

How to be a good manuscript reviewer

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Acknowledgements

Portions of the presentation come from my colleague

Dr. Steve Roach, Editor-in-Chief

Annals of the Child Neurology Society

WARNING

Shameless act of
self-promotion ahead

Why me?

- Things that make my wife and children proud
 - I published my first paper in 1989



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First paper published 1989

Weisleder P, Hodgson WR. Evaluation of four Spanish word-recognition-ability lists. *Ear Hear*. 1989 Dec;10(6):387-92. PMID: 2606290

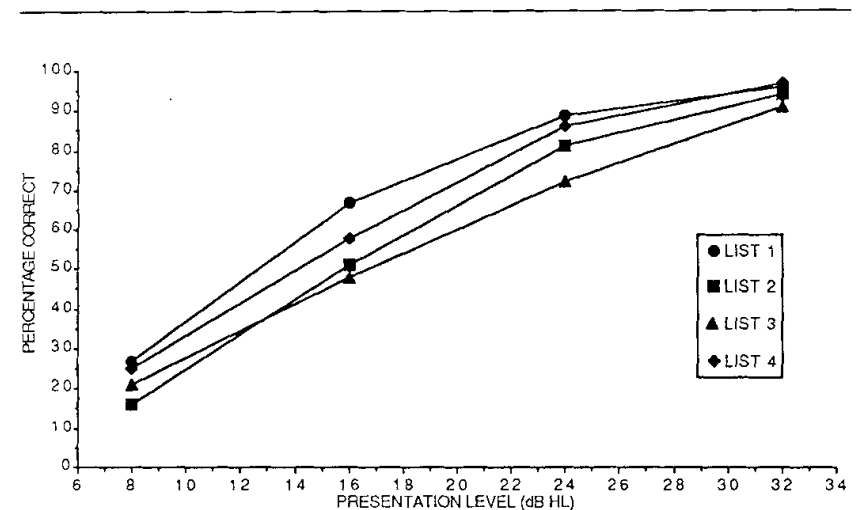


Figure 1. Performance/Intensity functions of Spanish-language word recognition ability lists.



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Why me?

- Things that make my wife and children proud
 - Associate Editor of *Journal of Child Neurology*: 2010-2015
 - Associate Editor of *Pediatric Neurology*: 2015-2020
 - Editor-in-Chief of *Seminars in Pediatric Neurology*: 2020-
 - Edited 2 books
 - Manual of Pediatric Neurology*
 - Current Topics in Pediatric Epilepsy*

A very short history of “Peer review” 17th to 20th century

A very short history of “Peer review” 17th to 20th century

- The first scientific journal was launched in 1665
 - Philosophical Transactions of The Royal Society

The screenshot shows the website for Philosophical Transactions of the Royal Society B, Biological Sciences. The header is red with the Royal Society Publishing logo and navigation links. The main content area features the journal title in green, a description of it as an influential journal, and a thumbnail of the current issue cover. To the right, it lists the Editor-In-Chief, Professor Richard Dixon, and provides frequency and ISSN information.

