How to Write a World Class Paper From title to references From submission to publication

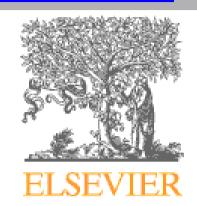
Presented by: De-An Guo and Michael Heinrich (Shanghai and London)

Guangzhou (10.11.09)



Acknowledgements and 'Disclaimer'

 The backbone of this presentation has kindly been provided by Irene Kanter-Schlifke, Elsevier, The Netherlands.

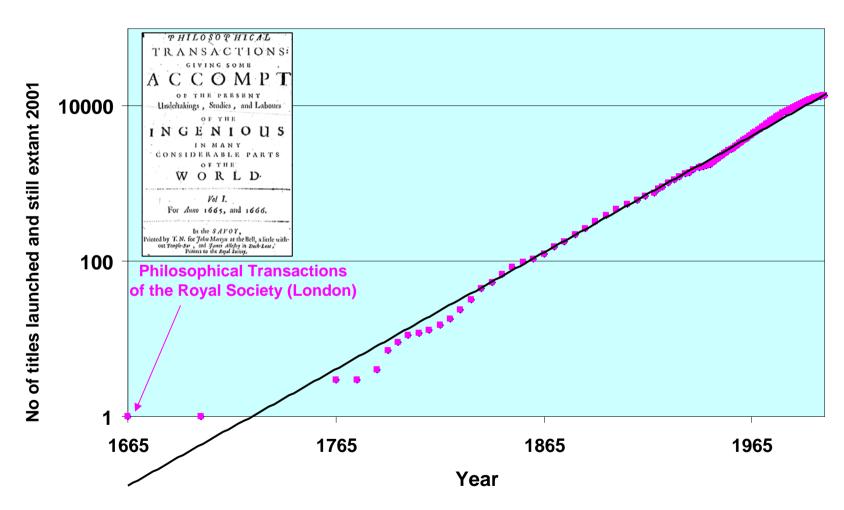


 The views in this presentation are, however, a synthesis and may not represent the publisher's view.

