

How to write a high quality scientific paper

(OR: 'Be all my sins remembered')

Michael Heinrich

Centre for Pharmacognosy and Phytoterapy

UCL School of Pharmacy, Univ. London, London, UK



Be all my sins remembered.

To be, or not to be, that is the question:

Whether 'tis nobler in the mind to suffer
The slings and arrows of outrageous fortune,
Or to take arms against a sea of troubles,
And by opposing end them? To die, to sleep,
No more; and by a sleep to say we end
The heart-ache, and the thousand natural shocks
That flesh is heir to: 'tis a consummation
Devoutly to be wished. To die, to sleep;
To sleep, perchance to dream – ay, there's the
rub:

For in that sleep of death what dreams may come,
When we have shuffled off this mortal coil,
Must give us pause – there's the respect
That makes calamity of so long life.
For who would bear the whips and scorns of time,
The oppressor's wrong, the proud man's
contumely,

The pangs of despised love, the law's delay,
The insolence of office, and the spurns
That patient merit of the unworthy takes,
When he himself might his quietus make
With a bare bodkin? Who would fardels bear,
To grunt and sweat under a weary life,
But that the dread of something after death,
The undiscovered country from whose bourn
No traveller returns, puzzles the will,
And makes us rather bear those ills we have
Than fly to others that we know not of?
Thus conscience does make cowards of us all,
And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought,
And enterprises of great pith and moment,
With this regard their currents turn awry,
And lose the name of action. Soft you now,
The fair Ophelia! Nymph, in thy orisons
Be all my sins remembered.

Be all my sins remembered.

To be, or not to be, that is the question:

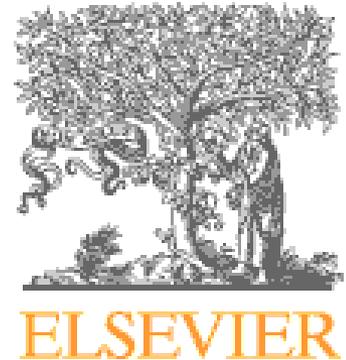
Whether 'tis nobler in the mind to suffer
The slings and arrows of outrageous fortune,
Or to take arms against a sea of troubles,
And by opposing end them? To die, to sleep,
No more; and by a sleep to say we end
The heart-ache, and the thousand natural shocks
That flesh is heir to: 'tis a consummation
Devoutly to be wished. To die, to sleep;
To sleep, perchance to dream – ay, there's the
rub:

For in that sleep of death what dreams may come,
When we have shuffled off this mortal coil,
Must give us pause – there's the respect
That makes calamity of so long life.
For who would bear the whips and scorns of time,
The oppressor's wrong, the proud man's
contumely,

The pangs of despised love, the law's delay,
The insolence of office, and the spurns
That patient merit of the unworthy takes,
When he himself might his quietus make
With a bare bodkin? Who would fardels bear,
To grunt and sweat under a weary life,
But that the dread of something after death,
The undiscovered country from whose bourn
No traveller returns, puzzles the will,
And makes us rather bear those ills we have
Than fly to others that we know not of?
Thus conscience does make cowards of us all,
And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought,
And enterprises of great pith and moment,
With this regard their currents turn awry,
And lose the name of action. Soft you now,
The fair Ophelia! Nymph, in thy orisons
Be all my sins remembered.

Acknowledgements and 'Disclaimer'

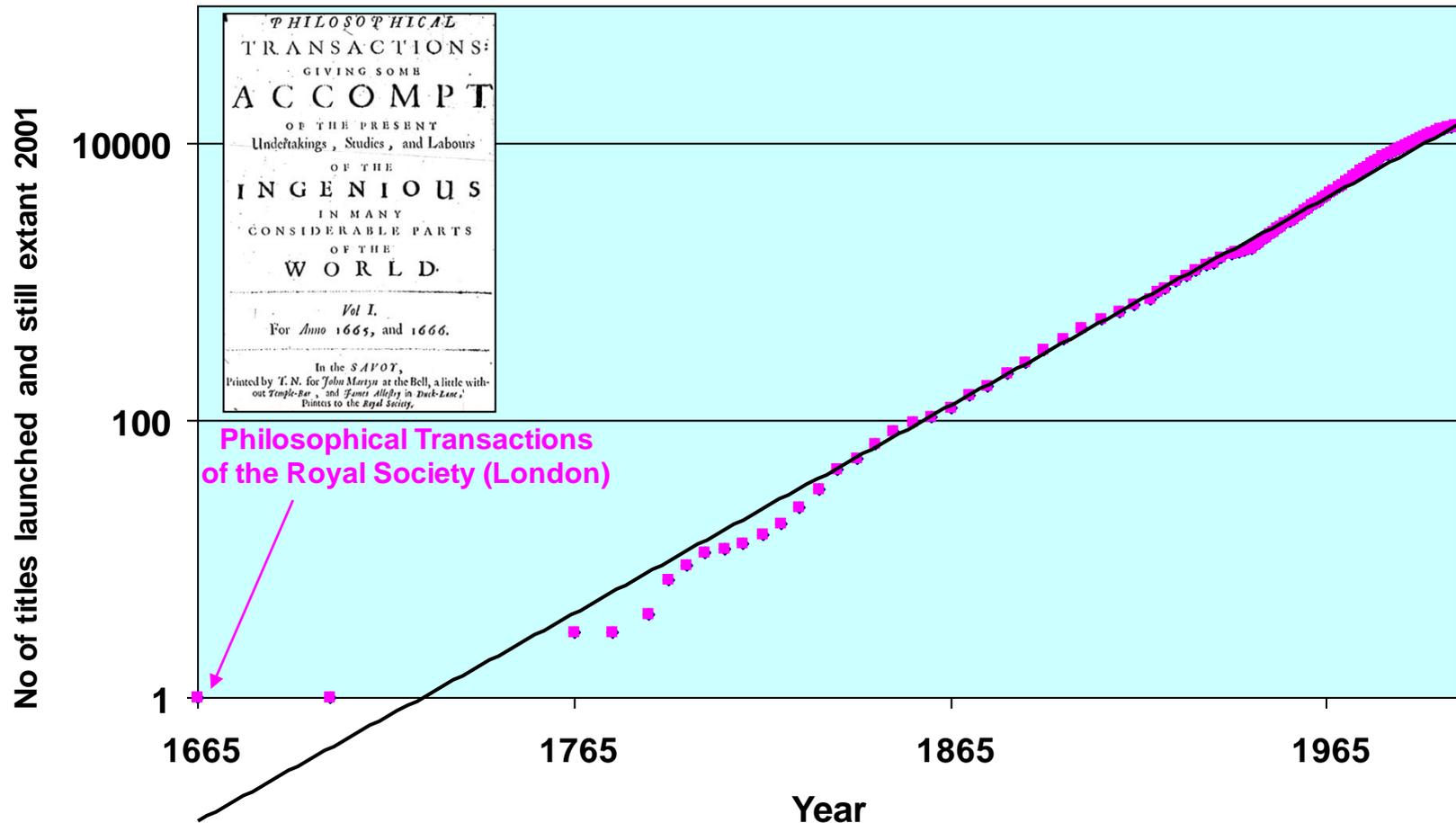
- The backbone of this presentation has kindly been provided by Irene Kanter-Schlifke, Elsevier, The Netherlands.
- The views in this presentation are, however, a synthesis and may not represent the publisher's view.



Today's presentation

- **Introduction**
- **Why do scientists publish?**
- **What is a good manuscript?**
- **How to write a good manuscript**
 - Preparations before starting
 - Construction of an article
 - Some technical details that need special attention
 - Language
- **Revision and response to reviewers**
- **Ethical issues**
- **Conclusion: what leads to ACCEPTANCE**

Peer-Reviewed Journal Growth 1665-2001



Source:
M A Mabe The number and growth of journals
Serials 16(2).191-7, 2003

Science and scientific publishing

- Science and medical communities around the world are united through the highly organized and efficient system of STM Publishing

**One truly
globalised aspect of
life: Science**



The publishing cycle

- 7,000 editors
- 70,000 editorial board members
- 7 million author/publisher communications/ year

Solicit and manage submissions

- 9.8 million articles now available

- 40 – 90% of articles rejected

Manage peer review

- 500,000 reviewers
- 600,000 authors publishing
- 2,000 journals
- 19,000 books
- 2,000 new books per year

Edit and prepare

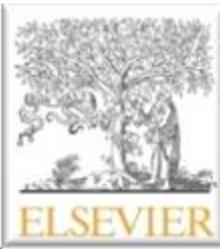
Production

Publish and disseminate

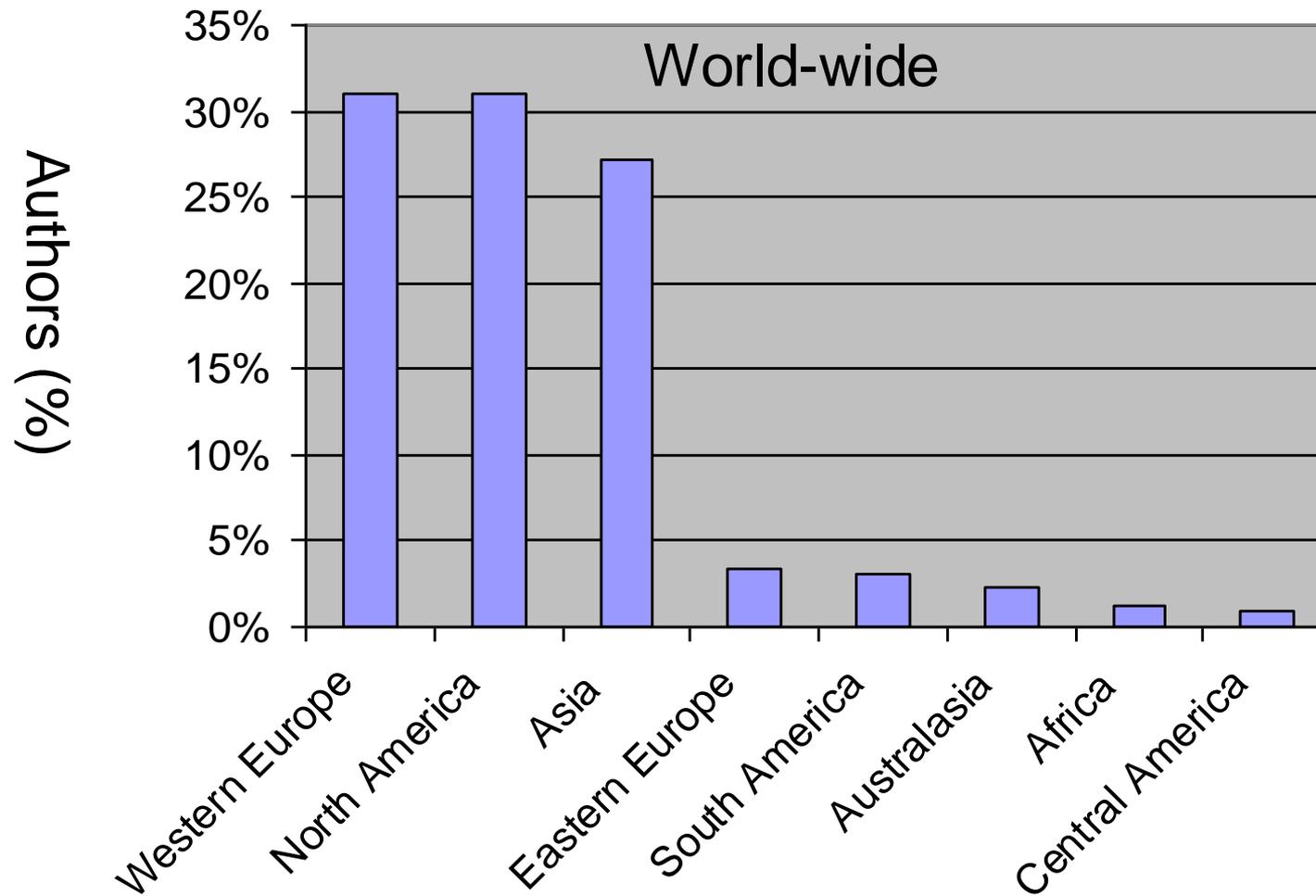
Archive and promote use

- 30 Million Researchers
- 180+ countries
- 480 million+ downloads per year

- 450,000 new articles produced each year
- 185 years of back issues scanned, processed and data-tagged



Geographical Breakdown of Pharma Authors



Types of publications

Publication

- Peer-reviewed articles
- Unreviewed articles & internet sources (Wikipedia)
- Scholarly books
- General dissemination materials and grey literature

Access:

- Subscription or toll access publishing which involves reader charges use restrictions;
- Open access publishing where access is free and publication is funded from the authors' side; and
- Open access self-archiving where academic authors post their work in online repositories, making it freely available to all Internet users.

