, supervision, acquisition of funding, writing the review, and editing often appearing in CRediT statements.

Another way to document a person's contribution to scholarship is to focus on patterns of co-authorship in their list of publications and arrange the articles as follows:

- Single author on original journal articles, reviews, and/or book chapters.
- First-author articles, together with one or more co-authors.
- Last-author articles, together with one or more co-authors.
- Articles as the corresponding author if not also first or last author.

Such a listing would make it perfectly clear what role the person played in the genesis and provenance of the articles in their publication list. A sensitive question is whether all names listed as authors should be credited with all the citations an article might receive or whether some type of fractionalization (1/n) is necessary. One of the pioneers in the field of bibliometric analysis, Derek J. de Sola Price (1922–1983), commented on the question of multiple authorship as follows [20]:

> *The payoff in brownie points of publications or citations must be divided among all authors listed on the by-line, and in the absence of evidence to the contrary it must be divided equally among them. Thus each author of a three-author paper gets credit for one third of a publication and one third of the ensuing citations. If this is strictly enforced it can act perhaps as a deterrent to the otherwise pernicious practice of coining false brownie points by awarding each author full credit for the whole thing.*

There is no way of knowing what the person occupying 5th or 6th position on a paper with 10–12 co-authors really contributed to the completion of the work contained in the article. Scientific collaboration is essential in the research enterprise; although a decision as to who in the research group should be considered a co-author needs to be made early in the planning process of the work; the ordering of the names (first, second, last, etc.) can be decided once the first draft of the manuscript is complete [21–23].

Authorship decisions and the ordering of the names vary between research groups, universities, and countries. The heads of some laboratories expect their name to be included among the authors (usually as the last author) on all papers emanating from their department [22,23]. In this way, after a long career in research some senior scientists might have their names on over 1000 publications. However, this policy of department heads adding their name to every article has sometimes backfired when it was later discovered that the data used to write the article were fabricated; when this happens, all the people listed as authors bear some of the responsibility and consequences [24].

Citation Analysis

The guru of citation analysis was Eugene Garfield, PhD (1925–2017), who founded the Institute for Scientific Information (ISI) back in the 1960s [25,26]. This organization conceived of the Science Citation Index (SCI), Current Contents, and Journal Citation Reports (JCR), as well as other science information products. The SCI required the indexing of the reference lists included in every substantive scientific paper in thousands of academic journals from a plethora of academic publishers worldwide [27,28]. Each reference cited in an article was dissected into the names of the authors, title of the work, name of the journal where it was published, and volume, issue, and page numbers, as well as its year of publication. This information was entered into a computer and evaluated and indexed in various ways to create massive amounts of data, originally published in annual reports and a long series of books. More recently, this information has been made available on-line through the searchable database known as Web of Science (WOS), which is produced by Clarivate Corporation (London, UK), a successor to ISI.

The reasons the author or authors of a scientific paper might cite a particular published article differ widely, although, according to Garfield [29], they might include one or more of the following:

- Paying homage to pioneers.
- Giving credit for related work.
- Identifying methodology, equipment, etc.
- Providing background reading.
- Correcting one's own work.
- Correcting the work of others.
- Criticizing previous work.
- Substantiating claims.
- Alerting researchers to forthcoming work.
- Providing leads to poorly disseminated, poorly indexed, or uncited work.
- Authenticating data and classes of fact—physical constants, etc.
- Identifying original publications in which an idea or concept was discussed.
- Original publication describing a concept or term (e.g., Parkinson's disease).
- Disclaiming work or ideas proposed in earlier papers (negative claims).
- Disputing priority claims made by others (negative homage).

Whatever the reason for citing a source, it is generally agreed that the more often a paper is cited, the more influential it is perceived to be by people working in the same or closely related disciplines. Some published articles receive the status of a "citation classic," although depending on the journal this might require hundreds of citations.

It is generally considered that the more citations a scientist accumulates, the more successful they have been in advancing knowledge in their chosen discipline. Obviously, the accuracy of the list of references is crucial, and those responsible for submitting an article for publication must ensure that the journal name and/or abbreviation is correct, that the volume, pages, and year of publication are reliable, and that the names of the authors of the cited article are spelled correctly. This requires a double check of the list of references before a manuscript is submitted for publication [30].

Measuring Impact

Impact is a nice-sounding word that implies something important or meaningful, such as making an impact on a person or thing. Academic journals are often compared and contrasted by their "impact factor," which is calculated as the number of times the average article it publishes is subsequently cited over a defined citation window, usually the first two years after publication, in articles published in all journals included in the Web-of-Science citation database [27,28].

Much has been written about use of the journal impact factor (JIF) as a mark of prestige and standing among scientific journals in the same subject category, and this includes forensic science journals, which WOS lists under the heading "medicine, legal" [31,32]. More important than the JIF, however, is that the journal operates with an effective and transparent peer-review process and that the most qualified individuals are selected by the editor to review manuscripts. A submitted manuscript is always improved by a diligent and impartial peer review [33]. Whether the peer review process should be single-blind, double-blind, or completely open is often discussed and debated because of potential conflicts of interests between one or more of the authors of the article and the peer reviewers [34].