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

Archive and promote use

Publish and disseminate

FISEVIER

• 40 – 90% of articles rejected

Edit and prepare

Manage

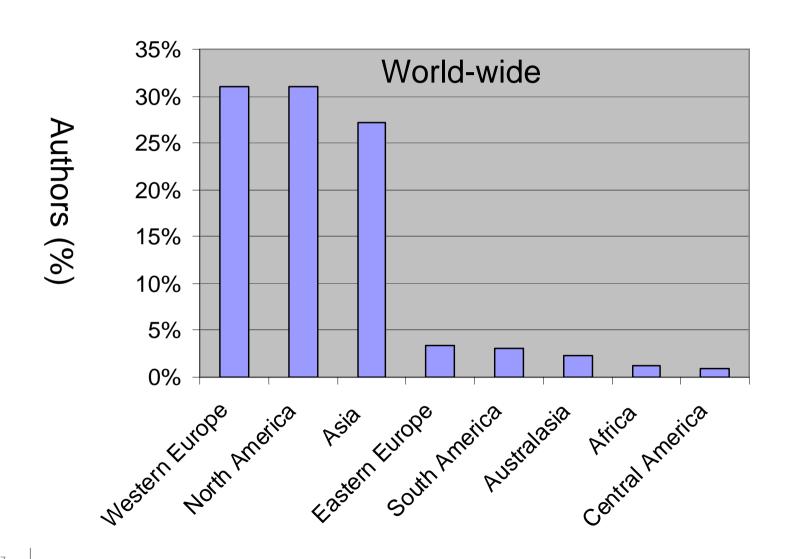
peer review

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

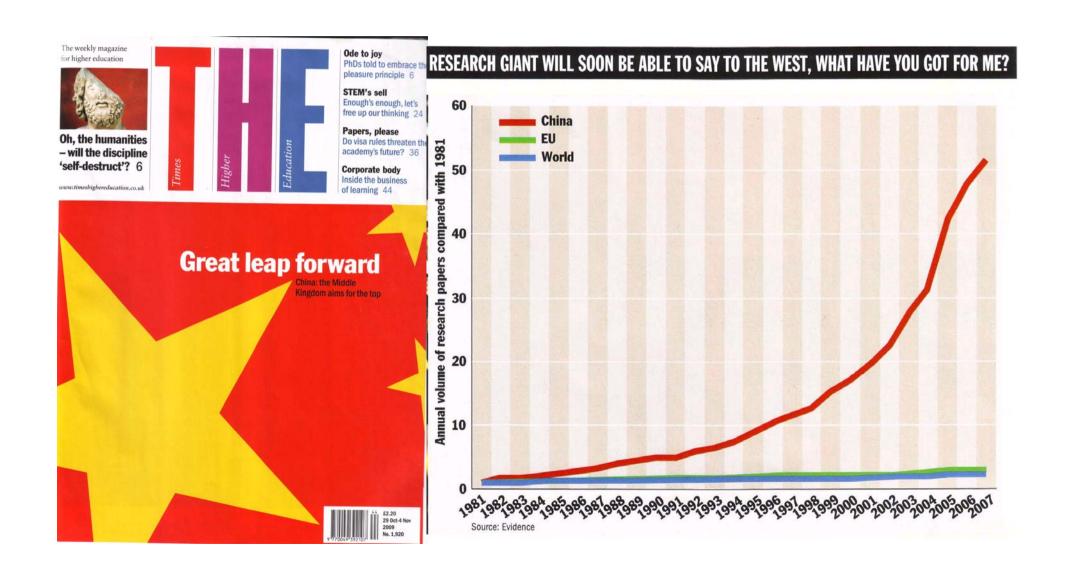
- **Production**
- 450,000 new articles produced each year
- 185 years of back issues scanned, processed and data-tagged

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

Geographical Breakdown of Pharma Authors



Chinese Science, a view from the Times Higher Education (29.10. 2009)



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
 - E.g. "author pays" models, "delayed open access", etc.

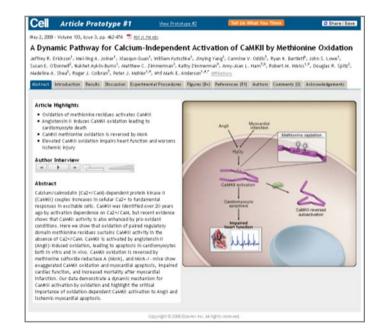
Trends in Publishing: The Article of the Future

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

Key Features:

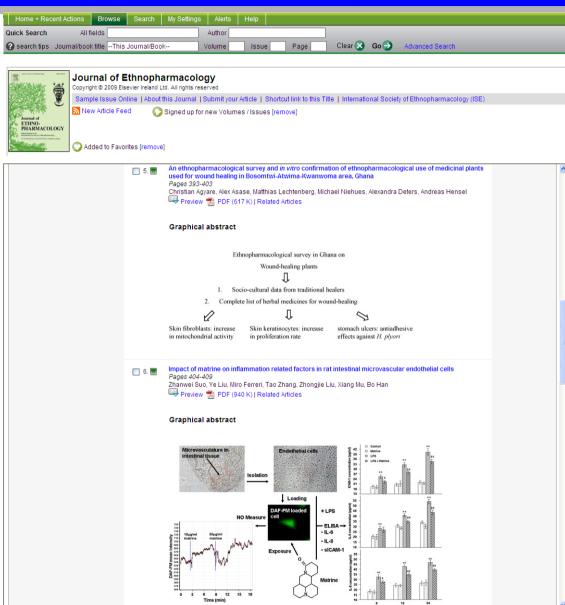
- Take full advantage of online capabilities
- Allowing readers individualized entry points and routes
- Using the latest advances in visualization techniques

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



Already now available: Graphical Abstracts





Outline: How to prepare a publication

- Introduction
- Why do scientists publish?
- What is a good manuscript?
- How to write a good manuscript
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 - Language
- Revision and response to reviewers
- Ethical Issues
- Conclusion: what leads to ACCEPTANCE