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Current issue

Editor-In-Chief
Professor Richard Dixon
FRS

Frequency: Biweekly
ISSN (Online): 1471-2970
ISSN (Print): 0962-8436

<https://mitcommlab.mit.edu/broad/commkit/peer-review-a-historical-perspective/>

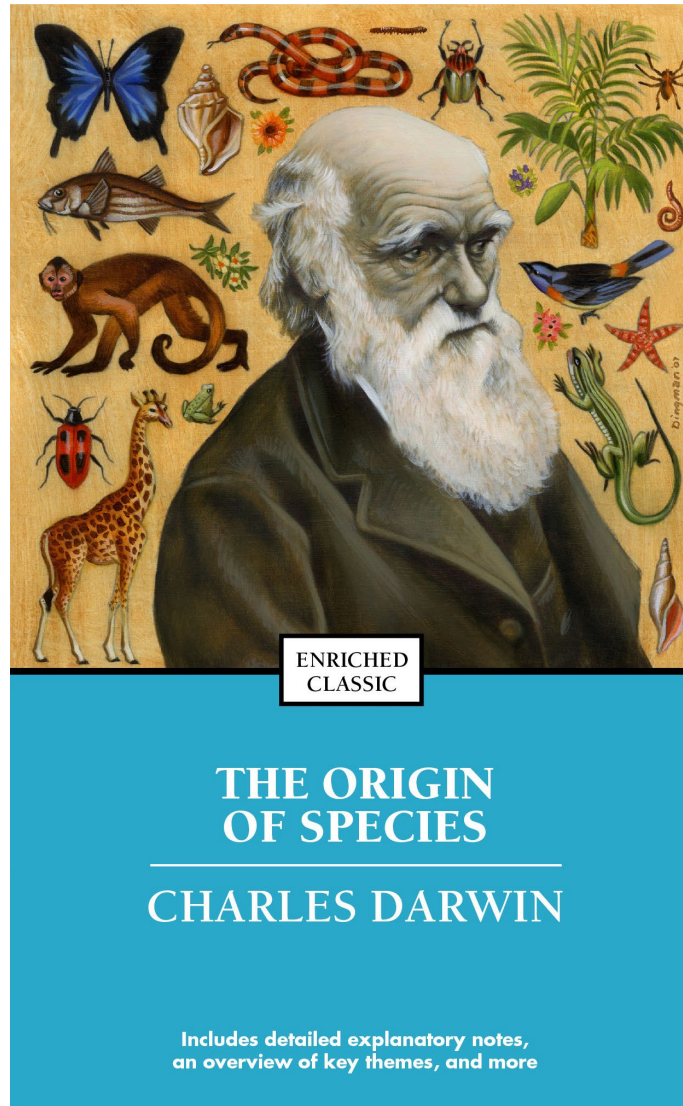
A very short history of “Peer review” 17th to 20th century

- Before the 20th century scientific discoveries were shared via
 - Short articles in newspapers
 - Personal letters - *correspondence networks*
 - Presentations
 - Books



The anatomy lesson of Dr. Nicolaes Tulp, 1632, Rembrandt

<https://mitcommlab.mit.edu/broad/commkit/peer-review-a-historical-perspective/>



<https://mitcommlab.mit.edu/broad/commkit/peer-review-a-historical-perspective/>

A very short history of “Peer review” 1920s to 1970s

- As interest in science grew Editors made the decisions
 - Problem: they published their friends’ work
- As science became more egalitarian Editors couldn’t keep up
 - A star was born: The Peer Review System
 - *JAMA* and *Science*: 1940s
 - *The Lancet* 1976

.....<https://mitcommlab.mit.edu/broad/commkit/peer-review-a-historical-perspective/>

A very short history of “Peer review” 1970s to 1990s

- Editors selected reviewers from colleagues
- The manuscript arrived in the mail – no choice!
- The process would take many months
- Everything was done “by hand”

.....<https://mitcommlab.mit.edu/broad/commkit/peer-review-a-historical-perspective/>

And then came computers and email

- Proliferation of journals
- Articles became longer
- Reviewers were asked to review
- Speed of the review process increased
- Speed of the publication process increased

.....<https://mitcommlab.mit.edu/broad/commkit/peer-review-a-historical-perspective/>

Why should you accept to review a manuscript?

- You are the expert!
 - **Content expert** reviewer vs **general knowledge** reviewer
- Skillful peer reviews represent a valuable contribution to the field
- Your own manuscript preparation skills will improve
- Learn new concepts

Other benefits of the peer-review system

- Helps you read published articles more skillfully
- Your own manuscript preparation skills will improve
- Creates an opportunity for professional advancement
 - Evidence of your professional reputation for promotion
- Could lead to journal editorial board membership

Structure of Peer Review

Single-blind

- This is the most common approach
- Usually, two reviewers per manuscript



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Structure of Peer Review

Double-blind

- Manuscripts stripped of authors' names and affiliations
- Becoming the standard of practice

JADA uses the double-blind system

Structure of Peer Review

Unblinded

- Reviewers' names are printed as part of the paper
- Concern that the reviewers will “pull their punches”
- Likely would make it more difficult to find willing reviewers



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Manuscript Review: expectations

- Requests to score specific parameters
 - The science – you are the expert!
 - Manuscript length
 - Figures and tables
 - Ranking of publication priority
- A free-field section allowing comments to the authors
- A free-field section for private comments to the editors

Manuscript Review: expectations

- An answer to the critical question
 - Accept
 - Revise
 - Reject



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Overarching goal of the peer-review system

Improve the article



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How to improve the article

- Is the paper a “good fit” for the journal?
- Is the purpose of the paper clearly stated?
- Are the material and methods clearly described?
- Are the results clearly reported?
- Are the conclusions supported by the data?