Trends in publishing

- **Rapid conversion from “print” to “electronic”**
 - 1997: print only
 - 2005: 40% e-only (many e-collections)
30% print only
30% print-plus-electronic
 - Today Print only has practically disappeared
- **Changing role of “journals” due to e-access**
- **Increased usage of articles, at lower cost per article**
- **Electronic submission**
 - Increased manuscript inflow
- **Experimentation with ‘new’ publishing models**
 - Full open access journals
 - E.g. “author pays” models, “delayed open access”, etc.

Trends in Publishing: The Article of the Future

Redefine how a scientific article is presented online, allowing readers individualized entry points and routes through the content

Key Features:

- *Take full advantage of online capabilities*
- *Allowing readers individualized entry points and routes*
- *Using the latest advances in visualization techniques*

<http://beta.cell.com/erickson/>

Cell Article Prototype #1 View Prototype X1 Tell Us What You Think Share | Save

May 2, 2008 • Volume 133, Issue 5, pp. 462-474 [DOI: 10.1016/j.cell.2008.04.010](#)

A Dynamic Pathway for Calcium-Independent Activation of CaMKII by Methionine Oxidation

Jeffrey R. Erickson¹, Wei-ling A. Jahn¹, Xiaojun Guan¹, William Kutschke¹, Jinying Yang¹, Camille V. Oddo¹, Ryan K. Bartlett¹, John S. Lowe¹, Susan E. O'Donnell², Mehmet Aykin-Burns², Matthew C. Zimmerman², Kathy Zimmerman², Amy-Juan L. Han², Robert M. Weiss^{1,3}, Douglas R. Spitz², Madeline A. Shea², Roger J. Colbran¹, Peter J. Mohler^{1,4}, and Mark E. Anderson^{1,4} [*Correspondence](#)

Abstract | **Introduction** | **Results** | **Discussion** | **Experimental Procedures** | **Figure 5B** | **References (51)** | **Authors** | **Comments (1)** | **Acknowledgments**

Article Highlights

- Oxidation of methionine residues activates CaMKII
- Angiotensin II induces CaMKII oxidation leading to cardiomyocyte death
- CaMKII methionine oxidation is reversed by MsrA
- Elevated CaMKII oxidation impairs heart function and worsens ischemic injury

Author Interview

Abstract
Calcium/calmodulin [Ca²⁺/CaM]-dependent protein kinase II (CaMKII) couples increases in cellular Ca²⁺ to fundamental responses in excitable cells. CaMKII was identified over 20 years ago by activation dependence on Ca²⁺/CaM, but recent evidence shows that CaMKII activity is also enhanced by pro-oxidant conditions. Here we show that oxidation of paired regulatory domain methionine residues sustains CaMKII activity in the absence of Ca²⁺/CaM. CaMKII is activated by angiotensin II (AngII)-induced oxidation, leading to apoptosis in cardiomyocytes both in vitro and in vivo. CaMKII oxidation is reversed by methionine sulfide reductase A (MsrA), and MsrA^{-/-} mice show exaggerated CaMKII oxidation and myocardial apoptosis, impaired cardiac function, and increased mortality after myocardial infarction. Our data demonstrate a dynamic mechanism for CaMKII activation by oxidation and highlight the critical importance of oxidation-dependent CaMKII activation to AngII and ischemic myocardial apoptosis.

Copyright © 2008 Elsevier Inc. All rights reserved.

Cell Article Prototype #1 View Prototype X1 Tell Us What You Think Share | Save

May 2, 2008 • Volume 133, Issue 5, pp. 462-474 [DOI: 10.1016/j.cell.2008.04.010](#)

A Dynamic Pathway for Calcium-Independent Activation of CaMKII by Methionine Oxidation

Jeffrey R. Erickson¹, Wei-ling A. Jahn¹, Xiaojun Guan¹, William Kutschke¹, Jinying Yang¹, Camille V. Oddo¹, Ryan K. Bartlett¹, John S. Lowe¹, Susan E. O'Donnell², Mehmet Aykin-Burns², Matthew C. Zimmerman², Kathy Zimmerman², Amy-Juan L. Han², Robert M. Weiss^{1,3}, Douglas R. Spitz², Madeline A. Shea², Roger J. Colbran¹, Peter J. Mohler^{1,4}, and Mark E. Anderson^{1,4} [*Correspondence](#)

Abstract | **Introduction** | **Results** | **Discussion** | **Experimental Procedures** | **Figure 5B** | **References (51)** | **Authors** | **Comments (1)** | **Acknowledgments**

Article Highlights

- Oxidation of methionine residues activates CaMKII
- Angiotensin II induces CaMKII oxidation leading to cardiomyocyte death
- CaMKII methionine oxidation is reversed by MsrA
- Elevated CaMKII oxidation impairs heart function and worsens ischemic injury

Author Interview

Abstract
Calcium/calmodulin [Ca²⁺/CaM]-dependent protein kinase II (CaMKII) couples increases in cellular Ca²⁺ to fundamental responses in excitable cells. CaMKII was identified over 20 years ago by activation dependence on Ca²⁺/CaM, but recent evidence shows that CaMKII activity is also enhanced by pro-oxidant conditions. Here we show that oxidation of paired regulatory domain methionine residues sustains CaMKII activity in the absence of Ca²⁺/CaM. CaMKII is activated by angiotensin II (AngII)-induced oxidation, leading to apoptosis in cardiomyocytes both in vitro and in vivo. CaMKII oxidation is reversed by methionine sulfide reductase A (MsrA), and MsrA^{-/-} mice show exaggerated CaMKII oxidation and myocardial apoptosis, impaired cardiac function, and increased mortality after myocardial infarction. Our data demonstrate a dynamic mechanism for CaMKII activation by oxidation and highlight the critical importance of oxidation-dependent CaMKII activation to AngII and ischemic myocardial apoptosis.

Copyright © 2008 Elsevier Inc. All rights reserved.

Trends in Publishing: The Article of the Future

Redefine how a scientific article is presented online, allowing

The article of the future will be more interactive and multidimensional (additional data files, increased graphical capabilities, post-publication comments.

The Int. Soc. Ethnopharmacol. (jointly with Elsevier) is currently developing ideas for how to built up a platform for exchanging ideas between authors, reviewers and editors pre- and post-publication

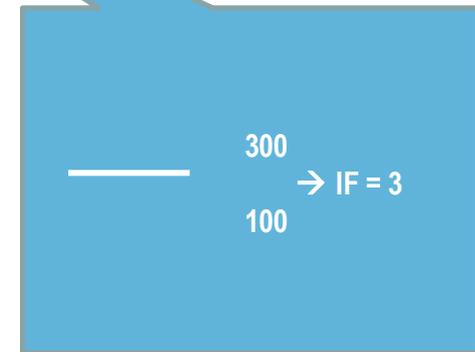
Journal impact: citations and IF

IF calculation:

Citations 2011 to publications 2009/2010

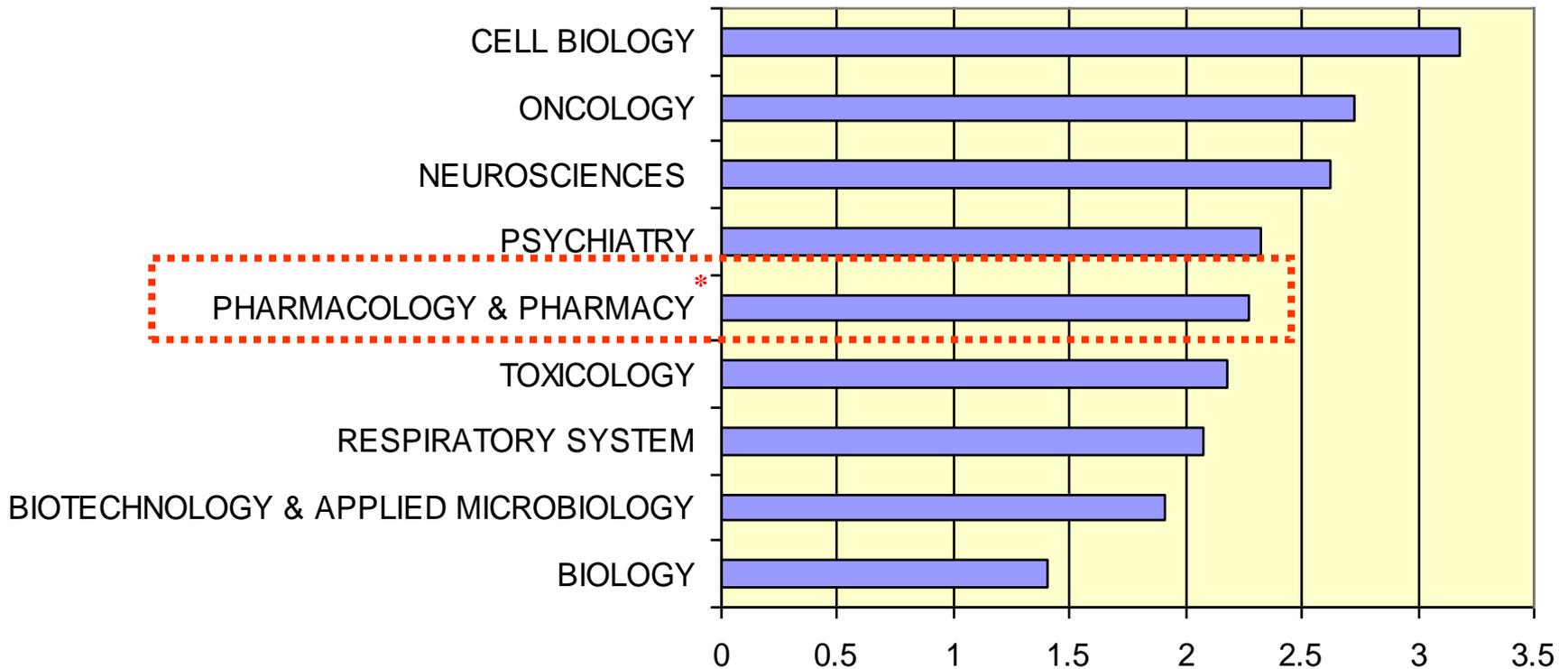
of publications 2009/2010

The impact is in fact only of limited use for assessing the quality of a journal – for a field it is an indicator of the size of this field and of the relative standing of a journal in this field.



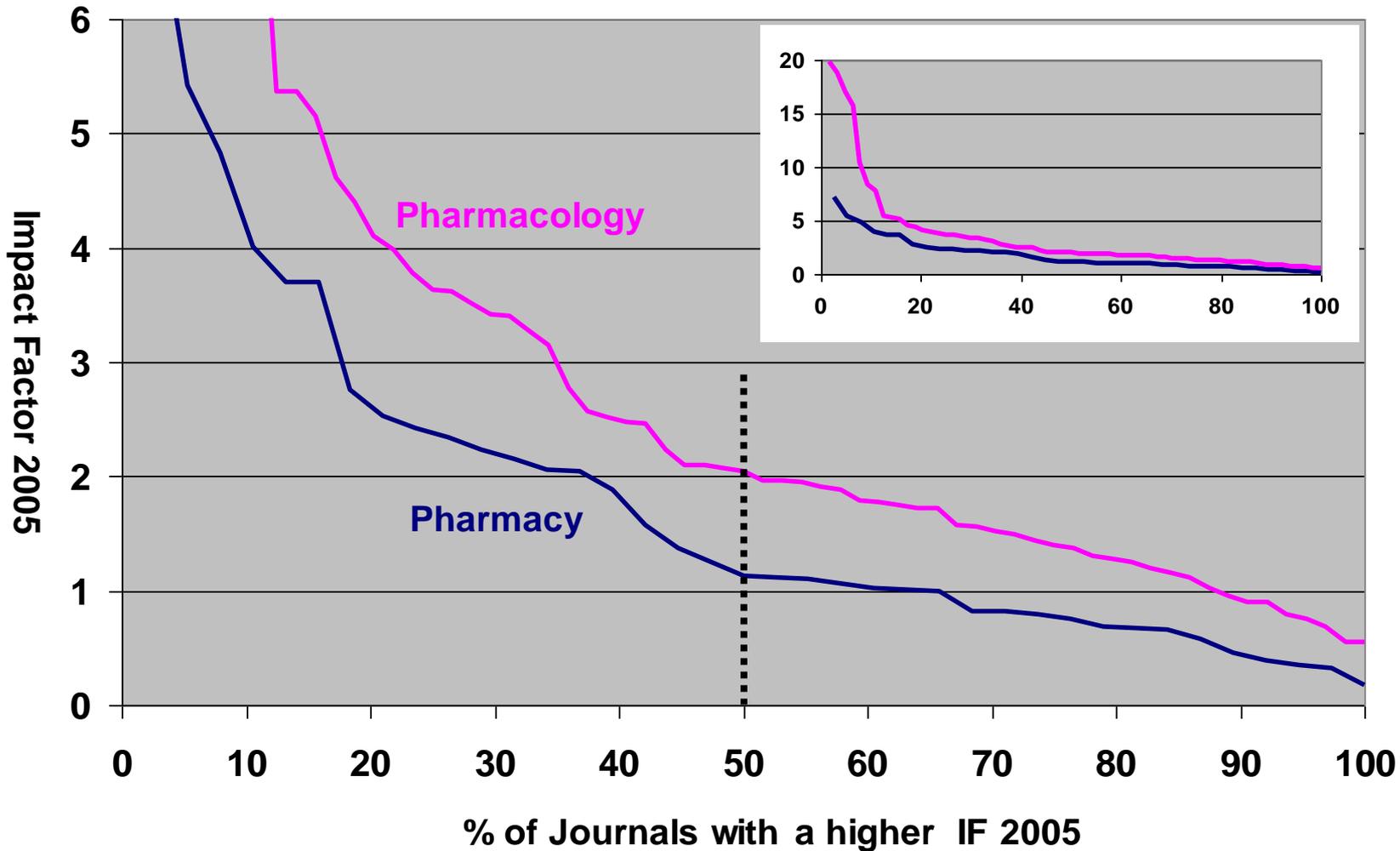
Influences on Impact Factors: Subject Area

