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Editorial

How to write an article: Preparing a publishable manuscript!

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Abstract

Most of the scientific work presented as abstracts (platforms and posters) at various conferences have the potential to be published as articles in peer-reviewed journals. This DIY (Do It Yourself) article on how to achieve that goal is an extension of the symposium presented at the 36th European Congress of Cytology, Istanbul, Turkey (presentation available on net at http://alturl.com/q6bfp). The criteria for manuscript authorship should be based on the ICMJE (*International Committee of Medical Journal Editors*) Uniform Requirements for Manuscripts. The next step is to choose the appropriate journal to submit the manuscript and review the 'Instructions to the authors' for that journal. Although initially it may appear to be an insurmountable task, diligent organizational discipline with a little patience and perseverance with input from mentors should lead to the preparation of a nearly perfect publishable manuscript even by a novice. Ultimately, the published article is an excellent track record of academic productivity with contribution to the general public good by encouraging the exchange of experience and innovation. It is a highly rewarding conduit to the personal success and growth leading to the collective achievement of continued scientific progress. Recent emergences of journals and publishers offering the platform and opportunity to publish under an *open access charter* provides the opportunity for authors to protect their *copyright* from being lost to conventional publishers. Publishing your work on this open platform is the most rewarding mission and is the recommended option in the current modern era.

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INTRODUCTION

This article is an extension of the symposium presented at the 36th *European Congress of Cytology* (ECC), Istanbul, Turkey: *How to write article? CytoJournal perspective*! (Symposium# 9).[1] This four-part symposium was presented by the editors-in-chief/representative of four of five international, peer-reviewed, premier cytopathology

journals. The message by each of the four presenters had an anticipated overlap. This article is a modification and expansion of the CytoJournal point of view. It is published for CytoJournal readership as an exercise in open access charter as requested by some attendees and CytoJournal readers. The CytoJournal portion of the presentation at ECC is also available on web at http://alturl.com/q6bfp.

Writing an article can be a reality with appropriate efforts and approach. Once we decide to write on the topic of our research, the most important factor is to just begin the process! However, what follows may not seem as simple. As aptly stated by Gene Fowler, "*Writing is easy: All you do is sit staring at a blank sheet of paper until drops of blood form on your forehead*".[2]

Scientific literature is based on the analysis and discussions about experiments, observations, and experiences with serious and intellectual exchange of information accomplished through a variety of platforms. In addition to the books, e-books, lectures, and direct conversations among scientists, publishing the research in peer-reviewed journals is an important exercise for academic growth at the individual level and advancement of science at the global level.

Even though performing a study and recording the details of the observations are important components of an academic career, abandoning the process at this stage will not add significantly to individual academic advancement [Table 1].[3] Converting these initial scholarly efforts into the abstract is a nimble start. However, writing an abstract is just not enough. For appropriate academic credit, one must proceed to the next step of preparing a publishable manuscript. Unfortunately, fewer than half of all abstracts at the conference went on to become completed manuscripts.[4] Non-publication of a deserving work is a tremendous personal and public loss [Table 1]. The fact is that only published articles are considered the true gauge of academic achievement in the scholarly world as judged by funding entities, department chairs, colleagues, and peers.

Table 1: Hypothetical scale comparing the efforts put and proportion of scholarly credits perceived

Effort	Perform research project	Present abstract as		Publish article in peer-reviewed journal
		Poster	Platform	
Actual efforts	90%	Add 5% (95%)	Add 4% (94%)	Add 5 to 6% (100%)
Perceived scholarly credit	1%	5%	10%	100%

This article is primarily directed towards junior scholars seeking some general guidance in writing a publishable cytopathology manuscript. Although this article mainly concerns research papers, the broad principles are applicable to other areas of pathology and science in general. These principles are also applicable to other categories of publications including case reports and review articles, as well as brief reports and editorials.[5]

Writing a research manuscript and shaping it into a published article (paper) is a structured process with ample potential for frustration unless honed by the wisdom of appropriate mentorship. Most of the resources are available freely on the web, but this article consolidates these resources in one place with prime emphasis on cytopathology manuscripts. Beginners are especially recommended and encouraged to study these resources.[6-12]