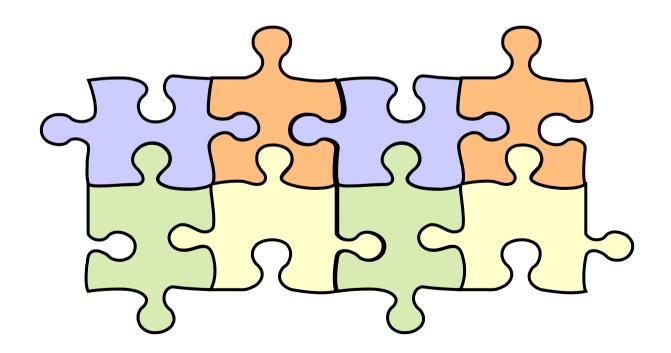
What is your personal reason for publishing?



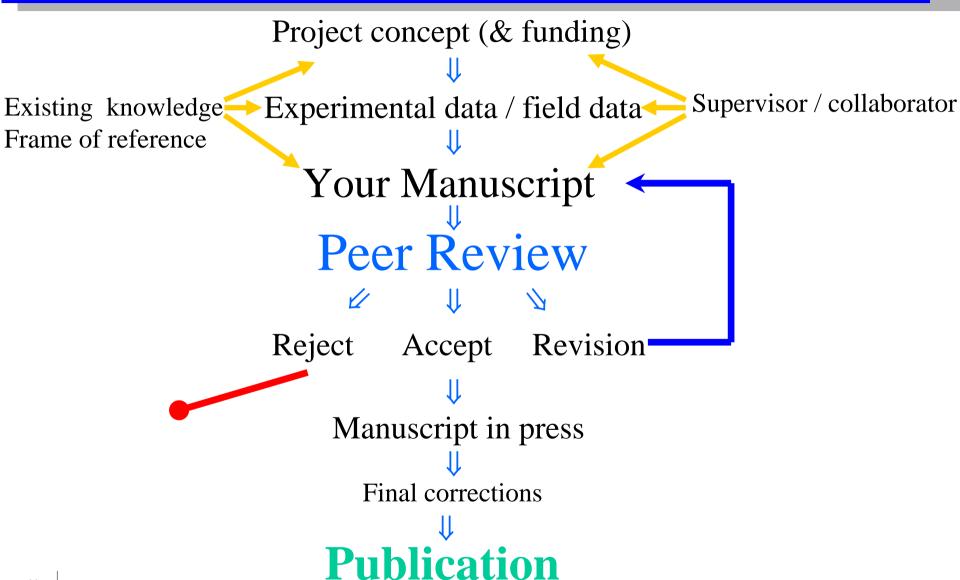
However, editors, reviewers, and the research community DO NOT care about these reasons.

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?
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Journal of Ethnopharmacology

Manuscript inflow: ca. 2.500 per year

Acceptance rate: 20%

Published articles: ca. 400 – 450 per year

Number of issues: 18

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)



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



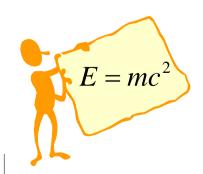
A good manuscript...

makes readers grasp the scientific significance EASILY

Important are **both**

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

...and the PRESENTATION – clear, logical



How to write a good manuscript

- Preparations before starting
- Construction of an article
- Some technical details that need special attention
- Language

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



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?
- Is your paper of local or international interest?
 - "A bioequivalence study of ibuprofen tablets marketed in Southern Kosovo" in the International Journal of Pharmaceutics

Choose the right journal

- Investigate all candidate journals to find out
 - Aims and scope
 - Accepted types of articles
 - Readership