Median IF per subject category

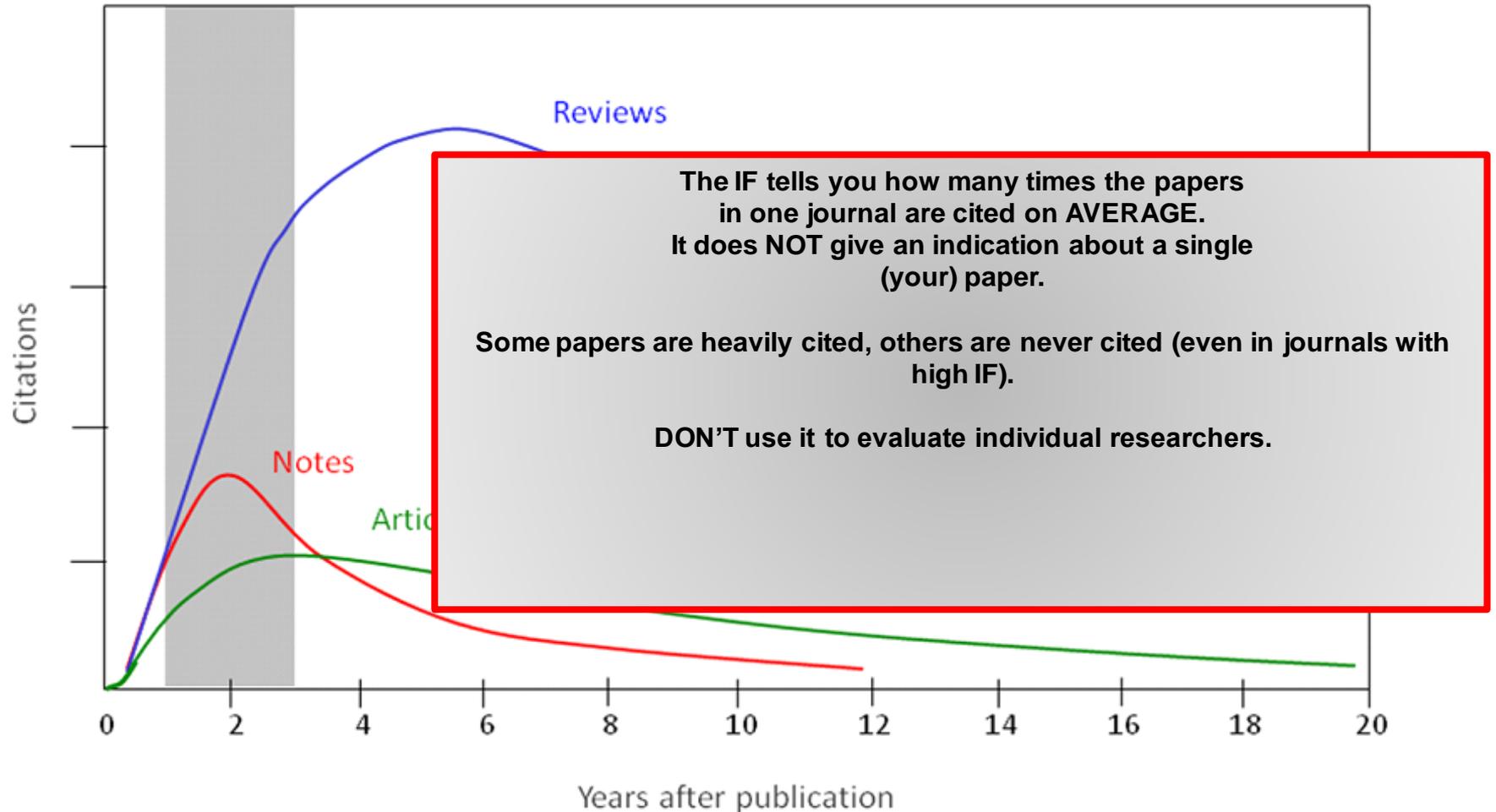


Note: * - There are in fact major differences between pharmacy and pharmacology!

Pharmac[ology] Journals Ranked by Impact Factor



Citations per article type

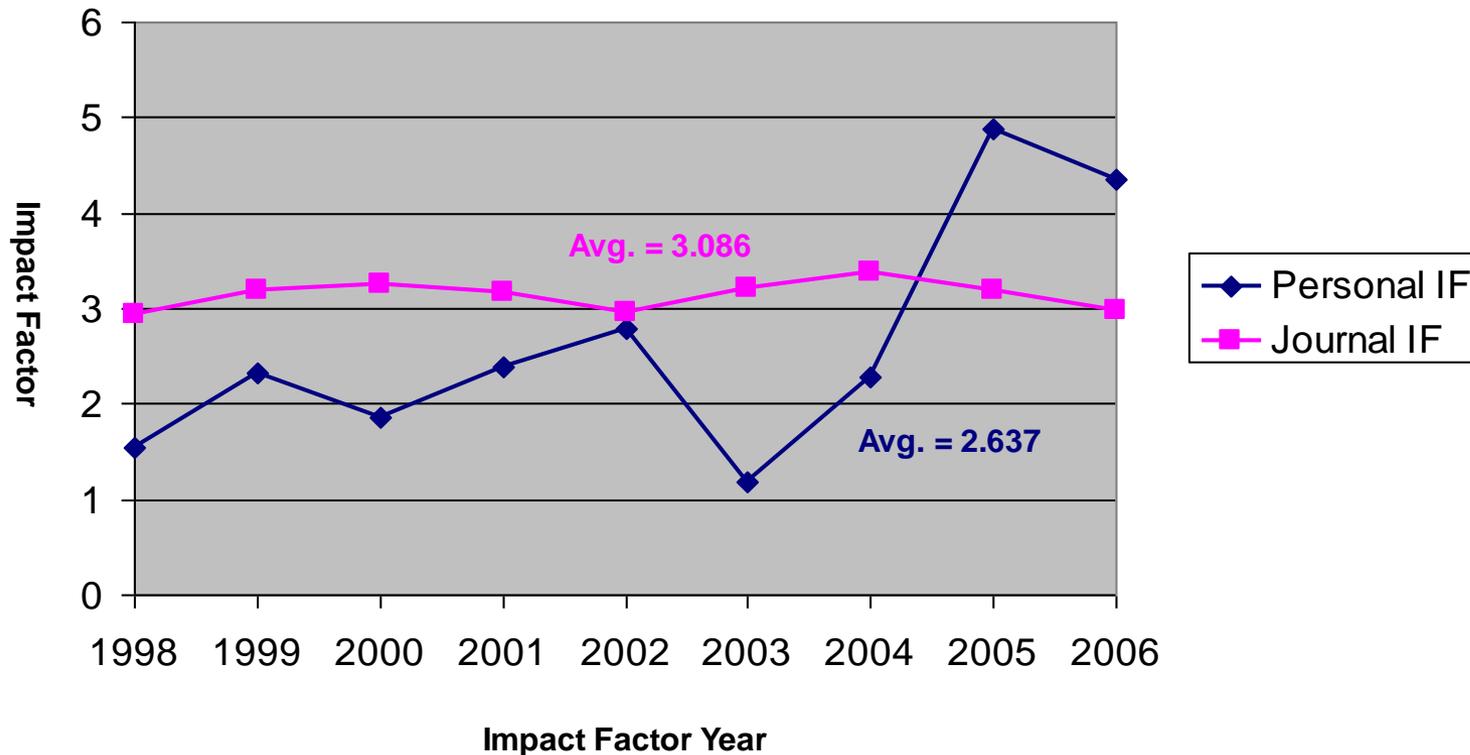


Author vs. Journal Impact Factors

Author N.N.:

≈100 original research articles (Reviews excluded)

≈ 50% published in ISI category “Pharmacology & Pharmacy”



Choosing the right journal



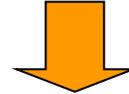
Do not just “descend the stairs”

Top journals

Nature, Science, Lancet, NEJM,



Field-specific top journals



Other field-specific journals



National journals

Choosing the right journal

New stilbenoids with insect-deterrent effects from *X*



Choosing the right journal

Investigate all candidate journals to find out

- Aims and scope
- Accepted types of articles
- Readership
- Current hot topics
- go through the abstracts of recent publications

Volume 88, Issues 21-22, Pages 909-1000 (23 May 2011)

Potential impact of drugs of abuse on mother-to-child transmission (MTCT) of HIV in the era of highly active antiretroviral therapy (HAART)

Edited by Vishnudutt Purohit, Rao S. Rapaka, Paul Schnur and David Shurtleff

articles 1 - 14

E-mail articles | Export citations | PDF downloader | Open all previews

1 Editorial Board
Page /FC
Show preview | PDF (32 K) | Related articles | Related reference work articles

2 Potential impact of drugs of abuse on mother-to-child transmission (MTCT) of HIV in the era of highly active antiretroviral therapy (HAART)
Pages 909-916
Vishnudutt Purohit, Rao S. Rapaka, Paul Schnur, David Shurtleff
Show preview | PDF (470 K) | Related articles | Related reference work articles

3 Mother-to-child transmission of HIV-1 in sub-Saharan Africa: Past, present and future challenges
Review Article
Pages 917-921
Taha E. Taha
Show preview | PDF (150 K) | Related articles | Related reference work articles

4 Mother-to-child transmission of HIV-1 in the era prior to the availability of combination antiretroviral therapy: The role of drugs of abuse
Review Article



Find an author's most frequent co-authors

Co-Author Visualizer

Life Sciences



ISSN: 0024-3205
Imprint: ELSEVIER

Actions

- Submit Article
- Order Journal
- Recommend to Friend
- Bookmark this Page
- Subscribe to RSS feed

Facts & Figures

Impact Factor: 2.560
5-Year Impact Factor: 2.672
Issues per year: 52

Life Sciences is an international journal publishing articles that emphasize the molecular, cellular, and functional basis of therapy. The journal emphasizes the understanding of mechanism that is relevant to all aspects of human disease and translation to patients. All articles are rigorously reviewed. The Journal favors ... click here for full Aims & Scope

Executive Editor-in-Chief:
F. Porreca

Open access solutions available for this journal



Pharmacology
AUTHOR RESOURCES

Win \$35,000 creating Apps For Science!
Go to <http://appsforscience.com>

Want to know more about Life Sciences Mini-Reviews?
Find out here!



Articles | Issues

Recent | Top 10 Cited | Most Downloaded

Sat May 14 21:34:45 BST 2011

- Rapamycin (Sirolimus) protects against hypoxic damage in primary heart cultures via Na⁺/Ca²⁺ exchanger activation
Life Sciences, In Press, Accepted Manuscript, Available online 12 May 2011
Dalia El-Ani, Hagit Stav, Victor Guetta, Michael Arad, Asher Shainberg
- Effects of burn injury, cold stress and cutaneous wound injury on the morphology and



Show preview

Additional Information

Editorial Board

Readers

- Access Full-Text
- Volume/Issue Alerts

Authors

- Submit an Article
- Track Your Accepted Articles
- Guide for Authors
- Author Information Page
- Webshop

Librarians

- Ordering Information
- Dispatch Dates
- Abstracting/Indexing

Editors

- Article Tracking for Editors

Reviewers

- Reviewer Guidelines
- Log in as Reviewer

Advertisers/Sponsors

- Advertisers Media Information

Societies

Already now available: Graphical Abstracts



Journal of Ethnopharmacology

Copyright © 2009 Elsevier Ireland Ltd. All rights reserved.