There are many steps in writing a publishable manuscript, beginning with the decision to perform a study and culminating in its publication in a peer-reviewed scientific journal, preferably the one with ability to generate high impact of your work in the scientific arena. The impact factor of any journal measures the number of citations to its articles published in other scientific journals. It is a proxy for the relative importance of a journal within its field. The magnitude to which an individual article has been cited by other authors is thus the important factor conventionally used for measuring the scientific achievements.[13] Indirectly, any journal achieving widest, barrier-free broadcasting of your article would increase its visibility with enhanced opportunities to attract a higher number of citations.[14]

Research and publication process may be broadly divided in to three main steps:

I. Performing the research
II. Analyzing the data (results)
III. Preparing the manuscript

The first two steps are not the main topic of this article, and so these will be addressed only briefly with the following lists of important points to be considered for achieving the goal of publishing an article in a scientific peer-reviewed journal.

I. Performing a study (research)

What shall I research?

For important discoveries-problem studied should usually be important.

Dull and banal problems yield dull or insignificant results.

The problem should be such that it matters what the answer is!

The issue should be studied in sufficient depth.

Any perceived challenge is a potential opportunity for research with an attempt to resolve it successfully.

In reality, research is the art of finding a simple solution to a perplexing problem. Once a topic has been preliminarily chosen, then the pertinent literature is searched to determine the potential of a publishable research before making a final decision to proceed with the project.

How shall I commence the research?

Have a clear plan for data collection.

A senior mentor could be a good resource to help guide the research project.

For human research, the project must first be approved by *the Institutional Review Board (IRB) or a comparable entity*.

Before starting the study you may have to explore resources and expertise in a variety of technical and academic areas. Communicating and networking with colleagues already doing research in a particular area is recommended. Collaboration and collegiality are critical for academic success. Design the study with application of statistical tools as needed for appropriate collection of data. If necessary, consult a statistician.[15-17]

II. Analysis of data (results)

Statistical analysis of data is often required for scientific studies.

Science involves formulating and testing hypotheses which are capable of being proven false by observed data. The *null hypothesis* is the statement being tested, typically that there is no statistical difference in observed events. It is usually paired with an alternative hypothesis and the researcher tries to disprove the *null hypothesis*. The results then may be:

EITHER

- Cannot support a hypothesis (statistically significant difference).

OR

- Can support the null hypothesis (lack of a statistically significant difference).

Simple statistical tools, including tutorials[18] and calculators[19] for statistical analysis required for most of the clinical-translational research are available on the web.

III. Prepare publishable manuscript

Manuscript preparation is the main focus of this article. The goal of this step is to share research results with scientific peers and ultimately, the general public. However, even before embarking upon this crucial step, it is important to consider and evaluate the following seemingly innocuous but critical and pertinent issues, which may otherwise be neglected with unintended long term consequences.[1]

Authorship

Authorship acknowledges the scholars for their work. With authorship comes the burden of responsibility. The authors are responsible for the integrity of their published data including its analysis and interpretation.[20] It is prudent to discuss authorship in advance with all involved participants with perceived stake in the publication process of the manuscript under preparation. The scholar writing and performing the study should be the first author and the mentor could be the senior or last author. All authors should fulfill the criteria described by ICMJE.[21] Anyone who claims authorship should have made a significant contribution to the study.

Some of these ethical standards may be open to interpretation, which may result in disagreements and even occasional scandals.[22-26] WAME (World Association of Medical Editors) may help address disagreements.[27] Unearned authorship, not fulfilling the ICJME criteria, is unacceptable to the academic community. Unacceptable justifications for authorship include: "I was around at the time of the study," "It is my topic," "I suggested the study," "The paper will not be published without my name on the author list," and "I need authorship for my promotion." One of the most egregiously abusive practices is the department chair who demands authorship because "I am the one who made it possible for you to do this study."[28] Additional inadequate justifications for authorship include: "I signed out this case or these cases," "I did all the technical work such as staining or immunostaining," "I pulled out all the cases," and so on. Many of these deserve credit, but may not fulfill criteria to be listed as an author. However, these contributions may be recognized under acknowledgements.