The peer review of manuscripts before acceptance is the cornerstone of scientific publishing, and it has been in existence for over 350 years [35,36]. Peer reviewers have been referred to as the gatekeepers of science, because they give a stamp of approval to the work presented, and can be considered as a type of quality control, because the work has passed muster by two or more experts selected by the journal editor. However, peer review has been criticized amid allegations of bias, rivalry, jealousy, sexism, and nepotism [37]. Peer review is not infallible, although it seems appropriate to paraphrase what Sir Winston Churchill (1874–1965) once said about democracy, namely that "it's the worst system in the world, except for all the rest."

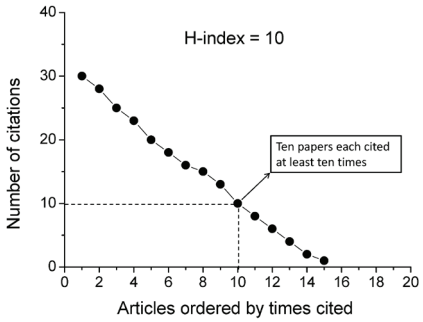


Figure 1. H-index distribution graph obtained by rank-ordering publications by the number of times they have been cited. An H-index of 10 means the person in the example has his or her name on 10 papers, each of which has been cited at least 10 times.

Hirsch-Index

A paper published in 2005 in the *Proceedings of the US National Academy of Science* by Jorge H. Hirsch (a physicist) introduced the concept of the H-index as a citation metric [38], and this has since found considerable success and utility [39–41]. The H-index is sometimes referred to when comparing the importance of a person's published papers, such as when applying for a new job or for promotion from assistant to associate professor. In short, a researcher's H-index is the number of his or her papers (H) that have been cited at least H times. Thus a single number furnishes information about both the productivity and the usefulness of a person's published papers.

To calculate a person's H-index, their publication list is arranged in decreasing order of the number of times each article has been cited [42]. One then counts down the list to find the paper number that matches that number of citations. In the example shown (Figure 1), the researcher in question has an H-index of 10, since his or her name is on 10 publications each of which has been cited at least 10 times. The remaining articles have not yet reached 10 citations, and are therefore presently outside the H-core of publications.

Various modifications of the H-index have been suggested that permit a fairer comparison between senior and more seasoned scientists with those midway through their career or just starting to write and publish scientific papers. One version of the H-index is obtained by dividing the person's H-index by the number of years elapsed since their first publication; a value between 1.0 and 2.0 is considered above average, and >2.0 is excellent.

Another modification of the H-index is referred to as the Hm-index, which adjusts the citation count of each paper by the number of co-authors [43]. Thus, a paper with two authors is counted as 0.5, three authors as 0.33, four authors as 0.25, and so on. These fractions are then summed until they match the number of citations giving the person's Hm index, which is always less than the H-index, unless a person is the single author of each paper in their H-core [43].

The increasing prevalence of multi-authored scientific papers over the past 50–100 years is problematic when credit is attributed to individual names listed as co-authors [44]. Unless some written declaration is made, it is increasingly difficult (or impossible) to figure out who did what when a dozen or more names are listed as authors on many of the articles listed in a person's CV.

Citation Databases

Every substantial scientific paper ends with a list of references to articles, books, chapters, government reports, and websites that were considered relevant for the completion of the respective manuscript. Each citation can be considered a formal reference to information considered important for the planning and writing of the current research paper. A citation is used to support a factual statement, proposition, argument, or assertion or to identify the location of any text quoted from various sources, including other published articles, books, websites, or any other type of print or online material [29,30].

An article might be cited for a varity of reasons, such as to draw attention to important methodology, for historical reasons, or simply to pay homage to some mentor or pioneer in the subject matter. Moreover, a journal article might be cited for either positive or negative reasons, such as might happen if the conclusions reached could not be confirmed and/or verified in the current investigation.

Nevertheless, the publication of highly cited papers is considered important for the reputation of a journal within its subject category, and the more often an article is cited, the more important are its contents considered to be. The number of citations a journal receives in a particular year to articles it has published in the previous two years divided by the number of citable items in that same two years is

the basis for calculating the Journal Impact Factor (JIF), which might range from 0 to over 100 [27,28]. It appears that review-type articles and method papers attract more citations than original research contributions [45].

As already alluded to, the reference list at the end of a scientific paper furnishes a wealth of bibliometric information linking the provenance of the article itself to previously published work. Citation metrics are now widely used in academia to compare and contrast scholarly articles and the oeuvre of a scientist's publications or the work emanating from entire university departments or countries. Garfield [29] wrote the following about the reason an author might choose to cite another person's publication in their own article:

> *Since authors refer to previous material to support, illustrate, or elaborate on a particular point, the act of citing is an expression of the importance of the material. The total number of such expressions is about the most objective measure there is of the materials' importance to current research. The number of times all the material in a given journal has been cited is an equally objective and enlightening measure of the quality of a journal as a medium for communicating research results.*

Scopus

Scopus was launched in 2004 by Elsevier (Amsterdam, The Netherlands), one of the leading European academic publishers, and has become a direct competitor to WOS. Scopus has a larger journal coverage than WOS, although the bulk of the literature it abstracts was published after 1950, whereas WOS began to document and abstract journal articles from the beginning of the 1900s. The search capabilities that Scopus affords users are continually being improved, including the use of AI technology for matching with other scientist's profiles. Searching with keywords locates relevant articles on any particular topic, and an author profile is easily generated by plugging in the person's family name and initials. The publications retrieved via an author search can then be arranged in various ways, such as chronologically or by number of times each one has been cited; information is also available about the distribution of citations over time.