How to improve the article

- Is there novelty in the findings?
- Are tables and figures clear?
- Can text be better reported in a table or a figure?
- Have key references been cited?
- Is the manuscript clearly written?
- Are potential conflicts of interest reported?

What do editors value in a review?

- People who accept review invitations
 - If you can't do it, explain why and suggest another person



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An editor's plea

Please reply

Accept or decline, but please reply



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What do editors value in a review?

- Timely submission of review comments
 - Don't accept an invitation and then fail to complete it
 - OK to ask a journal for additional time
- Comments with realistic manuscript suggestions
- Reasonably tactful comments for the authors

Getting your hands dirty

- Start with a one sentence summary of the manuscript
- Don't use words such as
 - Criticism
 - Problem
 - Trash
- Use words such as
 - Comment
 - Question
 - Suggestion



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Getting your hands dirty

- Organize your comments as a numbered list
- If possible, add comments on a Word file and upload as attachment
- Provide actionable suggestions for improvement

Ethical concerns

- Research ethics
- Patient confidentiality
- Conflicts of interest
- Duplicate publication
- Ghost authors
- Plagiarism

Major journals use plagiarism detection programs

Introduction

Pyridoxine dependent epilepsy (PDE) is an autosomal-recessive (PDS; OMIM 266100) disorder characterized by the onset of generalized convulsions in the newborn period that is resistant to antiepileptic drugs (AEDs) but responsive to pharmacologic amounts of pyridoxine.¹ The prevalence is estimated between 1 per 276,000 and 1 per 700,000 births.² Clinical features have been described in patients with classical PDE, including abnormal fetal movements, features suggestive of perinatal hypoxic-ischemic injury, irritability, abnormal cry, exaggerated startle response, dystonic movements, respiratory distress, abdominal distension, bilious vomiting, hepatomegaly, hypothermia, shock, and acidosis.¹ Conventionally, four clinical criteria are required for the diagnosis: seizures resistant to AED, good response to pyridoxine, complete seizure control on pyridoxine monotherapy, and seizure recurrence after pyridoxine withdrawal.³ The responsible gene antiquitin (ALDH7A1) encoding alpha-aminoacidic semialdehyde dehydrogenase (α -AASA dehydrogenase) in the pantoic acid pathway of lysine catabolism is located on chromosome 5q31.⁴ Antiquitin deficiency causes seizures, because it leads to severe secondary deficiency of pyridoxal 5-phosphate which is essential enzyme cofactor in the metabolism of several amino acids and neurotransmitters.⁵ We present the clinical and molecular genetic findings of two patients with pyridoxine dependent epilepsy carrying the same mutation in the ALDH7A1 gene.

Pyridoxine-dependent epilepsy in Turkey : Two cases and review of the literature

ORIGINALITY REPORT

49%

SIMILARITY INDEX

PRIMARY SOURCES

- 1 pyridoxinedependantepilepsy.org
Internet 150 words – 6%
- 2 Yeghiazaryan, N.S., "Long-term follow-up in two siblings with pyridoxine-dependent seizures associated with a novel ALDH7A1 mutation", European Journal of Paediatric Neurology, 201111
CrossCheck 121 words – 5%
- 3 memo.cgu.edu.tw
Internet 121 words – 5%
- 4 Millet, A., "Novel mutations in pyridoxine-dependent epilepsy", European Journal of Paediatric Neurology, 201101
CrossCheck 119 words – 5%
- 5 Tlili, Abdelaziz, Nadia Hamida Hentati, Rim Chaabane, Abdellatif Gargouri, and Faiza Fakhfakh, "Pyridoxine-dependent epilepsy in Tunisia is caused by a founder missense mutation of the ALDH7A1 gene", Gene, 2013.
CrossCheck 119 words – 5%
- 6 Nune S Yeghiazaryan, "Pyridoxine-dependent epilepsy: An under-recognised cause of intractable seizures", Pyridoxine-dependent epilepsy", J Paediatr Child Health, 03/2012
CrossCheck 97 words – 4%
- 7 Frank, Yitzchak, and Stephen Ashwal, "Neurologic Disorders Associated with Gastrointestinal Diseases and Nutritional Deficiencies", Swaiman's Pediatric Neurology, 2012.
CrossCheck 73 words – 3%
- 8 www.ijcom.org
Internet 57 words – 2%



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How about Artificial Intelligence?