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

Parkinson's disease model mouse

Preview 📆 PDF (500 K) | Related Articles

Graphical abstract

Pages 369-373

Current hot topics

€ Email Articles (Export Citations 🏂 Download PDFs 🔲 Open All Previews

Rathinasamy Muthusamy, Arumugam Krishnamurti, Sankar Surendran

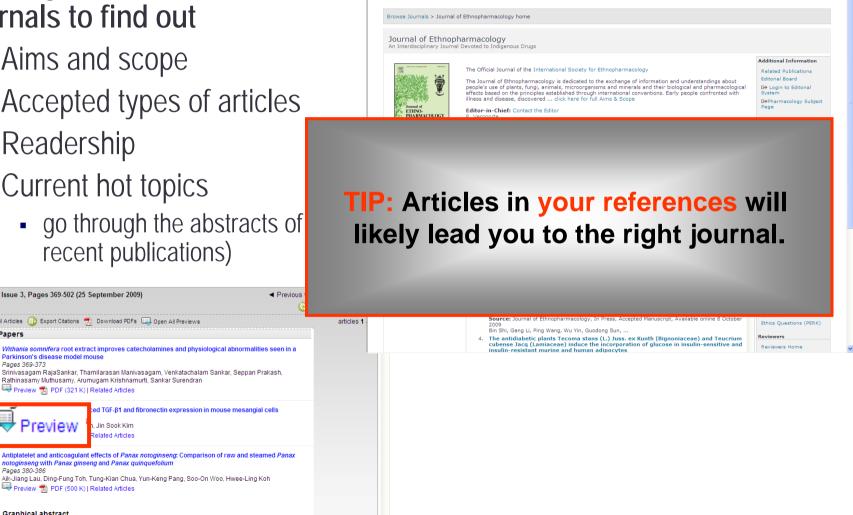
Jin Sook Kim

go through the abstracts of recent publications)

Sriniyasagam RajaSankar Thamilarasan Maniyasagam, Venkatachalam Sankar, Seppan Prakash

Aik-Jiang Lau, Ding-Fung Toh, Tung-Kian Chua, Yun-Keng Pang, Soo-On Woo, Hwee-Ling Koh

ed TGF-β1 and fibronectin expression in mouse mesangial cells



Products Alerts User Resources About Us Support & Contact Elsevier Websites

ATTENTION!

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

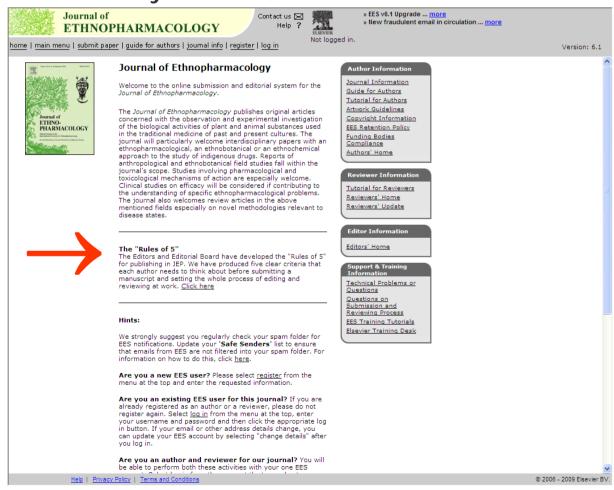
International ethics standards prohibit multiple/simultaneous submissions, and Editors DO find out!

How to write a good manuscript

- Preparations before starting
- Construction of an article
- Some technical details that need special attention
- Language

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 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
 - <u>D</u>iscussion (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

How to write a good manuscript

- Preparations before starting
- Construction of an article
- Some technical details that need special attention
- Language