Besides the cumulative number of citations, both with and without self-citations, the Scopus database also generates the person's H-index. Articles can be arranged in various ways in decreasing or increasing order of the number of times each has been cited; the same information is also available as a graphic. The publication counts and H-index tend to be higher in the Scopus database than in WOS, perhaps because of the different journal coverage [46]. However, both databases require a subscription for full access to the material, although various summary measures can be obtained without a subscription.

Scopus also provides author position details, such as percentage as sole-author, first-author, or last-author over the past 10 years. A list of the most frequently occurring co-authors is also easily available in decreasing order of the number of collaborative papers. Also of interest is a pie-diagram illustrating the types of source journal where a person most frequently publishes their work.

ResearchGate

Another on-line database that has gained considerable traction, usage, and some controversy is ResearchGate, which was launched in 2008. Besides abstracting and counting the citations of published articles, ResearchGate encourages scientists to upload pdf versions of their publications, to which ResearchGate adds a new front page with the article's title and the names and addresses of the authors. Some believe this represents a breach of contract unless the article was published open access, because the copyright is owned by the publisher of the journal where the work was first published; this copyright issue remains unresolved. The ResearchGate website has started to advertise chemical reagents, scientific equipment, and other laboratory products, which provides a source of revenue, although creating a profile and using the database are gratis.

There is a wealth of bibliometric information available via ResearchGate about a person's publications, including their latest H-index (with and without self-citations), the total number of citations of their published papers, and how many recommendations their work has received. There is also a ResearchGate app that can be downloaded to a cell phone. Researchers are informed whenever somebody cites one of their articles or when their articles reach some milestone, such as 50, 100, 500, or 1000 reads and/or citations.

ResearchGate also generates a weekly citation report, which is sent to the owner of a profile, and this contains information about who cited or recommended their artickes, with a breakdown by countries and institution. ResearchGate also makes use of the citation data and interest shown in an author's publications to calculate a research interest (Ri) score, thus permitting direct comparisons with other people in the database.

Composite Citation Score

The composite citation score (C-score) or index is a relatively new bibliometric indicator (since 2019) developed by John Ioannidis and his associates from Stanford University. The motivation for creating a C-score was described in several articles published in *PLOS Biol-*

ogy [47,48]. One advantage of the C-score over other citation metrics is that it includes six different metrics and considers authorship position on published papers, whether solo-author, first-author, or last-author position. The six individual citation metrics are defined in **Table** 1 and after a log + 1 transformation are compared with the highest values of that particular metric in the database. The six individual ratios are then added together to give the person's C-score [47].

The bibliometric data used to create the C-score derives from Elsevier's Scopus database, which contains more than 8 million entries. Only those individuals in the database credited with at least five published articles as author or co-author were used to calculate a C-score. They were allocated to 22 broad scientific fields or disciplines and then into 174 sub-fields, depending on the types of scientific journal where articles were generally published using a standard Science-Metrix classification. Those people listed in the final database, depending on their C-score, are considered to be within the top 2% of all people in their subject category, which in this case was "legal and forensic medicine" (LFM; *see* **Table 2**).

As an example, the September 2024 edition of the C-score database contained publication and citation data up to the end of 2023, and 14,394 individuals were classified as having LFM as their primary research discipline. The top 10 LFM scientists in the database were then ranked according to their C-scores as shown in Table 2. This shows the person's name, followed by a country of residence, and the second column is the number of articles in Scopus with the person's name as an author or co-author. Then follows the person's ranking in the entire database (third column), consisting of over 200,000 highly cited scientists worldwide from all subject categories. The remaining columns show the six citation metrics as defined in Table 1 that were used to calculate the person's C-score.

A closer look at these top 10 individuals in LFM shows that 3 are from the field of forensic toxicology (Kintz, Jones, and Drummer); 4 are specialists in forensic genetics/DNA (Kayser, Gill, Butler, and Budowle); and, 3 are specialists in legal medicine/pathology (Madea, Byard and Brinkmann).

The citation counts in Table 2 exclude self-citations, where a person cites one of their own previously published papers. Self-citation rates vary widely between scientists and disciplines, and for the 10 people listed in Table 1, self-citing rates ranged from 8.2% to 28.0% of their total number of citations. There is growing interest in the C-score because it considers authorship position on the cited articles and the fact that self-citations can be excluded from total citations, as indicated in the title of a recent article, "Goodbye H-Index, Welcome C-Score" [49].

Google Scholar

Originally created in 2004, Google Scholar is a freely available search engine. I encourage forensic practitioners to create their own profile. All that is necessary is to enter an e-mail address and a password and the profile is created instantly and the information it contains can remain private or be made public. For those scientists with a common family name (e.g., Evans, Jones, Williams, Smith) and perhaps the same initials as others in the database, some editing will be necessary, although this is easily done. The H-index and total citation count are higher in Google Scholar than in the other citation databases discussed in this article, because all mentions of an article on the WWW are included, not just the appearances in reference lists (citations) of articles in academic journals [50].