NIH

*“NIH scientific peer reviewers are prohibited from using natural language processors, large language models, or other generative AI technologies for analyzing and formulating peer review critiques for grant applications and R&D contract proposals.”**

*<https://nexus.od.nih.gov/all/2023/06/23/using-ai-in-peer-review-is-a-breach-of-confidentiality/>

Getting your hands dirty

- Provide actionable suggestions for improvement
- Document your observations to support your recommendation
- Be kind remember when you submitted your first paper
- Only make publication recommendations to the Editor

Private comments to the Editor

- Include broad concerns
- The editor may or may not share your comments
- The editor may “sanitize” your comments
- This is where you can make less tactful comments

Less tactful private comments to the Editor

Number 5

The author should sit in a quiet room and turn off his cell phone. Then read the text several times and see how some of the sentences are un-finished and need revisions



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Less tactful private comments to the Editor

Number 4

This manuscript is well-written, making its lack of importance even more apparent



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Less tactful private comments to the Editor

Number 3

My kids make me sleep deprived, but I checked [the references] several times, and I don't think I am hallucinating



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Less tactful private comments to the Editor

Number 2

There is much less here than meets the eye



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Less tactful private comments to the Editor

Number 1

It's wonderful to read a truly great paper, but this is not one of those



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Setting your limits

- It's not your responsibility to correct the grammar
 - You can make general comments
- You are not expected to check every reference
 - Scan for accuracy
- Based on your comfort ask for a statistician's review
- You are not expected to accept every manuscript

Be mindful of your conflicts and biases*

- Be mindful of your own potential conflicts
- It is best not to review manuscripts written by
 - Close colleagues
 - Trainees
 - Mentors
 - Individuals from your own institution
- Your financial conflicts
- Talk to the editor

***Committee on Publication Ethics <https://publicationethics.org>**

Reviewer feedback

- The editor should notify you of the publication decision
- Provide a copy of your and the other reviewers' comments
- These comments offer an opportunity to gauge your skills
 - Did the other reviewers' raise valid points that you didn't notice?
 - Did the reviewers reach a similar recommendation even if for different reasons?
- A publication decision that is counter to your recommendation does not mean that your assessment was incorrect



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What's the big deal?

Retraction Watch: <https://retractionwatch.com>



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It's everyone's responsibility



Retracted article

See the [retraction notice](#)

> Nat Med. 2006 Nov;12(11):1294-300. doi: 10.1038/nm1491. Epub 2006 Oct 22.

Genomic signatures to guide the use of chemotherapeutics

Anil Potti¹, Holly K Dressman, Andrea Bild, Richard F Riedel, Gina Chan, Robyn Sayer, Janiel Cragun, Hope Cottrill, Michael J Kelley, Rebecca Petersen, David Harpole, Jeffrey Marks, Andrew Berchuck, Geoffrey S Ginsburg, Phillip Febbo, Johnathan Lancaster, Joseph R Nevins

Affiliations + expand

PMID: 17057710 DOI: [10.1038/nm1491](#)

Erratum in

Nat Med. 2007 Nov;13(11):1388

Nat Med. 2008 Aug;14(8):889

Retraction in

[Retraction: Genomic signatures to guide the use of chemotherapeutics.](#)

Potti A, Dressman HK, Bild A, Riedel RF, Chan G, Sayer R, Cragun J, Cottrill H, Kelley MJ, Petersen R, Harpole D, Marks J, Berchuck A, Ginsburg GS, Febbo P, Lancaster J, Nevins JR.

Nat Med. 2011 Jan;17(1):135. doi: [10.1038/nm0111-135](#).

PMID: 21217686 No abstract available.

FULL TEXT LINKS



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> N Engl J Med. 2006 Aug 10;355(6):570-80. doi: 10.1056/NEJMoa060467.

A genomic strategy to refine prognosis in early-stage non-small-cell lung cancer

Anil Potti¹, Sayan Mukherjee, Rebecca Petersen, Holly K Dressman, Andrea Bild, Jason Koontz, Robert Kratzke, Mark A Watson, Michael Kelley, Geoffrey S Ginsburg, Mike West, David H Harpole Jr, Joseph R Nevins

Affiliations + expand

PMID: 16899777 DOI: 10.1056/NEJMoa060467

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N Engl J Med. 2007 Jan 11;356(2):201-2

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Retraction: A genomic strategy to refine prognosis in early-stage non-small-cell lung cancer. N Engl J Med 2006;355:570-80.