[Sample Issue Online](#) | [About this Journal](#) | [Submit your Article](#) | [Shortcut link to this Title](#) | [International Society of Ethnopharmacology \(ISE\)](#)

[New Article Feed](#)

[Signed up for new Volumes / Issues \[remove\]](#)

[Added to Favorites \[remove\]](#)

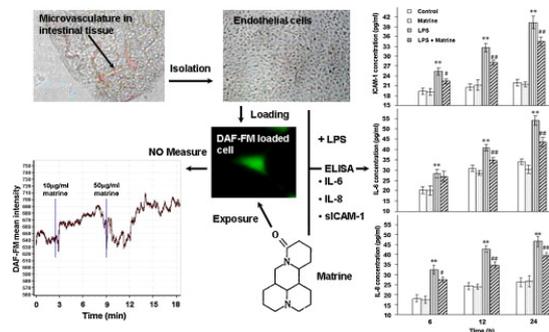
5. [An ethnopharmacological survey and *in vitro* confirmation of ethnopharmacological use of medicinal plants used for wound healing in Bosomtwi-Atwima-Kwanwoma area, Ghana](#)
 Pages 393-403
 Christian Agyare, Alex Asase, Matthias Lechtenberg, Michael Niehues, Alexandra Deters, Andreas Hensel
[Preview](#) [PDF \(617 K\)](#) [Related Articles](#)

Graphical abstract



6. [Impact of matrine on inflammation related factors in rat intestinal microvascular endothelial cells](#)
 Pages 404-409
 Zhanwei Suo, Ye Liu, Miro Ferreri, Tao Zhang, Zhongjie Liu, Xiang Mu, Bo Han
[Preview](#) [PDF \(940 K\)](#) [Related Articles](#)

Graphical abstract



Already now available: Graphical Abstracts



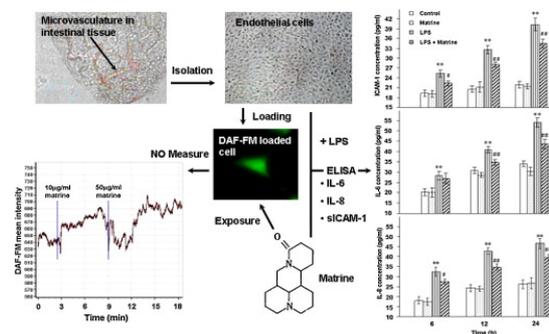
Home + Recent Actions Browse Search My Settings Alerts Help
Quick Search All fields Author

↓ And then an editor gets this as a graphical abstract

Graphical Abstract

Abstract

An entomopathogenic fungus, *Cordyceps* spp. has been known to have numerous therapeutic implications in terms of human health. Main constituent of the extract derived from this fungus comprises of a novel bio-metabolite called as Cordycepin (3'deoxyadenosine) which has a very potent anticancer, anti-oxidant and anti-inflammatory activity. The current review discusses about the etiology of host infection and the cultivation strategies followed along with efforts to delineate the mechanism of action and medicinal importance of *Cordyceps*. The study will certainly draw the attention of scientific community to improve the bioactivity and production of Cordycepin which will further add to our understanding of the molecular and biochemical interaction of the insect-host relationship.



Outline: How to prepare a publication

- Introduction
- **Why do scientists publish?**
- What is a good manuscript?
- How to write a good manuscript
 - Preparations before starting
 - Construction of an article
 - Some technical details that need special attention
 - Language
- Revision and response to reviewers
- Ethical Issues
- Conclusion: what leads to ACCEPTANCE

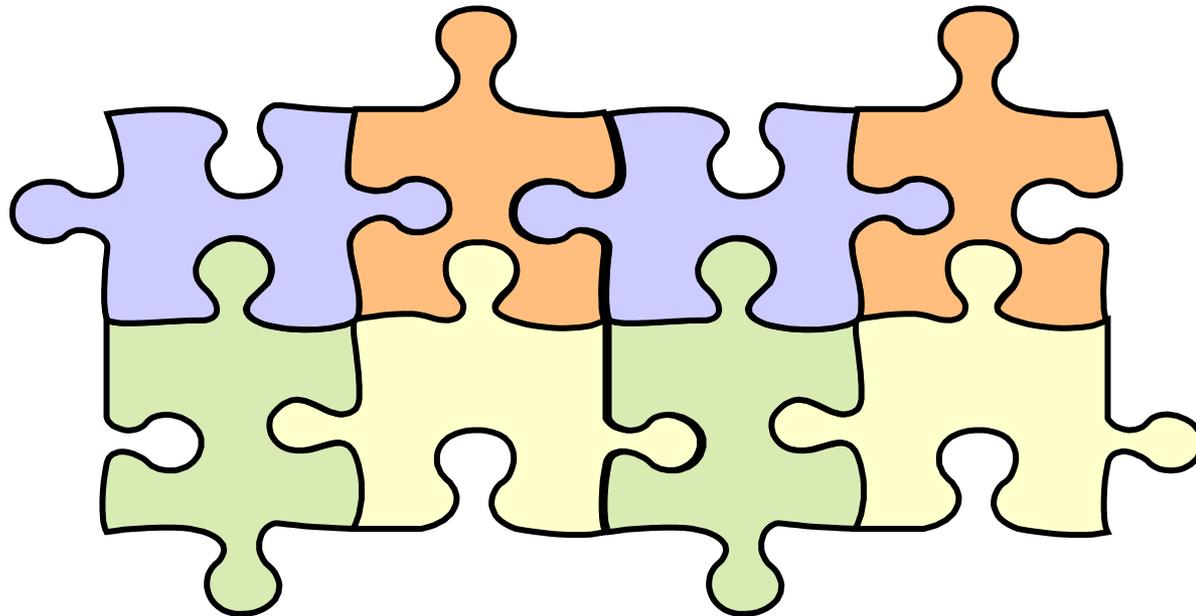
What is your personal reason for publishing?



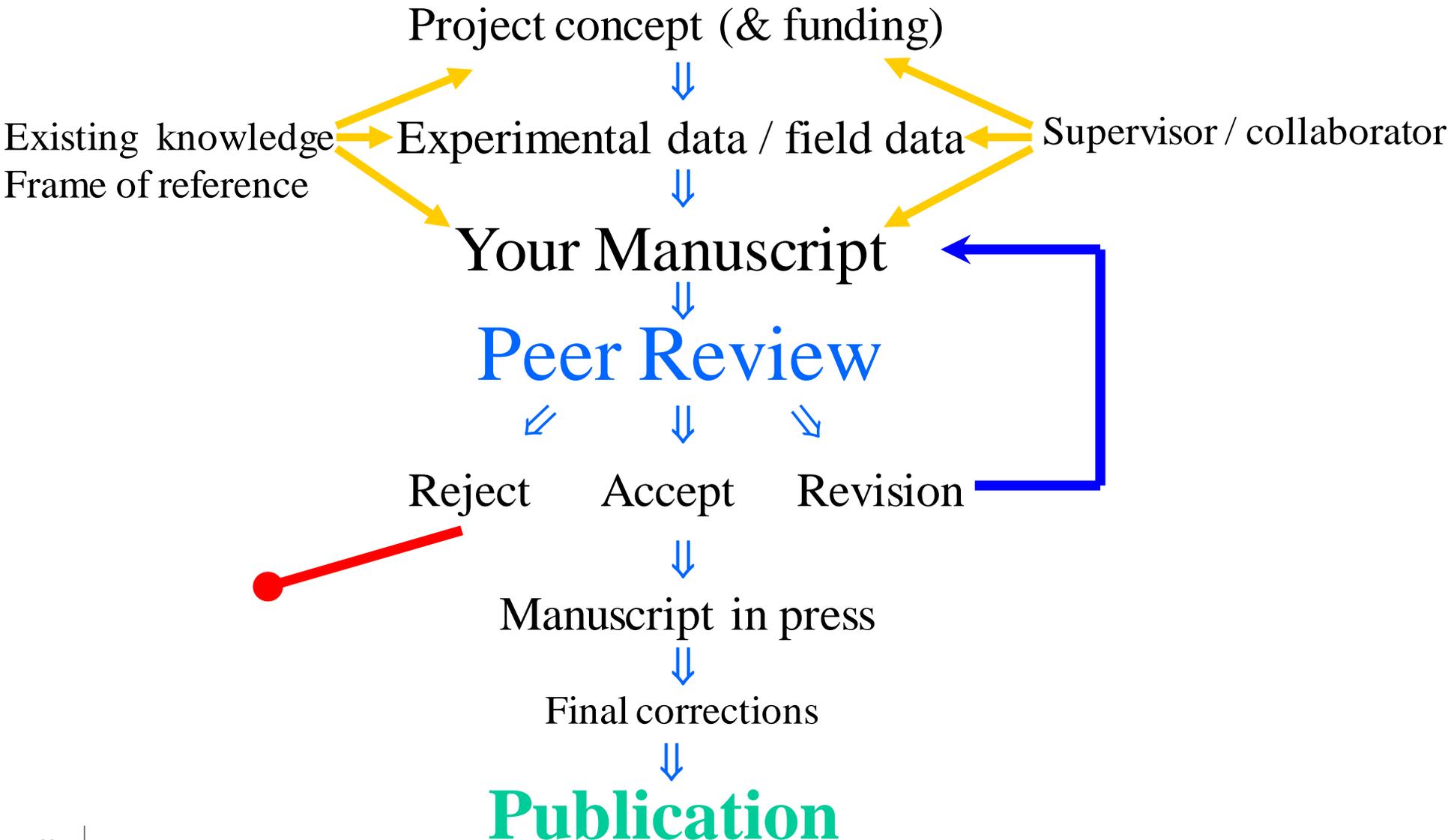
However, editors, reviewers, and the research community DO NOT care about these reasons.

Why do scientists publish?

... to **share** with the science **COMMUNITY** something that **advances knowledge** in a certain field.



From an idea to a publication



- **Introduction**
- **Why do scientists publish?**
- **What is a good manuscript?**
- **How to write a good manuscript**
 - Preparations before starting
 - Construction of an article
 - Some technical details that need special attention
 - Language
- **Revision and response to reviewers**
- **Ethical issues**
- **Conclusion: what leads to ACCEPTANCE**

Journal of Ethnopharmacology

Manuscript inflow: ca. 3.300 per year (estimate for 2012)

Acceptance rate: 20%

Published articles: ca. 400 – 450 per year

Number of issues: > 20

Editor-in-Chief: Prof. R. Verpoorte

Reviews' editor M. Heinrich (incl. book reviews, commentaries)

Editor P.J. Houghton,

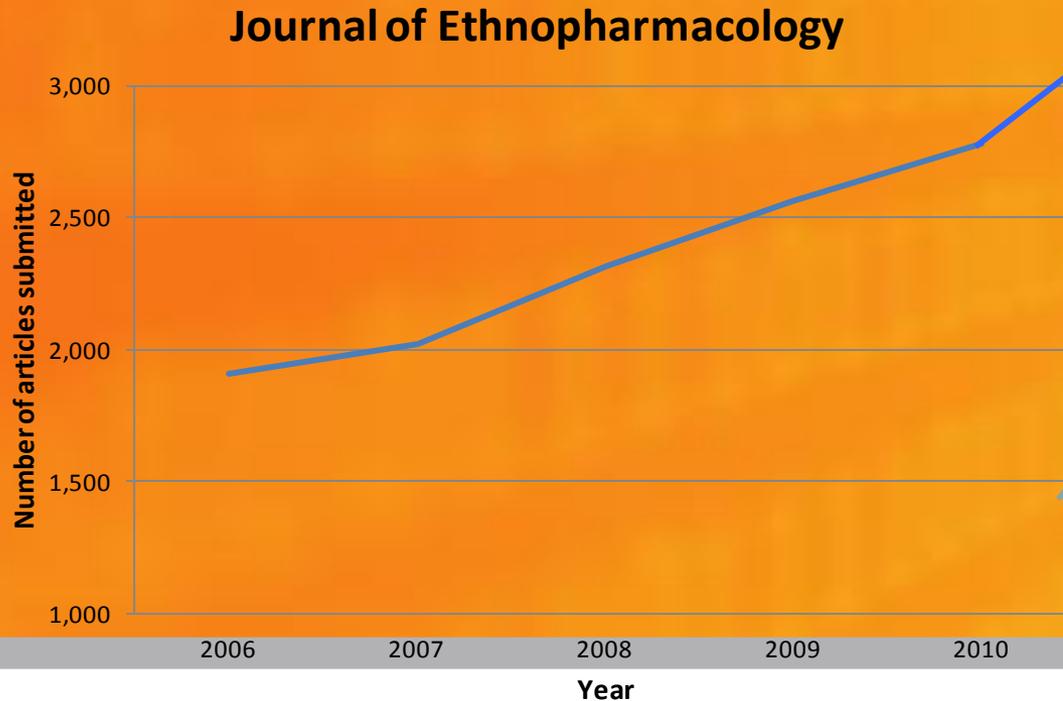
Associate Editors: De-an Guo, P.K. Mukherjee, G. Schmeda-Hirschmann, J. van Staden, E. Yesilada

Manuscript submission:

Electronic (EES = Elsevier Editorial System)



Increased number of articles

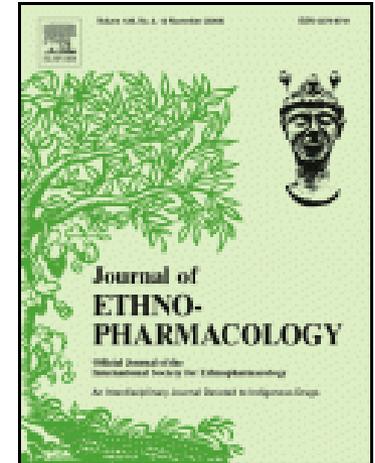


**In August 2012
already > 2100
articles submitted**



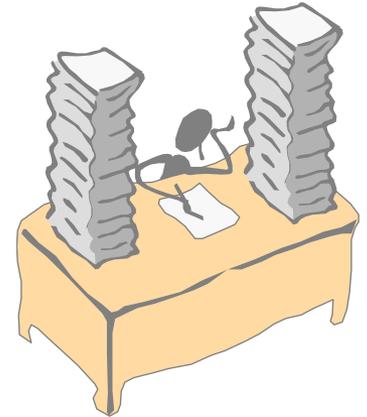
The Journal of Ethnopharmacology

- **The scope:** The *Journal of Ethnopharmacology* publishes original articles concerned with the observation and experimental investigation of the biological activities of plant and animal substances used in the traditional medicine of past and present cultures. The journal will particularly welcome interdisciplinary papers with an ethnopharmacological, an ethnobotanical or an ethnochemical approach to the study of indigenous drugs. Reports of anthropological and ethnobotanical field studies fall within the journal's scope. Studies involving pharmacological and toxicological mechanisms of action are especially welcome. Clinical studies on efficacy will be considered if contributing to the understanding of specific ethnopharmacological problems. The journal also welcomes review articles in the above mentioned fields especially on novel methodologies relevant to disease states.