Table 1. Definitions of the six citation metrics used by the Stanford University research team to calculate a composite citation score [47,48]

Citation metric	Brief definition of the citation metric
Total number of citations	The cumulative number of citations to a person's papers included in the Scopus database.
H-index	This is the number of an author's publications that have been cited at least the same number of times. The Hirsch index is obtained by arranging the list of publications in decreasing order of the number of times each has been cited and is given by the article number with at least that same number of citations [38].
Hm-index	Modified H-index takes into consideration the number of co-authors on each cited article. The paper is fractionalized depending on the number of authors (e.g., two authors = 0.5, three authors = 0.33, etc.). These fractions are then summed until the number matches the article number with that same number of citations [43].
Citations to single-author papers	Cumulative number of citations to papers with the person's name as sole author.
Citations to single- and first-author papers	Cumulative number of citations to papers with the person's name as single and first author.
Citations to single-, first-, and last-author papers	Cumulative number of citations to papers with the person's name as single, first, or last author.

Table 2. Top 10 most highly cited scientists in the subject category legal and forensic medicine (LFM) according to their composite citation scores as of September 2024

Person (country)[a]	Paper count[b]	Rank in database[c]	Total cites[d]	H-index (Hm index)[e]	S-author[f] (cites)	S+F author[g] (cites)	S+F+L author[h] (cites)	Composite C-score[i]
Kintz, P. (France)	600	11,732	10,935	53 (35.8)	79 (1,261)	308 (5,521)	429 (7,827)	4.1158
Kayser, M. (Netherlands)	381	13,533	21,497	77 (24.2)	14 (556)	59 (3,639)	190 (11,055)	4.0796
Gill, P. (Norway)	243	16,610	13,007	64 (24.9)	16 (600)	93 (4,561)	168 (9,186)	4.0249
Byard, R.W. (Australia)	1,047	17,879	10,925	41 (26.1)	250 (1,275)	571 (4,870)	951 (8,358)	4.0050
Jones, A. W. (Sweden)	345	19,687	5,982	40 (33.0)	128 (1,711)	250 (4,100)	306 (5,411)	3.9785
Drummer, O. H. (Australia)	310	20,377	9,581	50 (30.5)	40 (1,029)	95 (2,620)	211 (6,151)	3.9690
Butler, J. (US)	157	21,034	8,517	55 (24.2)	26 (1,440)	63 (3,151)	103 (5,223)	3.9605
Madea, B. (Germany)	835	23,065	10,282	52 (31.9)	74 (605)	219 (1,806)	666 (7,835)	3.9348
Budowle, B. (US)	658	24,500	15,609	61 (28.8)	23 (115)	139 (4,076)	403 (9,741)	3.9185
Brinkmann, B. (Germany)	459	34,027	9,763	47 (26.7)	20 (406)	106 (1,813)	348 (5,817)	3.8229

[a] Person's name and country of residence, with n = 14,394 individuals in the legal and forensic medicine category.
[b] Number of articles with that person listed as author or co-author.
[c] Rank in citation database for over 200,000 top-cited scientists representing all subject categories.
[d] Total number of citations to the person's publications (self-citations excluded).
[e] An index reflecting number of published papers with at least that number of citations (H-index) and after correction for multiple authorship (Hm-index).
[f] Number of papers as a single (S) author and (sum of citations).
[g] Number of papers as single (S) + first (F) author and (sum of citations).
[h] Number of papers as single + first + last author and (sum of citations).
[i] Composite citation score based on six different citation metrics (*see* Table 1).

The owner of the profile has the option to add a recent photo and to select five main subject categories, which in my case were Forensic Toxicology, Substance Abuse, Legal Medicine, Forensic Science, and Impaired Driving (*see* **Figure 2**). Clicking on one of these subject topics brings up a list of the profiles of other people with a Google Scholar account who selected the same category. Only the top seven cited articles are shown in Figure 2, and these are arranged by number of times each has been cited up to September 2025. Articles in the profile can also be sorted alphabetically by title or year of publication, although the default is times cited. Various language options are also available when a Google Scholar profile is created.

Clicking on the title of an article opens a new window that contains an abstract of the article, if one exists, and a bar graph showing year-by-year citations of that article. Clicking on one of the bars produces a list of all citing articles in that particular year. A link is also provided to the journal source file and, if available, a PDF version of the article if one exists on the WWW.

The box on the upper right corner (drawn by the author of this article) in Figure 2 is reproduced as **Table 3**, which gives a neat summary of the citation record for AW Jones as of September 2025. His publications have accumulated a total of 15,553 citations, the H-index is 71, and the i10-index is 281. This latter metric means that the name AW Jones is on 281 articles, each of which has been cited at least 10 times. Table 3 also compares career-long citation metrics with metrics limited to the last five publication years, hence since 2020.

PUBMED

Developed by the US National Library of Medicine (National Institute of Health), PUBMED has been abstracting and documenting the medical literature for many years. In 1996 the database went on-line and has become a widely appreciated tool for following developments in the medical sciences. However, many scientific journals were launched long before the National Institute of Health began abstracting the medical literature, so these articles are not included in the database.