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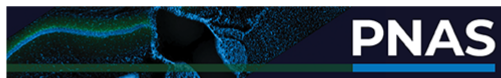
< Retraction notice

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Erratum in

Retraction in

It's everyone's responsibility



[Proc Natl Acad Sci U S A](#). 2008 Dec 9; 105(49): 19432–19437.

Published online 2008 Dec 2. doi: [10.1073/pnas.0806674105](#)

Medical Sciences

PMCID: PMC2592987

PMID: [19050079](#)

This article has been retracted.



Retraction in: [Proc Natl Acad Sci U S A](#). 2011 October 18; 108(42): 17569. See also: [PMC Retraction Policy](#)

A genomic approach to colon cancer risk stratification yields biologic insights into therapeutic opportunities

Katherine S. Garman,^{a,b} Chaitanya R. Acharya,^a Elena Edelman,^{a,c} Marian Grade,^d Jochen Gaedcke,^e Shivani Sud,^a William Barry,^{a,c} Anna Mae Diehl,^b Dawn Provenzale,^b Geoffrey S. Ginsburg,^a B. Michael Ghadimi,^e Thomas Ried,^d Joseph R. Nevins,^a Sayan Mukherjee,^{a,c} David Hsu,^{a,b} and Anil Potti^{a,b,1}

► Author information ► Article notes ► Copyright and License information ► [Disclaimer](#)

The genetic description of colorectal cancer, as first detailed in the classic studies of Vogelstein and Fearon, and Vogelstein *et al.* (2, 3), laid the foundation for the concept of accumulation of genetic alterations as tumors progress to a malignant state. These studies emphasized the concept of heterogeneity, an idea more fully described in recent studies that comprehensively monitored the cancer genome for genomic imbalances and associated gene expression changes (4, 5). Genome-wide expression analysis thus offers the opportunity to characterize and treat tumors in an individualized fashion.

Since the initial description by Wood (6), the clinical staging system in colon cancer has been the standard for determining prognosis. Developing improved prognostic tools is important as the current array of clinical predictors provides only broad categorizations of risk and insufficiently characterizes the relative risk for recurrence in individual patients (7). As an example, patients with early stage colon cancer (stages I and II) are usually considered cured after surgical resection, despite the fact that 15–20% of these patients develop disease recurrence (8, 9). In breast and lung cancer (10–12), genomic approaches have been shown to direct the care of cancer patients. We hypothesize that an improved understanding of patterns of gene expression in individual patients could lead to better, more directed care of patients with early stage colon cancer.

RESULTS

[Go to: ►](#)

Gene Expression Signature of Recurrence in Early Stage Colon Cancer: There is a significant unmet need to further characterize and treat early stage colonic tumors in an individualized fashion. This is particularly relevant for patients diagnosed with early stage colon cancer (stages I and II) who are usually considered cured after surgical resection, despite the fact that up to 20% of these patients later develop disease recurrence (8, 9). Because the current tumor, node, metastasis (TNM) staging system is relatively imprecise, our aim was to develop a prognostic model using gene-expression data to predict disease recurrence after curative surgery (a clinically relevant phenotype) in early-stage colon cancer. Toward this end, as detailed in Fig. 1A, we developed a prognostic model using a collection of 52 samples representing clinical stage I and stage II disease, for which gene expression data were available. Two independent datasets of 55 and 73 samples were used for validation of the prognostic model. The clinical characteristics of the patients are detailed in [supporting information \(SI\) Table S1](#).

Parting words

- Don't share the manuscript
- Don't contact the authors
- Don't contact other reviewers
- Don't start working on a similar project



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Parting words

- Acceptable to work with a junior colleague, but ask
- If above, do your own review and submit jointly
- Beware of “predatory journals”
 - Beall’s list of potential predatory journals
 - <https://beallslist.net/>

References

- History:
- <https://mitcommlab.mit.edu/broad/commkit/peer-review-a-historical-perspective/>
- <https://blog.f1000.com/2020/01/31/a-brief-history-of-peer-review/>
- <https://www.sciencedirect.com/science/article/pii/S0167779902019856>
- Best practices:
- <https://mitcommlab.mit.edu/broad/commkit/peer-review/>
- Anil Potti
- https://en.wikipedia.org/wiki/Anil_Potti#cite_note-61
- Committee on Publication Ethics: <https://publicationethics.org>
- Retraction Watch: <https://retractionwatch.com>
- Beall's list of potential predatory journals: <https://beallslist.net/>

Thank you for your attention

Questions?