(<http://ees.elsevier.com/jep/>)

Why is it important to submit a good MS?



→ it makes **YOUR** life easier

→ ... but also the life of the **Editors and Reviewers**

Editors and Reviewers are already overloaded.

Incomplete manuscripts create great frustration.

What goes wrong too often ...

“The following problems appear **much too frequently**”

- The specific scientific goals of the work (the ethnopharmacological hypothesis) is not spelled out clearly in the Introduction and not (sufficiently) discussed in the Discussion or Conclusions
- Submission of papers which are clearly out of scope
- Failure to format the paper according to the Guide for Authors incl.
 - poor references
 - wrong structure
 - no adequate graphical abstract
 - abstract is not structured according to the authors' instructions
- Inadequate (too short, imprecise) response to reviewers / poor revisions
- Inadequate standard of English
- Resubmission of rejected manuscripts without revision
- Sloppy MSs

→ **Instructions are there to be followed**

...and my own publishing advice is as follows:

- Submit to the **right journal**
- Submit to **one journal** only
- Do **not** submit “salami” articles
- Pay attention to **journal requirements** and structure
- Check the **English**
- Pay attention to **ethics standards**

Your article should be of value to the research community...

A research study is meaningful **only if...**

it is clear, can be understood and is reproducible

→ it is used

... and yourself!

**Your paper is your passport
to your community**



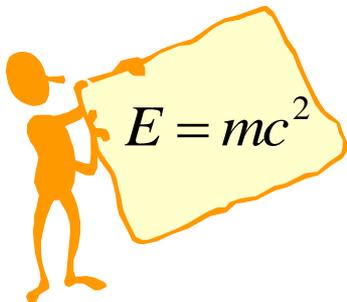
A good manuscript..

makes readers grasp the *scientific significance* EASILY

Important are **both**

...the **CONTENT** – useful and exciting

...and the **PRESENTATION** – clear, logical



WHY do you want to publish your work?

- Have you made a **contribution**/solved a problem in your field?
- Put your work into **perspective** with existing data!
- **Know** the latest results!!
 - Search engines



The screenshot shows the PubMed search interface. At the top, there are logos for NCBI and PubMed, along with the text 'A service of the U.S. National Library of Medicine and the National Institutes of Health' and the URL 'www.pubmed.gov'. Below the logos, there are navigation tabs for 'All Databases', 'PubMed', 'Nucleotide', 'Protein', 'Genome', 'Structure', 'OMIM', 'PMC', and 'Journals'. The search bar contains the text 'PubMed' in a dropdown menu, followed by 'for Panax notoginseng anticoagulant effect' and 'Go' and 'Clear' buttons. Below the search bar, there are buttons for 'Limits', 'Preview/Index', 'History', 'Clipboard', and 'Details'. The 'Display' section shows 'Summary' selected, 'Show 20' items, and 'Sort By' and 'Send to' dropdown menus. The 'All: 2' section shows 'Free Full Text: 0' and 'Review: 0'. Below this, it says 'Items 1 - 2 of 2' and 'One page.'. The search results are listed as follows:

- 1: [Antiplatelet and anticoagulant effects of Panax notoginseng: comparison of raw and steamed Panax notoginseng with Panax ginseng and Panax quinquefolium.](#)
Lau AJ, Toh DF, Chua TK, Pang YK, Woo SO, Koh HL.
J Ethnopharmacol. 2009 Sep 25;125(3):380-6. Epub 2009 Aug 7.
PMID: 19665534 [PubMed - in process]
[Related Articles](#)
- 2: [Cardiovascular pharmacology of Panax notoginseng \(Burk\) F.H. Chen and Salvia miltiorrhiza.](#)
Lei XL, Chiou GC.
Am J Chin Med. 1986;14(3-4):145-52.
PMID: 3799531 [PubMed - indexed for MEDLINE]
[Related Articles](#)

In what form? - type of your manuscript

- **Full articles / Original articles**
 - the most important papers; often substantial **completed** pieces of research that are of significance.
- **Letters / Short Communications**
 - usually published for the **quick and early** communication of significant and original advances; **much shorter** than full articles (usually strictly limited).
- **Review papers / Perspectives / Commentaries**
 - **summarize** recent developments **on a specific topic**; highlight important points that have been **previously reported** and introduce no new information; often submitted **on invitation**.

To which audience?

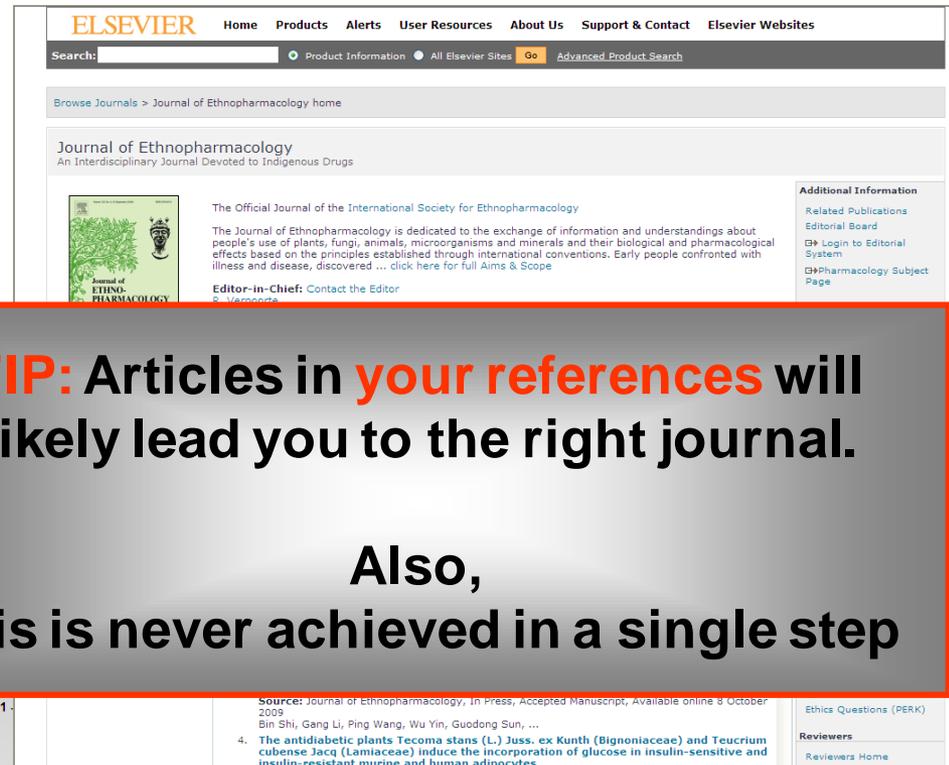
- Identify the **sector of readership/community** for which a paper is meant
- Identify the interest of your audience
 - “Knock-down of mdr-1 activity in transiently transfected HEK cells” in *Pharmazeutische Industrie*?
 - “Novel secondary metabolites from the marine algae *X* “ in the *Journal of Ethnopharmacology*?
 - “Anti-inflammatory effects of a novel simvastatin derivative “in the *British Journal of Nutrition*
- Is your paper of local or international interest?
 - “A bioequivalence study of ibuprofen tablets marketed in Southern Kosovo” in the *International Journal of Pharmaceutics*
- **Excellence in Research Australia or Research Excellence Framework**
 - Strategic considerations for your research unit / university

Choose the right journal

- Investigate all candidate journals to find out
 - Aims and scope
 - Accepted types of articles
 - Readership
 - Current hot topics
 - go through the abstracts of recent publications)

TIP: Articles in your references will likely lead you to the right journal.

Also, this is never achieved in a single step



ELSEVIER Home Products Alerts User Resources About Us Support & Contact Elsevier Websites

Search: Product Information All Elsevier Sites Go Advanced Product Search

Browse Journals > Journal of Ethnopharmacology home

Journal of Ethnopharmacology
An Interdisciplinary Journal Devoted to Indigenous Drugs

The Official Journal of the International Society for Ethnopharmacology

The Journal of Ethnopharmacology is dedicated to the exchange of information and understandings about people's use of plants, fungi, animals, microorganisms and minerals and their biological and pharmacological effects based on the principles established through international conventions. Early people confronted with illness and disease, discovered ... click here for full Aims & Scope

Editor-in-Chief: Contact the Editor
B. Vermeire

Additional Information
Related Publications
Editorial Board
Login to Editorial System
Pharmacology Subject Page

articles 1

Source: Journal of Ethnopharmacology, In Press, Accepted Manuscript, Available online 8 October 2009
Bin Shi, Gang Li, Ping Wang, Wu Yin, Guodong Sun, ...

4. The antidiabetic plants *Tecoma stans* (L.) Juss. ex Kunth (Bignoniaceae) and *Teucrium cubense* Jacq (Lamiaceae) induce the incorporation of glucose in insulin-sensitive and insulin-resistant murine and human adipocytes

Ethics Questions (PERK)
Reviewers
Reviewers Home



Volume 125, Issue 3, Pages 369-502 (25 September 2009)

Email Articles Export Citations Download PDFs Open All Previews

Research Papers

1. *Withania somnifera* root extract improves catecholamines and physiological abnormalities seen in Parkinson's disease model mouse
Pages 369-373
Srinivasagam RajaSankar, Thamilarasan Manivasagam, Venkatachalam Sankar, Seppan Prakash, Rathinasamy Muthusamy, Arumugam Krishnamurti, Sankar Surendran
Preview PDF (321 K) Related Articles

2. Effect of TGF- β 1 and fibronectin expression in mouse mesangial cells
Pages 374-383
Jin Sook Kim
Preview PDF (321 K) Related Articles

3. Antiplatelet and anticoagulant effects of *Panax notoginseng*: Comparison of raw and steamed *Panax notoginseng* with *Panax ginseng* and *Panax quinquefolium*
Pages 380-386
Aik-Jiang Lau, Ding-Fung Toh, Tung-Kian Chua, Yun-Keng Pang, Soo-On Woo, Hwee-Ling Koh
Preview PDF (500 K) Related Articles

Graphical abstract

We showed that steamed *Panax notoginseng* has the greatest antiplatelet and anticoagulant effects on