Care is needed if PUBMED is to be used to generate a publication record for a person active in research and who published articles prior to the 1950s or 1960s. For example, in connection with a biographical article about a famous US forensic toxicologist, Alexander Oscar Gettler (1883–1968), PUBMED credited him as the author of just six articles, whereas I know for a fact that he had published many more articles. The problem was that Gettler had been publishing articles in source journals long before they were ever indexed by the National Library of Medicine and are therefore not available via a search of PUBMED.

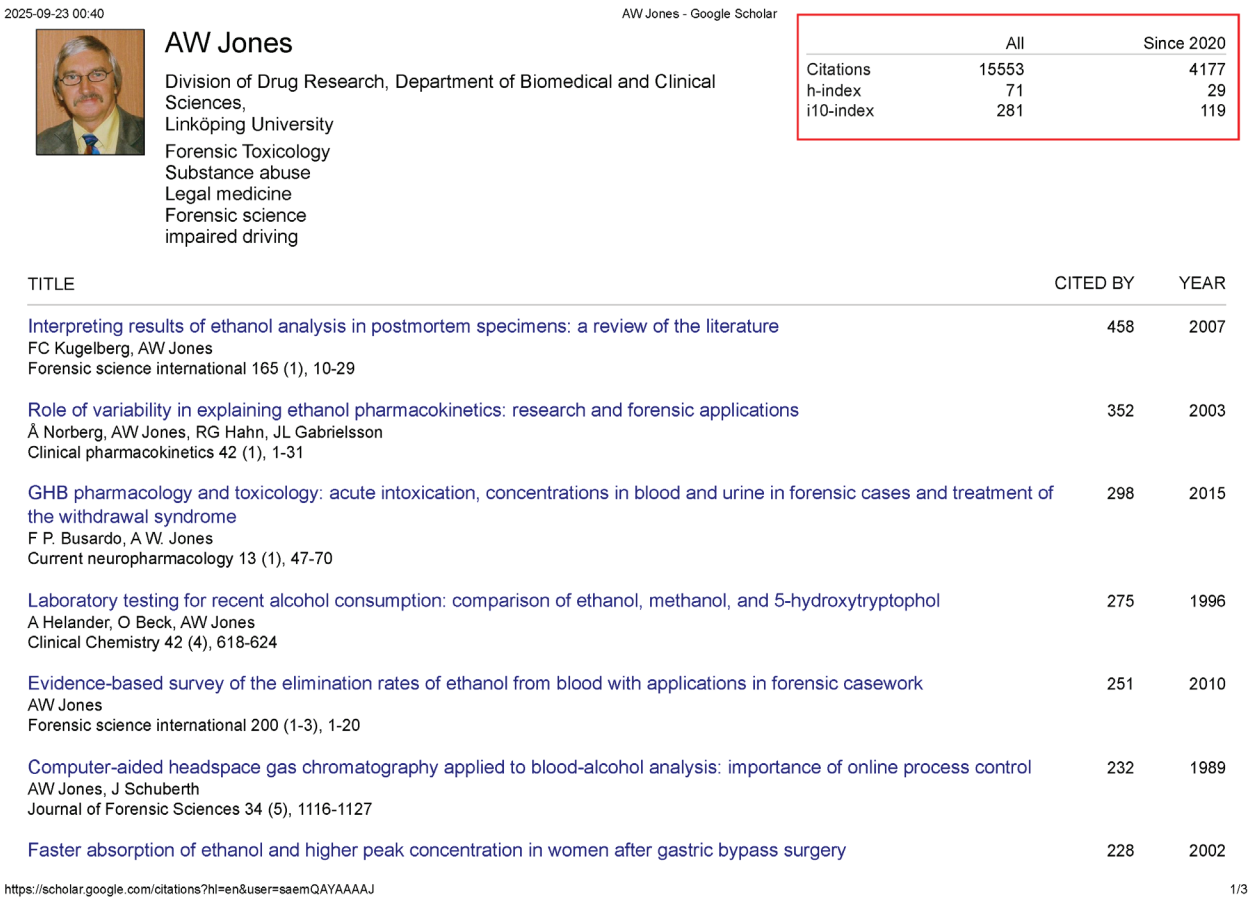


Figure 2. Example of a Google Scholar record for AW Jones (forensic practitioner) listing the seven top cited articles.

Table 3. Google Scholar citation summary for AW Jones

Indicator	Citation metric	
	All	Since 2020
Citation	15,553	4,177
H-Index	71	29
i10 index	281	119

A manual search of contemporary journals where Gettler might have published, such as *Analytical Chemistry*, *Journal of Biological Chemistry*, *Journal of the American Medical Association*, and *American Journal of Clinical Pathology*, found 73 published papers with his name as author or co-author; the first was published in 1909 and the last in 1956. The take-home message is that PUBMED is not suitable for documenting the publication records of the elder generation of forensic practitioners.

Another problem with PUBMED arises when people have a common family name and the same initials, resulting in homonyms. PUBMED does not use algorithms based on the person's address or research discipline to match a published article to a particular individual, hence making it difficult to filter out other people's papers from one's own. However, it is possible to combine a PUBMED search of a person's surname and initials with an address, such as country of residence, a selected keyword, or journal title.