Ongoing efforts to avoid unethical authorship claims are encouraging advances in authorship standards. Due to the complexity of authorship disputes, senior scholars and mentors should help junior colleagues to avoid egregious authorship violations. General guidelines are available at ICMJE.[21]

Authorship should be appropriately addressed both for the abstract and the final paper. A brief initial communication as *abstract* of Platform or Poster presentation to the

appropriate audience at various meetings is encouraged to elicit feedback from peers to improve the final manuscript. The final phase is preparation of manuscript to be published as a peer-reviewed *scientific journal article* (paper).

Journal selection

The focus at this stage is to consider what is the most appropriate journal in which to publish the manuscript? The issues to be considered include personal goals as well as the contribution to the public domain. A lack of serious thought to this issue may have seriously negative consequences. Faster, wider, and perennial dissemination of the publication should be the most important consideration.

Whichever journal is chosen, a poorly prepared manuscript will likely be rejected. Believing that inclusion of a prominent co-author will ensure acceptance of a poor quality manuscript is a common misconception and should be strongly discouraged.

Many journals allow recommending the most suitable reviewers for your work or who should be excluded because of conflict of interest, academic competition, or potential of bias. Journals may consider these recommendations to improve the review process.[29] However, these recommendations are only suggestions and the final selection of reviewers is at the discretion of the journal's editorial team.

Additional issues to consider in selecting an appropriate journal include:

The audience

Select the meeting (for publication of abstract) followed by finalization of the journal (for publication of the manuscript) most suitable for communicating your research to your potential audience. Although many authors aspire to publish in prestigious journals such as the *New England Journal of Medicine*, it may be more rewarding to publish in a journal dedicated to your specialty. For cytopathology, it is appropriate to select a cytopathology journal.

Open access charter

The rewards to the authors also include the intellectual property rights as *copyright* for the article. Although traditionally the copyright has been transferred to other interests, many consider this to be a flawed practice. Today, the option of *open access charter* prevents this loss of copyright without compromising the publication. Additional benefits include more rapid and wider dissemination of the work in a free environment. *Open access* journals such as CytoJournal extend this alternative platform and resources to maintain the author's copyright in the public domain.

The entire enterprise, from performance of the research to publication of the article, is directly based on your intellectual efforts. Protecting your intellectual property by retaining your *copyright* is not only to your benefit, but is also your responsibility. *Open access charter* allows the retention of *copyright* by the authors to be shared in a public domain.[13] The list of *Open Access journals* is available at *The Directory of Open Access Journals* (DOAJ).[30]

Circulation potential for widest dissemination

Journals offering rapid, real time, ubiquitous, barrier-free perennial access to the article would be an excellent choice for publishing your article. Journals, such as CytoJournal, which emphasize modern, online dissemination allow many other benefits including instant translation into many languages to reach a world wide audience.

Potential for high impact (short and long term) with real time tracking

In addition to the many benefits mentioned above, internet-based journals allow verification of multiple quality indices related to the individual articles and the journal with easily available free tools on web in real time instead of static data.[1] Some of these tools are listed below:

- ''Google Scholar'' (http://scholar.google.com/) and
- ''Google analytics'' (http://www.google.com/analytics/).
- Other Google scholar based sites for more matrices- E.g. ''Publish or Perish'' from Harzing.com
- SJR (SCImago Journal Rank Indicator) http://www.scimagojr.com/aboutus.php

Online articles in CytoJournal can provide *additional matrices* (such as number of views, downloads, prints, and citations by other articles) directly related to a particular article in its HTML version. This data can be accessed and verified by anybody at any time in real time on web.

Review the instructions to authors

Once the appropriate journal is chosen, *review the instructions to the authors of the selected journal*. The instructions should be followed meticulously. These instructions are published in the journal and are also usually available on the journal's homepage (which could be found through commonly used search engines, such as Google). For instance, CytoJournal author instructions can be downloaded from 'Author corner' at http://www.cytojournal.com/contributors.asp.[31]

Visiting journal web sites will also give additional information such as the scope of the journal and details on the peer-review process. Peer-review is an important component of the publication process, but varies by journal. CytoJournal's peer-review process is double-blind, in which the author identity is kept unknown to the reviewers and *vice versa*.[32] The journal's website is also a valuable resource for samples of the journal's style. Failure to comply the journal's instructions could result in rejection of the manuscript.