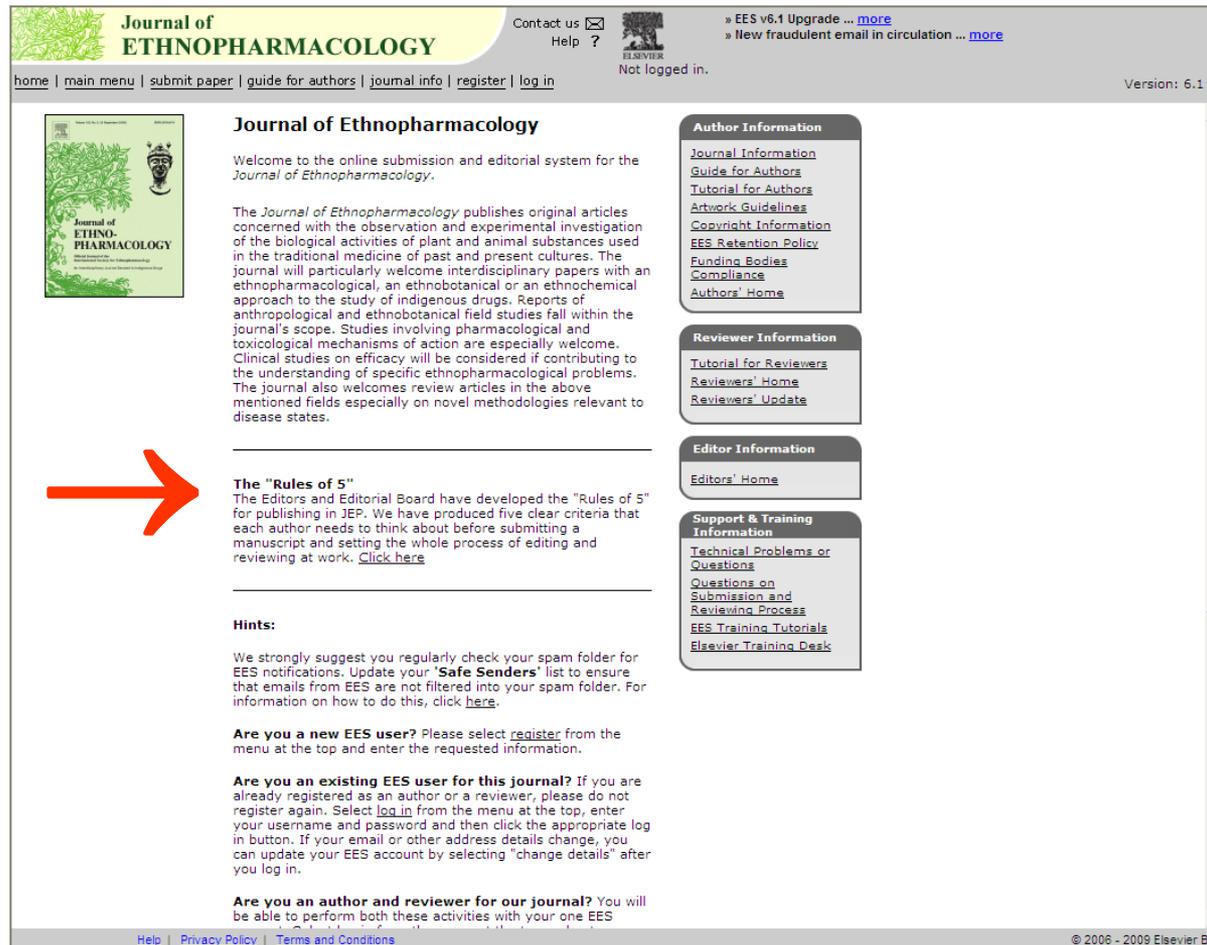
ATTENTION!

DO NOT gamble by scattering your manuscript to several journals. **Only submit once!**

International ethics standards **prohibit multiple/simultaneous submissions**, and Editors **DO** find out!

Before writinging, read the specific 'Guide for Authors'

Apply the Guide for Authors to your manuscript, **even to the first draft** (Rules, of Five, text layout, paper citation, nomenclature, figures and table, etc.). It will save your time, and the editor's.



The screenshot shows the website for the Journal of Ethnopharmacology. At the top, there is a navigation bar with links for 'home', 'main menu', 'submit paper', 'guide for authors', 'journal info', 'register', and 'log in'. A red arrow points to the 'guide for authors' link. The main content area is titled 'Journal of Ethnopharmacology' and includes a welcome message and a description of the journal's focus. Below this, there is a section titled 'The "Rules of 5"' which provides information about the journal's submission criteria. To the right of the main content, there are several sidebar boxes containing links for 'Author Information', 'Reviewer Information', 'Editor Information', and 'Support & Training Information'. The 'Author Information' box includes links for 'Journal Information', 'Guide for Authors', 'Tutorial for Authors', 'Artwork Guidelines', 'Copyright Information', 'EES Retention Policy', 'Funding Bodies', 'Compliance', and 'Authors' Home'. The 'Reviewer Information' box includes links for 'Tutorial for Reviewers', 'Reviewers' Home', and 'Reviewers' Update'. The 'Editor Information' box includes a link for 'Editors' Home'. The 'Support & Training Information' box includes links for 'Technical Problems or Questions', 'Questions on Submission and Reviewing Process', 'EES Training Tutorials', and 'Elsevier Training Desk'. The footer of the page contains links for 'Help', 'Privacy Policy', and 'Terms and Conditions', along with the copyright notice '© 2006 - 2009 Elsevier BV'.

Journal of Ethnopharmacology

Welcome to the online submission and editorial system for the *Journal of Ethnopharmacology*.

The *Journal of Ethnopharmacology* publishes original articles concerned with the observation and experimental investigation of the biological activities of plant and animal substances used in the traditional medicine of past and present cultures. The journal will particularly welcome interdisciplinary papers with an ethnopharmacological, an ethnobotanical or an ethnochemical approach to the study of indigenous drugs. Reports of anthropological and ethnobotanical field studies fall within the journal's scope. Studies involving pharmacological and toxicological mechanisms of action are especially welcome. Clinical studies on efficacy will be considered if contributing to the understanding of specific ethnopharmacological problems. The journal also welcomes review articles in the above mentioned fields especially on novel methodologies relevant to disease states.

The "Rules of 5"

The Editors and Editorial Board have developed the "Rules of 5" for publishing in JEP. We have produced five clear criteria that each author needs to think about before submitting a manuscript and setting the whole process of editing and reviewing at work. [Click here](#)

Hints:

We strongly suggest you regularly check your spam folder for EES notifications. Update your **'Safe Senders'** list to ensure that emails from EES are not filtered into your spam folder. For information on how to do this, click [here](#).

Are you a new EES user? Please select [register](#) from the menu at the top and enter the requested information.

Are you an existing EES user for this journal? If you are already registered as an author or a reviewer, please do not register again. Select [log in](#) from the menu at the top, enter your username and password and then click the appropriate log in button. If your email or other address details change, you can update your EES account by selecting "change details" after you log in.

Are you an author and reviewer for our journal? You will be able to perform both these activities with your one EES

Author Information

- [Journal Information](#)
- [Guide for Authors](#)
- [Tutorial for Authors](#)
- [Artwork Guidelines](#)
- [Copyright Information](#)
- [EES Retention Policy](#)
- [Funding Bodies](#)
- [Compliance](#)
- [Authors' Home](#)

Reviewer Information

- [Tutorial for Reviewers](#)
- [Reviewers' Home](#)
- [Reviewers' Update](#)

Editor Information

- [Editors' Home](#)

Support & Training Information

- [Technical Problems or Questions](#)
- [Questions on Submission and Reviewing Process](#)
- [EES Training Tutorials](#)
- [Elsevier Training Desk](#)

46

© 2006 - 2009 Elsevier BV

The general structure of a full article

- Title
- Authors
- Abstract
- Keywords

} Make them easy for indexing and searching! (informative, attractive, effective)

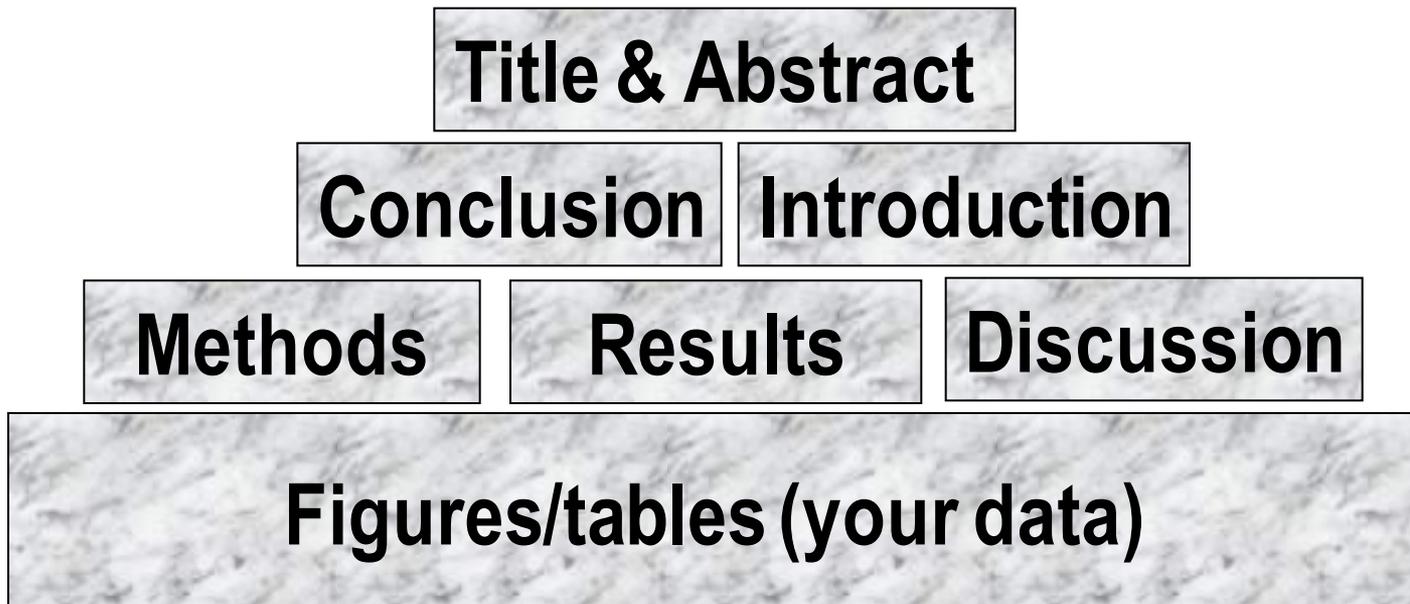
- Main text (IMRAD)
 - Introduction
 - Methods
 - Results
 - And
 - Discussion (Conclusions)

} Journal space is precious. Make your article as brief as possible. If clarity can be achieved in n words, never use $n+1$.

- Acknowledgements
- References
- Supplementary material

Work in progress vs. final masterpiece

The process of writing
– building the article



The final article

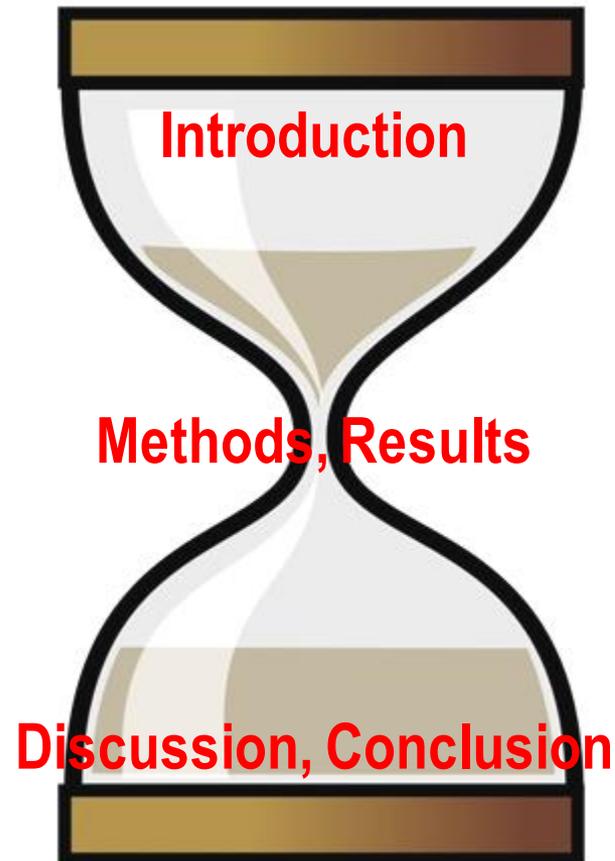
GENERAL



SPECIFIC



GENERAL



The title

Are these good titles?
What do you expect from this article?
Is it specific enough to tell you what the article is
about?””””

“Antinociceptive activity of coniine in mice”

or

“Pharmacological study of coniine in mice”

or

“Contributions to the effects of coniine in mice”

or

“Evaluation of the effects of coniine in rodents”

The title: Be specific and interesting

Are these good titles?
What do you expect from this article?
Is it specific enough to tell you what the article is about?"'"

“Antinociceptive activity of coniine in mice”

? or ?

“Pharmacological study of coniine in mice”

? or ?

“Contributions to the effects of coniine in mice”

? or ?

“Evaluation of the effects of coniine in rodents”

The title: Be specific and interesting

Are these good titles?
What do you expect from this article?
Is it specific enough to tell you what the article is
about?"

**Formulas of traditional Chinese
medicines in treatment of patients with
hyperlipidemia and by three main
tactics: targeting in gastrointestinal
tract, improving cardiovascular system,
and reinforcing tonic effects**

or

“Evaluation of the effects of coniine in rodents”

Visualising a mouse or an elephant?

Journal of Ethnopharmacology 110 (2007) 391–400

Uses and abuses of in vitro tests in ethnopharmacology: Visualizing an elephant[☆]

P.J. Houghton^{a,*}, M.-J. Howes^b, C.C. Lee^a, G. Steventon^c

^a Pharmacognosy Research Laboratories, Pharmaceutical Sciences Research Division, King's College London,
Franklin-Wilkins Building, 150, Stamford Street, London SE1 9NH, UK

^b Jodrell laboratory, Royal Botanic Gardens Kew, Kew, Richmond TW8 3DS, UK

^c Pharmaceutical Sciences Research Division, King's College London,
Franklin-Wilkins Building, 150, Stamford Street, London SE1 9NH, UK

Journal of Ethnopharmacology 126 (2009) 233–237

Is the body fat of the lizard *Tupinambis merianae* effective against bacterial infections?