Nevertheless, PUBMED is an indispensable bibliometric tool for searching the medical literature and keeping abreast of developments in research and scholarship, although not all journals, especially non-English periodicals, are included.

Concluding Remarks

This commentary has focused on citation databases, some of which are publicly available and others require a subscription. These databases provide a host of bibliometric information about a scientists' publications, including how many times each has been cited. Publishing the results of their research and scholarship is how scientists spread new knowledge and ideas, such as hypotheses, theories, and any discoveries they might have made. After an article is published in an academic journal, the information it contains enters the public domain and is thereby disseminated throughout the scientific community.

The future of the conventional printed editions of scientific journals is uncertain, and more and more are becoming electronic only, which yields major savings in printing and distribution costs (postage, etc.). Forensic journals are no exception; the flagship journal of the American Academy of Forensic Sciences (AAFS) become an on-line-only journal in 2015. One problem with electronic publishing is the emergence of so-called predatory or opportunistic journals, which bombard scientists with unsolicited e-mails "begging" them to submit something (anything) for publication in the next issue of their journal. The proliferation of these on-line-only journals is increasing, and many lack a proper business address and can only be contacted by e-mail [51–55]. Scientists would be ill-advised to submit their work for publication to such journals, which seem more interested in financial gain (publication costs and page charges) than in advancing research and scholarship. Moreover, the peer-review process used by such journals, if one exists at all, has gained a dubious reputation [56]. Furthermore, articles appearing in these journals are often never cited in papers published in mainstream journals from a reputable publisher [57].

A scientist's list of publications is probably the most important component of their CV, and as such needs to be carefully prepared and checked for accuracy and layout. Then comes the daunting task of attributing credit to the individual names listed as co-authors, because there might be eight or more co-authors on most of the articles included in the CV. This makes it advisable for the owner of the CV to provide information about the numbers of papers with their name as single, first, last, and/or corresponding author [8,21].

Those forensic practitioners who are active in research and publishing are encouraged to create a GOOGLE Scholar account, because it furnishes a quick and easy overview of one's scholarly publications, including the numbers of times each article has been cited. The GOOGLE scholar metric i10-index is the number of publications that have achieved at least 10 citations. An impression of a person's current research activity is obtained by comparing the career-long contributions with the number of citations, H-index, and i10-index for the previous five years (*see* Table 3).

The H-index has gained considerable traction as a bibliometric indicator and is especially useful when it is necessary to compare and contrast the published work of individual scientists [37,41]. The H-index represented a major improvement over simply looking at a person's total citation count, because having one's name on a few massively cited articles can give a wrong overall impression. The conventional H-index can be adjusted to correct for multiple authorship, as reflected in the so-called Hm-index [42], and both the H-index and Hm-index are among the six citation metrics used to calculate a person's C-score (*see* Table 2).

The C-score is the only metric that takes into consideration the authorship of published articles, such as whether a person is listed as a single author or the first or last author of the cited article. When considering the merits of people applying for membership in scientific societies, counting number of publications listed on the CV is inadequate, superficial, and misleading. It is more important to know the person's H-index, C-score, and the number of solo-author, first-author, and last-author contributions.

For a single-author paper, it is obvious to whom the credit and responsibility belong, but single authors are an endangered species, especially in the medical sciences. Combining different types of expertise through inter-laboratory collaboration is beneficial to research development and progress, but greater transparency is needed when deciding who should be included as a co-author of any publication emanating from this research [57]. According to the Oxford English Dictionary, an author is a person who creates something, such as writing a literary work—a book, an article, or a document. This suggests that writing the first draft of a scientific manuscript is a strong claim to be listed as the first author of any joint publication.

The International Committee of Medical Journal Editors (ICMJE) has created a useful document containing recommendations and guidelines pertaining to the types of contribution necessary to be included as an author on a publication as opposed to being mentioned in an acknowledgement section [58]. The following four criteria should be met to be legitimately included as a co-author:

1. Making a substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
2. Drafting the work or reviewing it critically for important intellectual content; AND
3. Final approval of the version to be published; AND
4. Agreement to be accountable for all aspects of the work of ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

According to the ICMJE, all people listed as authors should meet the above four criteria, which would allow them to take full credit and accountability for the published material. Those who contributed to the work in other ways but failed to meet the authorship criteria should be acknowledged in the final manuscript. The ICMJE gives examples of activities that warrant acknowledgement (and not authorship), much to the chagrin of many senior

scientists. Such things as acquisition of funding, general supervision of a research group, writing assistance, technical support, proofreading, and language editing should be acknowledged, but not with co-authorship.

Despite the opinions of the ICMJE, the question remains of how to deal with gift authorship, guest authorship, and ghost authorship, which besides being unethical border on scientific misconduct [59]. The old practice of listing authors alphabetically has long since gone by the wayside, even though some periodicals, such as the *British Medical Journal*, encouraged alphabetic ordering once upon a time.

Rarely do all people listed as co-authors contribute equally to the genesis of the article concerned; some might have done more of the experimental and/or clinical work, others the planning and/or writing of the article, or they might have had responsibility for submitting the work for peer-review and publication. Ways are urgently needed to attribute credit to individual names on multi-authored papers, such as when people apply for promotion or are being considered for some award or scientific accolade. Close attention should be given to the number of sole-authored papers listed in a person's CV, as well as the numbers of first-, last-, and corresponding-author papers. Being placed in the middle of a bunch of authors is not especially meritorious, and in such cases it is simply not possible to know what this person actually contributed.