Additional help may be obtained from books on the topic,[9-12,33] various resources on the web,[6-8,34] and most importantly your mentors and senior colleagues.

Keep abbreviations to a minimum and avoid non-standard, difficult-to-comprehend mnemonics. An alphabetized list of abbreviations is recommended. It is appropriate to engage the reader by balancing the scientific narration with a human touch, such as first-person narration.

Remainder of the article will now cover step by step hints for *writing a publishable cytopathology manuscript*. In general, it is similar to writing any other scientific manuscript with various stages such as brainstorming, prewriting, drafting, revising, and editing ultimately leading to a publishable manuscript.[27,35-37]

Step 1: Write materials and methods

The *Materials and Methods* section is one of the most important of any scientific manuscript. The description should communicate to the reader all critical details. For example, manuscripts with immunological and molecular methodologies should provide explicit details on temperatures, clones of antibodies, titers, diluents, pH, molarity, buffers, primer sequences, incubation temperature, duration, etc. (preferably as a table) so that the results could be reproduced by others. In addition, how to read the results including actual criteria with appropriate images and sketches should be mentioned in a very easy to understand fashion. Already published areas may be mentioned in brief with appropriate citation.

Studies involving human subjects must first be approved by the Institutional Review Board. Such approval (as well as informed consent, if appropriate) must be included in the manuscript. Similarly, if the study involved animals, approval from the appropriate review board is also required with appropriate statement in the manuscript.

Most of the details required under *Materials and Methods* should be in your "study protocol" and may be copy-pasted from there. Include details on the population such as age, sex, race, etc., relevant to the study. If you must use abbreviations, Materials and Methods is a good place to introduce them.

Methods of maintaining patient safety and confidentiality may be included if relevant. Many studies involve comparison and so randomization process and statistical methods should be explained. As previously mentioned, it may be prudent to *involve a statistician from the beginning to help devise the study and report the findings.*

Step 2: Organize your results

The results are the soul of your study and a critical part of the manuscript. The scientific peers, in addition to scrutinizing how you conducted the study, will want to know what your findings were! The *Results* section is for communicating these findings in an easily understood manner.

The arrangement of data should match the methodology and should communicate as much information as relevant. At this stage, avoid interpreting the result which should be left to the *Discussion* section. To help organize presentation of data, first prepare tables, graphs, sketches, and photographs, and then describe them in the text. Visual representation of your data makes it easier for the reader to understand.

With current software programs, many different options are available for organizing data. Select graphs and tables appropriate to best communicate your data. Readers often miss trends of data in tables; therefore, use graphs to highlight trends. One should strike a balance between too few and too many visual aids. Include brief titles and legends for each visual representation. Avoid abbreviations if possible, but define them if used.

Describe the important details of the visual representations in the *Results* section and cite all the representations in the text. It is not necessary to describe every data point in this section. However, the text should guide the reader in interpretation of the visual representations and facilitate understanding of the discussion.

Step 3: Discussion

The discussion is where the authors analyze their findings and put them into a broader scientific context. The length of the discussion depends on the type of study and generally should focus on the points related to the results observed in the study.[38]

Determine which results are most important. Devote about three sentences to these main findings in the first paragraph.

In the next paragraph, explain the methodology. This is the place to justify your choice of techniques, protocols, selection criteria, methods of data analysis, etc.

Next, show how your study compares with other scientific studies, including citations to appropriate key references. You should indicate *how your findings confirm* or *deny already published data*. The length of this portion may run into a several paragraphs, with the goal of covering the important points. It is also imperative to convey statistical *versus* clinical significance and how it might impact clinical practice and patient care.[39]

Most studies have some limitations, and so it is appropriate to acknowledge the limitations of your study, if you know of any. If appropriate, you could include concerns with methods, sample population, study power, sampling issue, uncontrollable variables, etc.

At this stage, you should complete the discussion with a *summary* of the findings or realistic *conclusions* based only on your results. This last paragraph should be, preferably, short with no more than a few sentences. Avoid exaggerating or understating your claims. Finish with suggestions for future investigation in the area of your study.