Work in progress vs. final masterpiece

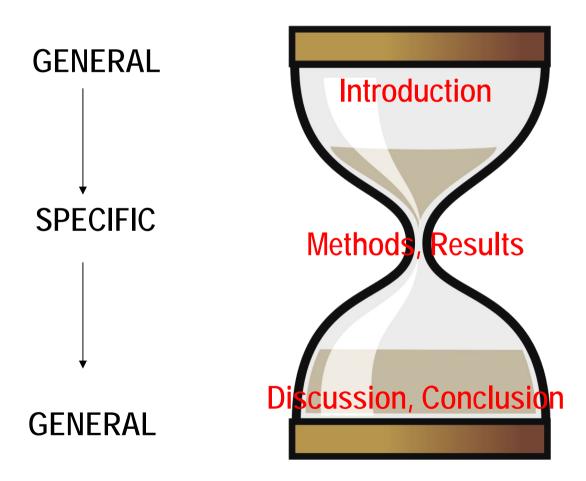
The process of writing

- building the article



Work in progress vs. final masterpiece

The final article



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 mice"

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"

"Contributions to the effects of coniine in mice"

Contributions to the effects of confine in mice?

or ?

"Evaluation of the effects of coniine in mice"

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

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

- ² 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
- 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!!!

Keywords – mainly used for indexing and searching

Don't be too narrow, and neither too broad

Avoid abbreviations

Check the Guide fo

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

Do not mix introduction with results, discussion, and conclusion

s of a com-

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

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

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 µmol/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

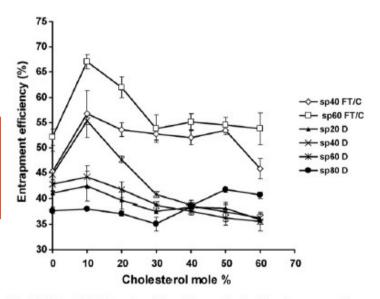


Fig. 1. Effect of cholesterol mol% and the method of free drug separation on the entrapment efficiency of flurbiprofen into niosomes. FT/C: freeze thawing/centrifugation. D: dialysis.

Table 4
Effect of flurbiprofen concentration on niosomal encapsulation efficiency

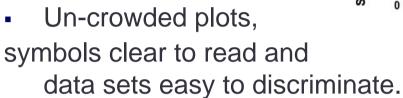
Flurbiprofen concentration mg/mmol lipids	EE%	% (mg drug/µmol of total lipids)
25	55.99 ± 2.28	1.40 ± 0.06
50	67.04 ± 1.41	3.35 ± 0.14
75	72.25 ± 2.3	5.41 ± 0.17

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

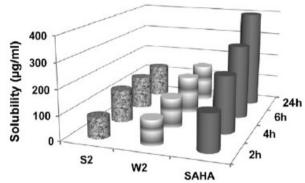
Results – What have you found?

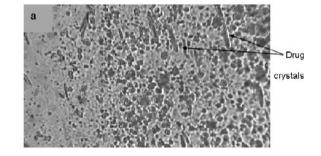
- > Tell a clear and easy-to-understand story.
- → RED THREAD
- Only representative results but do not hide results!
 - > Add <u>Supplementary Materials</u> for data of secondary importance.
- Be structured (sub-headings)
- Do not provide long lists of data which are not explained and discussed in the text, but nor can you repeat data given in a table of figures in the text
- Figures and tables need to have clear and selfexplanatory headings
- Include controls (positive and negative)

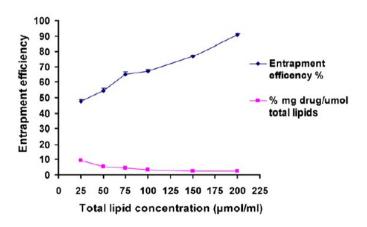
Appearance counts!



- 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

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
- 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!

What have you shown?

ATTENTION: DON'T repeat the abstract

What does it mean for the field?

In summary, we have demonstrated that the mercaptoacetamide-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 Perez Garcia = José Perez-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
- Ask 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





- 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?
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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

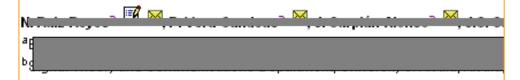
Publication misconduct

- 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 ② 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 P http://www.elsevier.com/locate/withdrawalpolicy.

Reason: This article is virtually identical to the previously published article algorithm for SNR improvement in ultrasonic NDT", *Independent Nonde International*, volume 38 (2005) 453 – 458 authored by N. Reiz Rejection.