All in all, it is hardly acceptable that every person listed as an author receive full credit for all the citations an article might accrue over time, and some type of fractionalization should be considered. One suggestion is to award 50% of the citations to the first author, whereas other names on a multi-authored paper share the remaining 50% of citations equally. Other constellations of sharing are possible, including dividing the total citations an article might receive by the number of co-authors, as suggested by Price [20].

This commentary has described various bibliometric databases and how they might be used to gather information about the usefulness of a person's publications as reflected in the number of times they have been cited [60,61]. Counting the number of articles listed on a person's CV indicates productivity, but the reputations of the journals where the works were published (impact factors) also deserve consideration. The impact factors of journals in the subject category "medicine, legal" are fairly low, the highest being 3.1 [31,32]. The most objective indictor of the usefulness of a specific article is not the JIF but the number of citations it later receives in articles penned by other scientists. If an article is never cited, one wonders what value or impact the work has had in advancing knowledge in that particular scientific discipline.

References

1. Hackman L, Raitt F, Black S, Black S (Eds): *The Expert Witness, Forensic Science, and the Criminal Justice Systems of the UK*; CRC Press: Boca Raton, FL; 178 pp; 2019.
2. Jones AW: Use of bibliometric methods to verify the credentials of expert witnesses in forensic science and legal medicine and the dilemma of multiple-authorship; *Perspect Leg Forensic Sci* 2024:10002; 2024; *https://doi.org/10.35534/plfs.2024.10002* (Accessed Aug. 20, 2025).
3. Rix K: Expert evidence: Frequently asked questions; *J Forensic Leg Med* 77:102106; 2021.
4. Hak JW: The pedagogical expert witness: Teaching complex science in the courtroom; *Can J Forensic Sci Soc* 56:1; 2022.
5. Jones AW: Highly cited forensic practitioners in the Nordic countries and their composite citation scores based on six different citation metrics; *Med Leg J* 93(suppl 1):13; 2025.
6. Jones AW: Who are the most highly cited forensic scientists in the United States? *J Forensic Sci* 68:723; 2023.
7. Horta H, Santos JM: The impact of publishing during PhD studies on career research publication, visibility, and collaborations; *Res High Educ* 57:28; 2016.
8. Jones AW, Teitelbaum J: Forensic journals — Trends and development; In Payne-James J, Byard RW (Eds): *Encyclopedia of Forensic and Legal Medicine*, 3rd ed, Vol 3; Elsevier: Amsterdam, Netherlands; pp 64–80; 2025.
9. Rawat S, Meena S: Publish or perish: Where are we heading? *J Res Med Sci* 19:87; 2014.
10. Guraya SY, Norman RI, Khoshhal KI, Guraya SS, Forgione A: Publish or perish mantra in the medical field: A systematic review of the reasons, consequences and remedies; *Pak J Med Sci* 32:1562; 2016.
11. Sauer RM, Gabbi C: Grantsmanship: What? Who? How?; *Eur J Intern Med* 57:22; 2018.
12. Relman AS: Sponsorship, authorship, and accountability; *N Engl J Med* 346:290; 2002.
13. Weeks WB, Wallace AE, Kimberly BC: Changes in authorship patterns in prestigious US medical journals; *Soc Sci Med* 59:1949; 2004.
14. Byard RW, Vink R: Does listing of individual contributions in "mega-authorship" papers always follow best practice guidelines? *Forensic Sci Med Pathol* 17:545; 2021.
15. Riesenberg D, Lundberg GD: The order of authorship: Who's on first? *JAMA* 264:1857; 1990.
16. Birnbaum Y, Kitakaze M, Grieve D, Uretsky BF: Who should be the corresponding author, what are their responsibilities, and what email address should they provide? *Cardiovasc Drugs Ther* 37:1039; 2023.
17. Wittau J, Seifert R: How to fight fake papers: A review on important information sources and steps towards solution of the problem; *Naunyn Schmiedebergs Arch Pharmacol* 397:9281; 2024.
18. Eaton L: Norwegian researcher admits that his data were faked; *BMJ* 332:193; 2006.
19. Vastag B: Cancer fraud case stuns research community, prompts reflection on peer review process; *J Natl Cancer Inst* 98:374; 2006.
20. Price D: Multiple authorship; *Science* 212:986; 1981.