Important pitfalls to be avoided in the discussion
Avoid a claim to be first unless it is well-documented. Priority claims are invitations to be proven wrong. Avoid rambling discussions. Do not fail to cite key references for your study, and avoid unrelated literature.

Step 4: The introduction
After writing most of your manuscript, then draft an introduction. The introduction is critical in attracting the reader's attention. Use brief sentences.[40]

Use the introduction to state why your study is necessary. A brief review of literature can be cited in support. This section generally should not be more than one double spaced typed page.

Cover the following points in your introduction
a. Identify the clinical or scientific problem.
b. Explain the unknown issues related to the problem.
c. Address any identifiable challenges in study design.
d. End with an unambiguous statement about the *hypothesis* of the study.

The primary hypothesis is one of the most critical components of any manuscript. It should be spelled out very early in the planning stages of any study.

Step 5: References
References should be carefully documented so that other investigators can consult them. The authors should follow the citation guidelines used by the individual journal.[31,41]

Software programs such as Endnote® (Thomson Reuters, http://www.endnote.com/) and WinWord® can help manage the references and simplify their citation in the manuscript. Both reviewers and readers will be frustrated by inaccurate citations. Failure to cite references accurately can result in manuscript rejection, and if published, errors may compromise the researcher's credibility.

Step 6: The abstract
Although the abstract appears first in the article, it is better to write it last, after all the details are well worked out. Each journal has specific guidelines for writing an abstract. The CytoJournal abstracts are structured under four different areas: Background, Material and Methods, Results, and Conclusions as explained in the "Instructions for CytoJournal authors."[31]

Stay within the word limit, but provide all critical key information, especially the results and conclusion or summary. The abstract summarizes the article. Many readers will only review the abstracts, at least initially, so it is vitally important.

Step 7: Create the title page
The ideal title should be brief, catchy, and self-explanatory. In addition to the title, the title page should provide the author information required for publication.

Depending on the particular journal, the title page may be submitted as part of the manuscript or as a separate file. CytoJournal, for example, requests a separate "title page" to facilitate double blind peer-review [Table 2].[31]

Authors for CytoJournal should provide all of the following in the title page file: names of all authors, their degrees, affiliations and institutions, e-mail addresses, and contact details including phone number and fax number. Depending on the type of the article (research *versus* case report *versus* review *versus* others), the additional details required for CytoJournal include- Acknowledgement, Competing Interest Statement by all Authors, Authorship Statement by all Authors, Ethics Statement by all Authors, and any other related information.[31]

Step 8: Rewrite-rewrite-rewrite
Review your manuscript with your own brutally honest criticism. Revise until you are satisfied and the manuscript is the best it can be. Check for appropriate flow to the

Table 2: The CytoJournal articles should be written in following sections

A.	**First page file (Title page):** To be submitted separately.
	Title
	Authors
	Affiliations
	Corresponding author (Address, phone number, fax number e-mail, etc)
	Competing interests
	Authors' contributions
	Ethics Statement by All Authors (about IRB)
	Acknowledgements (if any)
B.	**Article file:** To be submitted separately.
	(To allow benefits of double blind peer-review process with CytoJournal, please avoid inclusion of any author identifiers).
	Title
	Abstract
	The abstract of the CytoJournal manuscript should not exceed 350 words and must be structured into separate sections: *Background, the* context and purpose of the study; *Materials and Methods*, how the study was performed and statistical tests used; *Results*, the main findings; *Conclusions*, brief summary and potential implications.
	Please minimize the use of abbreviations and do not cite references in the abstract.
	Introduction (Background)
	Materials and Methods
	Results
	Discussion (Conclusions / Summary)
	List of abbreviations used (if any)
	References
	Figure legends (if any)
	Tables and captions (if any)
	Description of additional data files (if any)

manuscript without abrupt transitions. Any statement not supported by your findings or the published literature should be deleted.[42]

Read aloud and check for common preventable errors, such as a missing "not" or "no." Similarly, check to make sure that all tables, figures, and references are appropriately cited.