Felipe S. Ferreira^{a,*}, Samuel V. Brito^a, José G.M. Costa^b, Rômulo R.N. Alves^c,
Henrique D.M. Coutinho^b, Waltécio de O. Almeida^b

^a Universidade Federal da Paraíba, Departamento de Sistemática e Ecologia, João Pessoa, PB, Brazil

^b Universidade Regional do Cariri, Departamento de Química Biológica, Crato, CE, Brazil

^c Universidade Estadual da Paraíba, Departamento de Biologia, Campina Grande, PB, Brazil

- A precise (!!) AND ‘catchy’ title will draw the readers’ attention to your work

Title – what is the paper broadly about?

- Your opportunity to **attract the reader's attention**.
- Keep it **informative** and **concise**.
- Avoid technical jargon and abbreviations if possible.

Abstract – tell the prospective readers what you did and what were the important findings.

- This is the **advertisement** of your article. Make it interesting, and easy to be understood without reading the whole article.
- You must be **accurate** and **specific!**
- A clear abstract will strongly influence whether or not your work is further considered.
- Keep it as **brief** as possible!!!
- Describe goals, methods, results and give some critical conclusions (cf. structured abstracts)

Keywords – mainly used for indexing and searching

- Don't be too narrow, and neither too broad
- Avoid abbreviations
- Check the Guide for

TIP: Search for your keywords online.

→ Would readers find YOUR article using these keywords?

Introduction – to convince readers that you clearly know why your work is useful

1. Introduction

Epigenetic modifications are increasingly recognized to play significant roles in both normal cellular physiology and disease processes, particularly in cancer where aberrant gene expression has long been associated with the pathogenesis of diseases. The histone acetylation status, one of the major groups mediating epigenetic modifications, is determined by the opposing actions of histone acetyltransferases (HATs) and histone deacetylases (HDACs). HAT inactivation has been linked to oncogenesis and experimental evidence suggests that the aberrant HDAC activity leads to the transcriptional repression of specific tumor suppressor genes, thus contributing to tumor formation (Marks et al., 2001; Karagiannis and El-Osta, 2006). Actions of HDAC inhibitors (HDACIs) often result in cell cycle arrest, differentiation and apoptosis in numerous transformed cell lines in culture and *in vivo* (Johnstone, 2002; McLaughlin and La Thangue, 2004; Minucci and Pelicci, 2006).

Therefore, the development of HDACIs as therapeutic agents for cancer treatment has recently been intensified.

Give overall picture – keep it brief! (no history lesson!)

Current state of knowledge

Introduction – to convince readers that you clearly know why your work is useful

Nevertheless, Vorinostat known as SAHA (suberoylanilide hydroxamic acid) that recently has been approved by FDA for the treatment of cutaneous T-cell lymphoma (CTCL) is not an ideal drug due to its low solubility and permeability classification (class IV), according to the Biopharmaceutical Classification System (BCS), and short half-life in clinical trials (half-life of 120 min for oral administration vs. 40 min for intravenous) (Kelly et al., 2005). Moreover, HDACIs with substantially longer half-lives, such as MS-275 with a half-life of up to 80 h, display higher toxicity profiles (Ryan et al., 2005). Additionally, Valproic acid binds to serum proteins (up to 90% of the absorbed drug) and exhibits low potency (Minucci and Pelicci, 2006).

Growing evidence has also revealed that the hydroxamate group is associated with low oral bioavailability, poor *in vivo* stability, and undesirable side effects (Mulder and Meerman, 1983; Vassiliou et al., 1999; Suzuki et al., 2005). It has also been shown that the hydroxamate type inhibitor Batimastat promoted liver metastasis in a tumor free mouse model (Kruger et al., 2001). As such, it has become increasingly important to identify replacement groups that exhibit strong inhibitory action against HDACs. Therefore, the

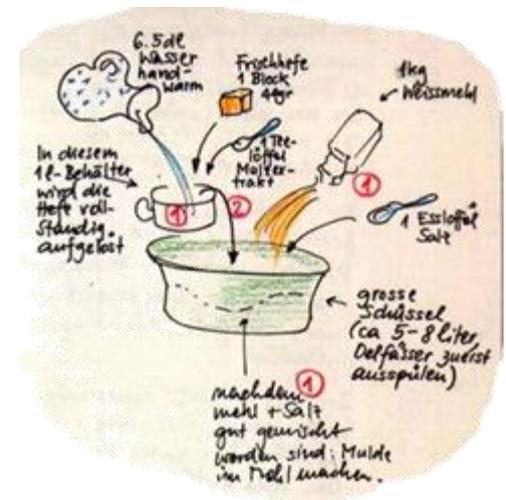
What is the problem? Are there any existing solutions? What are their main limitations? And what do you hope to achieve?

Do **not** mix introduction with results, discussion, and conclusion

... of a compound in the early stage of the drug discovery process are of crucial importance. A successful drug-lead candidate must possess

Methods – how was the problem studied

- Include detailed information, so that a knowledgeable reader can **reproduce** the experiment.



- However, use **references** and **Supplementary Materials** to indicate the previously published procedures.

Results – What have you found?

3. Results

3.1. Factors affecting entrapment efficiency of flurbiprofen in niosomal formulations

3.1.1. Effect of surfactant structure

To investigate the influence of surfactant structure on flurbiprofen entrapment efficiency, niosomal formulations of different spans were prepared from proniosomes with the same total lipid concentration (100 $\mu\text{mol/ml}$). Results listed in Table 3 show that Sp 60 has significant higher entrapment efficiency than other span types ($P < 0.05$). This could be due to the surfactant chemical structure. All span types have the same head group and different alkyl chain. Increasing the alkyl chain length is leading to higher entrapment efficiency (Hao et al., 2002). The entrapment efficiency followed the

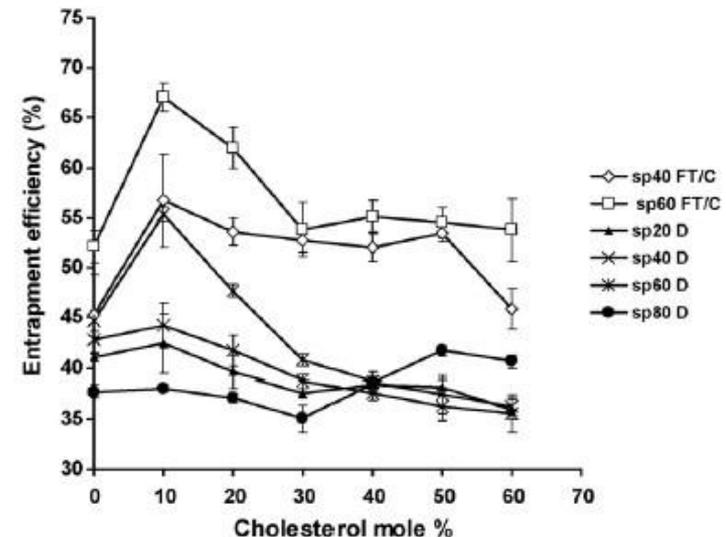


Fig. 1. Effect of cholesterol mol% and the method of free drug separation on the entrapment efficiency of flurbiprofen into niosomes. FT/C: freeze thawing/centrifugation. D: dialysis.

Table 4

Effect of flurbiprofen concentration on niosomal encapsulation efficiency

Flurbiprofen concentration mg/mmol lipids	EE%	% (mg drug/ μmol of total lipids)
25	55.99 \pm 2.28	1.40 \pm 0.06
50	67.04 \pm 1.41	3.35 \pm 0.14
75	72.25 \pm 2.3	5.41 \pm 0.17

Each result is the mean value \pm S.D. ($n = 3$).

Results – What have you found?

- Tell a clear and easy-to-understand story.

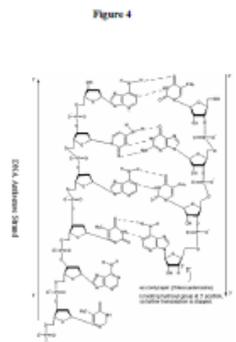
➔ RED THREAD

- Only representative results – but do not hide results!
 - Add Supplementary Materials for data of secondary importance.
- Be structured (sub-headings)
- Do not provide long lists of data which are not explained and discussed in the text, but nor can you repeat data given in a table of figures in the text
- Figures and tables need to have clear and self-explanatory headings
- Include controls (positive and negative)

Appearance counts!

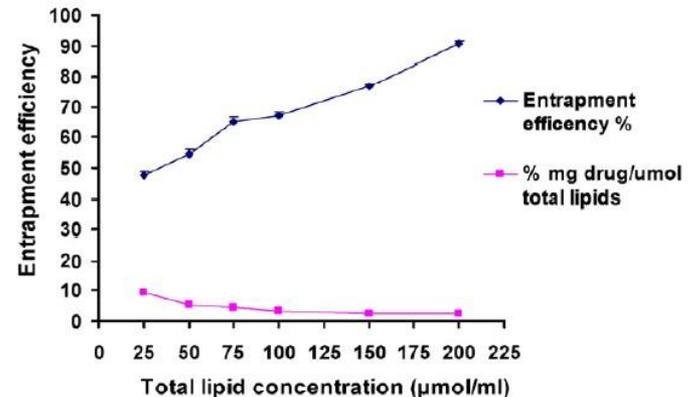
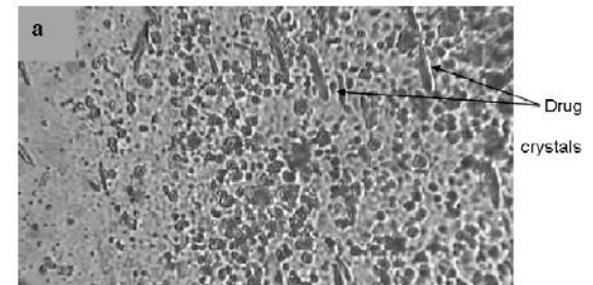
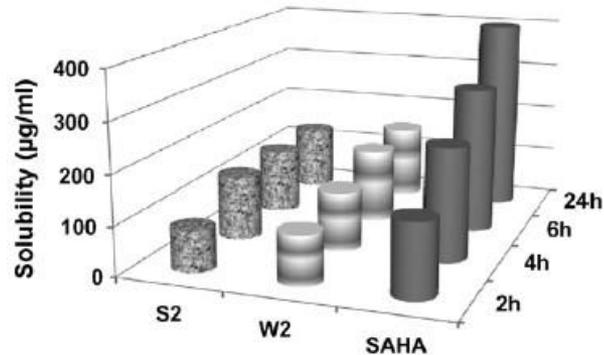
Don't do this

- Un-crowded plots, symbols clear to read and data sets easy to discriminate.
- Scale bar on photographs.
- Use color ONLY when necessary.
- Do not include long boring tables!



Appearance counts!

- Un-crowded plots, symbols clear to read and data sets easy to discriminate.
- Scale bar on photographs.
- Use color ONLY when necessary.
- Do not include long boring tables!



Discussion – What the results mean

- Here you SELL your data!
- Discussion to correlate with results, *but don't repeat results*
- Put your results into perspective with previously published data

ATTENTION: DON'T ignore work in disagreement with yours
– confront it and convince the reader that you are correct

Watch out for the following

- Don't exaggerate
- Be specific (say "48 degrees" instead of "higher temperature")
- Use *consistent terminology* (not 'herbal medicine' AND 'phytomedicine' AND 'medical product' AND '....' all in the same MS)
- Avoid sudden introduction of new terms or ideas
- Speculations on possible interpretations are allowed. But these should be rooted in fact, rather than imagination.
- Check logic and justifications (don't introduce completely new concepts)
- Use standard scientific English and terminology

Conclusions – How the work advances the field from the present state of knowledge

Provide a clear scientific justification for your work!

ATTENTION: DON'T repeat the abstract

What have you shown?

What does it mean for the field?

In summary, we have demonstrated that the mercapto-acetamide-based HDACIs possess favorable solubility, lipophilicity, permeability and plasma stability features as compared to recently FDA approved drug Vorinostat (SAHA). Based on these findings, we assume that these compounds could sufficiently be absorbed by the intestinal tract. However, further studies are needed in order to determine the pharmacokinetic disposition of these compounds.

Indicate possible applications and extensions, if appropriate

References

- Typically, there are more mistakes in the references than any other part of the manuscript.
 - It is one of the most annoying problems, and causes great headaches among editors...
 - Cite the **main** scientific publications on which your work is based
 - Do not inflate the manuscript with too many references
- 30-40 references** are appropriate for a **full text article**
- Avoid excessive self-citations
 - Avoid excessive citations of publications from the same region

Cover letter – your chance to speak to the Editor directly

- Be concise and to the point
- View it as a job application letter; you want to “sell” your work...
- WHY did you submit the manuscript to THIS journal, e.g. the Journal of Ethnopharmacology ?
 - Do not summarize your manuscript, or repeat the abstract
- Mention special requirements, e.g. if you do not wish your manuscript to be reviewed by certain reviewers.