21. Jones AW: Some thoughts and reflections on authorship; *Alc Alcohol* 31:11; 1996.
22. Helgesson G, Eriksson S: Authorhip order; *Learn Pub* 32:106; 2019.
23. Helgesson G, Juth N, Schneider J, Lovtrup M, Lynoe N: Misuse of coauthorship in medical theses in Sweden; *J Empir Res Hum Res Ethics* 13:402; 2018.
24. Banerjee T, Partin K, Resnik DB: Authorship issues when articles are retracted due to research misconduct and then resubmitted; *Sci Eng Ethics* 28:31; 2022.
25. Jones AW: Eugene Garfield (1925–2017); *TIAFT Bulletin* 47:40; 2017.
26. Wouters P: Eugene Garfield (1925–2017); *Nature* 543:492; 2017.
27. Garfield E: Journal impact factor: A brief review; *CMAJ* 161:979; 1999.
28. Garfield, E: The history and meaning of the journal impact factor; *JAMA* 295:90; 2006.
29. Garfield E: When to cite; *Lib Quart* 66:449; 1996.
30. Santini A: The importance of referencing; *J Crit Care Med* 4:3; 2018.
31. Jones AW: Bibliometric evaluation of Forensic Science International as a scholarly journal in the legal medicine subject category; *Forensic Sci Int Synerg* 7:100438; 2023.
32. Jones AW: Bibliometric evaluation of Journal of Analytical Toxicology as a scholarly publication according to Web-of-Science citation database; *J Anal Toxicol* 48:1; 2024.
33. Lock S: A Difficult Balance — Editorial Peer-Review in Medicine; Nuffield Trust: London, UK; 1985; *https://www.nuffieldtrust.org.uk/research/a-difficult-balance-editorial-peer-review-in-medicine* (Accessed Aug. 20, 2025).
34. Davidoff F: Masking, blinding, and peer review: The blind leading the blinded; *Ann Intern Med* 128:66:1998.
35. Burnham JC: The evolution of editorial peer review; *JAMA* 263:1323; 1990.
36. Csiszar A: Peer review: Troubled from the start; *Nature* 532:306; 2016.
37. Wenneras C, Wold A: Nepotism and sexism in peer-review; *Nature* 387:341; 1997.
38. Hirsch JE: An index to quantify an individual's scientific research output; *Proc Natl Acad Sci USA* 102:16569; 2005.
39. Baldock C: The h-index and medical physics; *Australas Phys Eng Sci Med* 31:xi; 2008.
40. Ball P: Achievement index climbs the ranks; *Nature* 448:737; 2007.
41. Schreiber WE, Giustini DM: Measuring scientific impact with the h-index: A primer for pathologists; *Am J Clin Pathol* 151:286; 2019.
42. Barnes C: The h-index debate: An introduction for librarians; *J Acad Librariansh* 43:487; 2017.
43. Schreiber S: A modification of the h-index: The hm-index accounts for multi-authored manuscripts; *J Informetr* 2:211; 2008.
44. Greenblatt DJ: Authorship; *Clin Pharmacol Drug Dev* 11:1362; 2022.
45. Golubic R, Rudes M, Kovacic N, Marusic M, Marusic A: Calculating impact factor: How bibliographical classification of journal items affects the impact factor of large and small journals; *Sci Eng Ethics* 14:41; 2008.
46. Kulkarni AV, Aziz B, Shams I, Busse JW: Comparisons of citations in Web of Science, Scopus, and Google Scholar for articles published in general medical journals; *JAMA* 302:1092; 2009.
47. Ioannidis JP, Baas J, Klavans R, Boyack KW: A standardized citation metrics author database annotated for scientific field; *PLoS Biol* 17:e3000384; 2019.
48. Ioannidis JP, Boyack KW, Baas J: Updated science-wide author databases of standardized citation indicators; *PLoS Biol* 18:e3000918; 2020.
49. Rull V: Goodbye H-index, welcome C-score; *J Sch Publ* 56; 2025 (in press).
50. Bowman JD: Predatory publishing, questionable peer review, and fraudulent conferences; *Am J Pharm Educ* 78:176; 2014.
51. Byard RW: The forensic implications of predatory publishing; *Forensic Sci Med Pathol* 12:391; 2016.
52. Clemons M, de Costa ESM, Joy AA, Cobey KD, Mazzarello S, Stober C, Hutton B: Predatory invitations from journals: More than just a nuisance; *Oncologist* 22:236; 2017.
53. Laine C, Babski D, Bachelet VC, Barnighausen TW, Baethge C, Bibbins-Domingo K, Frizelle F, Gollogly L, Kleinert S, Loder E, et al.: Predatory journals — What can we do to protect their prey? *N Engl J Med* 392:283; 2025.
54. van Loon OR, van Loon AJT: Keeping medical science trustworthy: The threat by predatory journals; *Complement Ther Med* 76:102943; 2023.
55. Björk BC, Kanto-Karvonen S, Harviainen, JT: How frequently are articles in predatory open access journals cited? *Publications* 8:17; 2020.
56. Singhal S, Kalra BS: Publication ethics: Role and responsibility of authors; *Indian J Gastroenterol* 40:65; 2021.
57. ICMJE: Recommendations for the conduct, reporting, editing, and publication of scholarly work in medical journals (Updated April 2025); *https://wwwicmjeorg/icmje-recommendationspdf* (Accessed Aug. 2025).
58. Rennie D, Flanagin A: Authorship! Authorship! Guests, ghosts, grafters, and the two-sided coin; *JAMA* 271:469; 1994.
59. Jones JW, McCullough LB: Is a gift authorship really a grift authorship? *J Vasc Surg* 61:1092; 2015.
60. Jones AW: Scientometric evaluation of highly cited scientists in the field of forensic science and legal medicine; *Int J Legal Med* 135:701; 2021.
61. Jones AW: Highly cited forensic practitioners in the discipline legal and forensic medicine and the importance of peer-review and publication for admission of expert testimony; *Forensic Sci Med Pathol* 18:37; 2022.