Step 9: Circulate your manuscript

Once satisfied with self-review, circulate the manuscript. The coauthors should review the manuscript critically and participate in its finalization. As mentioned previously, all authors of the manuscript are responsible for its content. You should also ask others for their opinion, including junior and senior colleagues, trainees, mentors, and secretarial staff depending on the topic and its breadth.

Every manuscript can benefit from honest input from readers. However, their input may be incorporated, modified, or ignored based on careful consideration of the authors. Authors with English as a second language should take extra efforts with copy editing the manuscript using professional help if needed.

Table 3: Manuscript *checklist* (prior to final submission to the journal)

a.	Perform spell check.
b.	Check if the values are consistent in all areas.
c.	The sequence, measurements, and plan in the Materials and Methods section should be in congruence with Results section
d.	Apply *challenge test*- Ask- 'So what?'- Why should anyone read your writing?
e.	Address limitations as indicated towards the end of the discussion.
f.	Check if the study addresses the concerns pointed out in the introduction.
g.	Check for consistency (the abstract, introduction, results, discussion, tables, and figures should not show contradicting statements or information).
h.	The end of the manuscript by highlighting conclusion(s) or summary supported by the study generated data.
i.	Check if the *conclusion* / *summary* in the abstract and in the discussion match appropriately.
j.	Check if all tables, figures, and references in the manuscript are cited.
k.	Read the entire manuscript aloud to evaluate flow in writing. Final manuscript should be easy to understand and should not sound odd.

Brief statements, such as "the manuscript is OK as is" should be taken with caution. If there is compelling evidence that the contributor has not participated in the review and there is a lack of intellectual ownership, they should be deleted from the author list. Coauthors should have appropriate opinions and input in various areas such as tables, figures, algorithms, etc. Lack of critical analysis and honest criticism may lead to rejection of the manuscript.

Successful manuscripts usually have undergone numerous revisions before submission to journals with high standards. When satisfied that the manuscript is ready for submission, follow a general checklist [Table 3] and also a specific "submission checklist" provided by specific journals.[31]

Step 10: Recheck the final draft for flaws

There are some obvious errors in the manuscript that can lead to rejection [Table 3]. Although these may not be enumerated specifically by the journals, some of the features which may be highlighted are:[28,43,44]

1. Insufficient statistical power;
2. The topic is not interesting;
3. Methodology insufficient to address the hypothesis;
4. The topic is not novel and has been already covered widely;
5. The topic, although novel, does not need special attention;

6. Improper review of literature
7. Poor statement of the hypothesis;
8. The hypothesis is clear, but the manuscript fails to address it;
9. Contradictions in the manuscript
10. The topic is unrelated to the scope of the journal;
11. Conclusion based on the data not provided or generated;
12. Inconsistent and confusing use of terminologies;
13. Avoidable blatant spelling errors;
14. Failure to cite all tables, figures, and references in the manuscript.

Common questions

How to approach the request for revision as peer reviewers' comments?

Peer reviewers are the most critical component of scientific publications and they extend you the opportunity to improve the final publication. They spend a significant amount of time and efforts by participating in this final goal as your peer.

In general, the editors of the journals are polite in communicating the decision and act as intermediaries between authors and reviewers. Please read the editor communication carefully. Request for a revision does not equate with possibility of acceptance. It is just the message that the reviewers have identified some concerns and the authors have the opportunity to address these issues to improve the manuscript and increase the chance of final acceptance.

Although reviewers avoid harsh comments, it is not uncommon for the authors to be angry at the reviewers. Nevertheless, it was meant to be a flawless manuscript submitted after pain-staking, meticulous efforts thriving for a nearly perfect manuscript almost ready to be accepted. Receiving pages of criticisms from the reviewers may be frustrating. In general, many of the sentinel papers are the ones which generate the most extensive criticism by the reviewers!

The role of reviewers is to challenge and prevent the author(s) from publishing a flawed manuscript on one hand or helping them to hone their manuscript into a revolutionizing high-powered publication on the other. It is crucial to acknowledge the underestimated fact that all reviewers devote their expertise and time as passion for the science in your specialty and are generally there to help you with their best intentions. Reviewers generally have experience and expertise in their subspecialty with significant insights into evaluation of the manuscript of your topic.[45]

Authors should analyze the editor's and reviewers' comments with a plan to address them one by one. It is obviously annoying to see a revision of the manuscript which has failed to address the reviewer's suggestions.