- **How to write a good manuscript**
 - Preparations before starting
 - Construction of an article
 - **Some technical details that need special attention**
 - Language

Technical details

- Length of the manuscript
- Supplementary Material
- Text layout
- Abbreviations

Suggest potential reviewers

- Usually **3-6** experts
- Authors in your subject area (see your references)
- International
- **NOT** collaborators or friends



Author names: common problems

What are the authors' (last) names?

- Järvinen = Jaervinen or Jarvinen ?
- Lueßen = Lueben or Luessen ?
- Borchard or Borchardt ?
- José Prieto Garcia = José Prieto-Garcia or José P. Garcia
- Ming Jan in one part of the MS, Jan Ming in another
- Dr. Jaap Van Harten = Dr. Van ???
 - ... and what happens if you marry ?

be consistent

- **How to write a good manuscript**
 - Preparations before starting
 - Construction of an article
 - Some technical details that needs special attention
 - **Language**

Language

1. Grammar

→ UK or US spelling? Be consistent!

2. Style

"Everything should be made as simple as possible, but not simpler" (Einstein)

→ Be clear

→ Be objective

→ Avoid imprecise language (nowadays - currently)

→ Be brief

To avoid early rejection, make the manuscript as good as possible.

- **No one gets it right at the first time!**
- Write, write, and re-write
- Be self-critical
- Discuss your MS with peers / the research team at all stages
- Ask other colleagues for feedback

- **Why do scientists publish?**
- **What is a good manuscript?**
- **How to write a good manuscript for international journals**
 - Preparations before starting
 - Construction of an article
 - Some technical details that needs special attention
 - Language
- **Revision and response to reviewers**
- **Ethical issues**
- **Conclusion: what leads to ACCEPTANCE**

First review through the Editor

Many journals including the Journal of Ethnopharmacology adopt the system of **initial editorial review**. Editors now often reject a manuscript without sending it for review.

Why?

- Peer-review system is **overloaded**

Why do scientists publish?

- Scientists publish to share with the science community something that **advances** (i.e not repeats) knowledge and understanding in a certain field.
- **Journal of Ethnopharmacology: “RULES OF FIVE” Rejection Criteria**
 - Out of Scope
 - The paper should report on traditional use or present results on pharmacological or toxicological studies (positive or negative) that are directly related to the traditional use. These data should eventually contribute to evidence-based traditional medicines.
 - Too preliminary
 - A paper must be based on a thorough and extensive study, using proper controls.
 - In-vitro antioxidant activity
 - Antioxidant activity is present in all plants. Screening with in-vitro assays thus has little meaning if no clear evidence is given for in-vivo activity.
 - Ethnopharmacological and ethnobotanical surveys without quantitative data
 - To be able to make choices for further studies is important, to have information how frequently plants are cited in surveys, and to have, if at all possible, cross checks for the information.
 - Lack of novelty
 - The study must represent a novel approach to the study of the activity, i.e. not more or less repeating what has already been published with similar results, but e.g. only using an other extract of the same plant, or, in case of antimicrobial activity, some other micro-organisms.

Revision after submission

Carefully study the comments and prepare a **detailed letter of response.**



Consider reviewing as a **discussion of your work.** Learn from the comments, and join the discussion.

Revision after submission

- Prepare a **detailed** letter of response
 - Copy-paste reviewer comments and address one by one
- State **specifically** what changes you have made to the manuscript.
 - Give page and line number.
- Provide a **scientific response** to the comment you accept; or a **convincing, solid and polite rebuttal** to the point you think the reviewer is wrong.
- Revise the **whole** manuscript
 - not just the parts the reviewers point out
- Minor revision **does NOT guarantee** acceptance after revision.
 - Do not count on acceptance, but address all comments carefully

... and if the paper has been rejected



- Don't be desperate – it happens to everybody
- Try to understand WHY, consider reviewers advice
- Be self-critical
- If you want to submit to another journal, begin as if you are going to write a **new** article.
 - Read the Guide for Authors of the new journal, again and again.

- **Why do scientists publish?**
- **What is a good manuscript?**
- **How to write a good manuscript**
 - Preparations before starting
 - Construction of an article
 - Some technical details that need special attention
 - Language
- **Revision and response to reviewers**
- **Ethical issues**
- **Conclusion: what leads to ACCEPTANCE**

Publish *AND* Perish! – if you break ethical rules

Ethical rules are **global**. They are the same

- in different countries
- among different publishers
- in all disciplines



To do and never to do: Ethics in Publishing

Always remember

Scientific ethics

- Be honest
- Be scientifically exact
- Be self-critical
- Respect the scientific community
- Be collegiate

Publication ethics

- Be careful when writing
- Be considerate of the needs of others (authors, editors, reviewers, publishers)

Therefore, follow the ethics of universal science

Never

Scientific misconduct

- Falsification of results

Publication misconduct

- Plagiarism
 - Different forms / severities
 - The paper must be original to the authors
- Duplicate submission
- Duplicate publication
- Lack of appropriate acknowledgement of prior research and researchers
- Lack of appropriate identification of all co-authors
- Lack of review and approval of your MS by ALL co-authors
- Conflict of interest and hiding it

doi:10.1016/j.sigpro.2005.07.019 Cite or Link Using DOI
 Copyright © 2005 Elsevier B.V. All rights reserved.

RETRACTED: Matching pursuit-based approach



Available online 24 August 2005.

This article has been retracted at the request of the Editor-in-Chief and Publisher. For more information, please visit <http://www.elsevier.com/locate/withdrawalpolicy>.

Reason: This article is virtually identical to the previously published article "A novel matching pursuit-based signal processing method for improving SNR in ultrasonic NDT of highly scattering materials, such as steel and composites. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated using both computer simulation and experimental results, when the input SNR (SNR_{in}) is lower than 0dB (the level of echoes scattered from microstructures is above the level of echoes)." *Independent Nondestructive Testing International*, volume 38 (2005) 453 – 458 authored by [redacted]

The article of which the authors committed plagiarism: it won't be removed from ScienceDirect. Everybody who downloads it will see the reason of retraction...

the echoes issuing from the flaws to be detected. Therefore, it cannot be cancelled by classical time averaging or matched band-pass filtering techniques.

Many signal processing techniques have been utilized for signal-to-noise ratio (SNR) improvement in ultrasonic NDT of highly scattering materials. The most popular one is the split spectrum processing (SSP) [1–3], because it makes possible real-time ultrasonic test for industrial applications, providing quite good results. Alternatively to SSP, wavelet transform (WT) based denoising/detection methods have been proposed during recent years [4–8], yielding usually to higher improvements of SNR at the expense of an increase in complexity. Adaptive time-frequency analysis by basis pursuit (BP) [9,10] is a recent technique for decomposing a signal into an optimal superposition of elements in an over-complete waveform dictionary. This technique and some other related techniques have been successfully applied to denoising ultrasonic signals contaminated with grain noise in highly scattering materials [11,12], as an alternative to the WT technique, the computational cost of the BP algorithm being the main drawback.

In this paper, we propose a novel matching pursuit-based signal processing method for improving SNR in ultrasonic NDT of highly scattering materials, such as steel and composites. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated using both computer simulation and experimental results, when the input SNR (SNR_{in}) is lower than 0dB (the level of echoes scattered from microstructures is above the level of echoes).

2. Matching pursuit

Matching pursuit was introduced by Mallat and Zhang [13]. Let us suppose an approximation of the ultrasonic backscattered signals $x[n]$ as a linear expansion in terms of functions $g_i[n]$ chosen from an over-complete dictionary. Let H be a Hilbert

space. We define the over-complete dictionary as a family $D = \{g_i; i=0, 1, \dots, L\}$ of vectors in H , such as $\|g_i\| = 1$.

The problem of choosing functions $g_i[n]$ that best approximate the analysed signal $x[n]$ is computationally very complex. Matching pursuit is an iterative algorithm that offers sub-optimal solutions for decomposing signals in terms of expansion functions chosen from a dictionary, where ℓ^1 norm is used as the approximation metric because of its mathematical convenience. When a well-designed dictionary is used in matching pursuit, the non-linear nature of the algorithm leads to compact adaptive signal models.

In each step of the iterative procedure, vector $g_i[n]$ which gives the largest inner product with the analysed signal is chosen. The contribution of this vector is then subtracted from the signal and the process is repeated on the residual. At the m th iteration the residue is

$$r^m[n] = \begin{cases} x[n] & m=0, \\ r^{m-1}[n] + a_{k(m)} g_{k(m)}[n], & m \neq 0, \end{cases} \quad (1)$$

where $a_{k(m)}$ is the weight associated to optimum atom $g_{k(m)}[n]$ at the m th iteration.

The weight a_i^m associated to each atom $g_i[n] \in D$ at the m th iteration is introduced to compute all the inner products with the residual $r^m[n]$:

$$a_i^m = \frac{\langle r^m[n], g_i[n] \rangle}{\langle g_i[n], g_i[n] \rangle} = \frac{\langle r^m[n], g_i[n] \rangle}{\|g_i[n]\|^2} = \langle r^m[n], g_i[n] \rangle. \quad (2)$$

The optimum atom $g_{k(m)}[n]$ (and its weight $a_{k(m)}$) at the m th iteration are obtained as follows:

$$g_{k(m)}[n] = \underset{g \in D}{\operatorname{argmin}} \|\langle r^{m-1}[n] \rangle\|^2 = \underset{g \in D}{\operatorname{argmax}} |\langle r^{m-1}[n] \rangle|^2 = \underset{g \in D}{\operatorname{argmax}} |a_i^m|. \quad (3)$$

The computation of correlations $\langle r^m[n], g_i[n] \rangle$ for all vectors $g_i[n]$ at each iteration implies a high computational effort, which can be substantially reduced using an updating procedure derived from Eq. (1). The correlation updating procedure [13] is performed as follows:

$$\langle r^{m+1}[n], g_i[n] \rangle = \langle r^m[n], g_i[n] \rangle - a_{k(m)} \langle g_{k(m)}[n], g_i[n] \rangle. \quad (4)$$

Misconduct has consequences

Science 6 March 2009:
Vol. 323, no. 5919, pp. 1280 - 1281
DOI: 10.1126/science.323.5919.1280

[< Prev](#) | [Table of Contents](#) | [Next >](#)

NEWS OF THE WEEK

SCIENTIFIC MISCONDUCT:

Retractions Put Spotlight on China's Part-Time Professor System

Hao Xin

In the latest scandal to grip Chinese academia, Zhejiang University last November fired an associate professor after finding him guilty of scientific misconduct. Since then, more allegedly plagiarized papers have come to light.

 [Read the Full Text](#)

NEWS

 [Send to a friend](#)  [Print](#)  [Comment](#)  [Share](#)

China issues another crackdown on scientific misconduct

Gina Lin

30 March 2009 | EN | 

[BEIJING] China's Ministry of Education has stipulated seven acts of academic misconduct and how they will be punished in an attempt to combat scientific misconduct in the country.



Punishment for anyone in breach of the new rules could involve warnings, dismissal or legal charges. Their research programmes could also be suspended or terminated, they could lose their funding, or have awards and honours revoked.

Shame of fake TCM research

(China Daily)

Updated: 2009-02-04 14:16

 [Comments\(3\)](#)  [Print](#)  [Mail](#)

Four papers on traditional Chinese medicine (TCM) were retracted by international journals last year because of "plagiarism and fake research", it was reported Tuesday.

Each paper had the same lead author,  associate professor with Zhejiang University, while co-authors included  a TCM expert and a member of the Chinese Academy of Engineering, said the Guangzhou-based 21st Century Business Herald.

In a written statement from Zhejiang University to China Daily Tuesday, they said He had published eight articles since arriving at the university in 2006.

He copied statistics in two articles from his PhD tutor  while statistics in two other articles were partially compiled by himself and copied from others. He also sent one article to two journals for publication. In the other two articles, he did the research himself but his findings included a lot of mistakes.

The university added that  had been sacked.

- **Why do scientists publish?**
- **What is a good manuscript?**
- **How to write a good manuscript**
 - Preparations before starting
 - Construction of an article
 - Some technical details that need special attention
 - Language
- **Revision and response to reviewers**
- **Ethical issues**
- **Conclusion: what leads to ACCEPTANCE**

What leads to acceptance ?

- Attention to details
- Check and double check your work
- Consider the reviewers' comments
- English must be as good as possible
- Presentation is important
- Take your time with revision
- Acknowledge those who have helped you
- New, original and previously unpublished
- Critically evaluate your own manuscript
- Ethical rules must be obeyed



– Nigel John Cook
Editor-in-Chief, *Ore Geology Reviews*

Thank you



**Questions
Comments**