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 sigmal-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 overcomplete waveform dictionary. This technique and some other related techniques have been successfully applied to denoising utrasonic signals on taminated with grain noise in highly scatteri materials [11,12], as an alternative to the W technique, the computational cost of algorithm being the main drawback,

In this paper, we propose a cold morning pursuit-based signal processin time cold or improving SNR in ultrasor NDT to highly scattering materials, such a self and composites. Matching pusuit is used instead of BP to reduce the complexity. Desire its iterate a nature, the method is fast earligh to be real-time implemented. The performance of the proposed method has been evaluated user south computer simulation and exponential rolls, i.e. when the input SNR of NR in its lower, can 0dB (the level of echoelic attention increastructures is above the level of an 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 $D = \{g_i; i = 0, 1, ..., L\}$ 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 persuit is an iterative algorithm that offers sub-optimal solutions for decomposing signs a neterms of expansion functions chosen from a deconary, where \hat{I}^i norm is used as the approximation metric because of its mathematical confusioner. When a well-designed diction by is used in the sing pursuit, the non-linear nature of the algorithm leads to compact algorithm and model.

In each or of the integrative procedure, vector $g_i[n]$ which give the largest oner product with the analysed signal is become. The contribution of this vector, then subtracted from the signal and the process is repeated on the residual. At the with large on the lasting is

$$r^{\mu}[n] = \begin{bmatrix} x[\sigma] & m = 0, \\ +1[n] + \alpha_{dmi}g_{ijkl}[n], & m \neq 0, \end{bmatrix}$$
 (1)

where $\alpha_{(m)}$ is the weight associated to optimum atom $q_{(m)}[n]$ at the with iteration.

The weight q^{μ} associated to each atom $g_{\nu}[n] \in D$ at the with iteration is introduced to compute all the inner products with the residual $r^{\mu}[n]$:

$$\alpha_i^m = \frac{\langle P^n[a], g_i[a] \rangle}{\langle g_i[a], g_i[a] \rangle} = \frac{\langle P^n[a], g_i[a] \rangle}{\|g_i[a]\|^2}$$

 $= \langle P^n[a], g_i[a] \rangle.$ (2)

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

$$g_{d,m}[n] = \arg\min_{\vec{q} \in D} ||\mathbf{r}^{m+1}[n]||^2$$

 $= \arg\max_{\vec{q} \in D} ||\mathbf{r}^m_i||^2 = \arg\max_{\vec{q} \in D} ||\mathbf{r}^m_i||.$ (3)

The computation of correlations $(r^{\mu}[n], g_{\mu}[n])$ for all vectors g[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:

$$(r^{m+1}[n], g_i[n]) = (r^m[n], g_i[n]) - \alpha_{i+1}(g_{i+1}[n], g_i[n]).$$
 (4)

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...

Signal Processing

Volume 86, Issue 5, May 2006, Pages 962-970

Misconduct has consequences

Science 6 March 2009: < Prev | Table of Contents | Next > Vol. 323. no. 5919, pp. 1280 - 1281 DOI: 10.1126/science.323.5919.1280 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









China issues another crackdown on scientific misconduct

Gina Lin

30 March 2009 | EN | 00

[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

Updated: 2009-02-04 14:16

Comments(3) A 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, Fernand, associate professor with Zhejiang University, while co-authors included in 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 Paid and, 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 Hadded 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
- <u>C</u>ritically evaluate your own manuscript
- <u>E</u>thical rules must be obeyed



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

The Journal of Ethnopharmacology is the official journal of the International Society for ethnopharmacology

www.ethnopharmacology.org

Invited plenary speakers include Prof. R. Bauer (Graz), Prof. Z. Z. Zhao (HK), Vernon Heywood (Reading) and others

Thanks!

Questions?



XIth Congress of the International Society of Ethnopharmacology (ISE 2010)

1er Encuentro Hispano Portugués de Etnobiología (EHPE 2010)

I Encontro Hispano – Português de Etnobiologia (EHPE 2010)

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