Meticulously drafted documents (*response form*) explaining how each of the criticisms has been addressed in the revision are an important part of the revised submission for the reviewers to understand the response by the authors. Depending on the topic and type of the manuscript this may be longer than the original manuscript. It is prudent to thank the reviewers for suggesting the changes to which you agree as the author. In case you do not agree with the criticism, the disagreement may be addressed in a polite manner in the response form. If the controversy is important to be shared with the readership and has a bigger picture component, it is preferable to address the controversy in the discussion section of the manuscript in proper perspective with cited references. It is recommended to highlight the areas of modifications in the revised manuscript, so that the editor and the reviewers can locate them easily.

Consciousness about the menace of Plagiarism

Plagiarism is defined as using ideas and words of other person without citing the source. It is a significant unethical behavior in the scholarly exercise of publishing.[46] It could be a major challenge to the reviewers and editorial component of the article publication. Although the current availability of software programs to check plagiarism are of significant help,[47] it is the commitment and conscious efforts by the scientific community which can only make a significant impact. Additional details and guidelines on the topic are available on WAME web site.[48]

Post acceptance of the manuscript

The acceptance of your manuscript has been your final goal and you deserve a huge congratulation for achieving it! You should celebrate and share the achievement with all the colleagues and parties participating in the successful culmination of your project. Thank all contributing colleagues and communicate the acceptance decision by the journal to all, including your department chair.

Soon, you should receive the page proofs. Please, read them carefully and correct them as needed. Check the spellings and affiliation details of all authors, including the entire article and areas such as the conflict of interest, disclosures, and the legends to all figures. Share the corrections with all the contributors and submit the consolidated final corrections to the publisher. This will be your last chance to avoid any errors in the final published version. Failure to correct at this stage may cost you your academic reputation. It is a good practice to extend personal thanks to all involved with the paper at various stages including those mentioned under the acknowledgements section.

Table 4: Summary chart showing the steps from performing a study to its final publication

I. Performing a study (research)
Broadly address-
What shall I do research on?
How shall I commence the research?
Calculate the power of the study

II. Analyze data (results)
Most studies would compare at least 2 sets of results to be evaluated by the application of *The Null Hypothesis*:
- Cannot prove a hypothesis (statistically significant difference).
OR
- Can support the null hypothesis (lack of statistically significant difference).

III. Preparation of publishable manuscript
This is the ultimate goal to share the results of any study with peers and general public.

A. *Preliminary preparations*
Consider following seemingly innocuous but critical issues:
Authorship
All authors should fulfill the criteria described by the ICMJE (International Committee of Medical Journal Editors).
Other contributions could be recognized under acknowledgements.
Copyright
Understand its significance and plan to protect it (Open access journals such as CytoJournal DONOT ask to transfer your copyright).
Choose the audience
Meeting-conference (abstract publication)
Journal selection (final publication)
Which is the most appropriate journal?
One of the cytopathology journals will be most appropriate for cytopathology research.
Other issues to be considered:
Personal goals as narrow objective
Public - scientific purpose contribute to progression of science in your field.
Circulation potential for widest dissemination
Seek journals with rapid, real-time, ubiquitous, perennial, barrier-free access to your published articles
Journals such as CytoJournal with emphasis on modern on-line dissemination allows many other benefits such as instant translation with wider exposure beyond English readership. real time availability of matrices such as visits, downloads, citation etc.
Potential for high impact (short and long-term) with real time tracking:
Journals with internet based services allow additional benefits including real time verification of multiple quality indices with free web based tools such as:
'Google Scholar' (http://scholar.google.com/) and
'Google analytics' (http://www.google.com/analytics/).
Other Google scholar based sites for more matrices such as:
'Publish or Perish' from Harzing.com
SJR (SCImago Journal Rank Indicator) http://www.scimagojr.com/aboutus.php
Review the instructions to authors
Usually available on web
CytoJournal instructions to authors at http://www.cytojournal.com/contributors.asp
Understand the peer-review process.
CytoJournal peer-review process is double blind.
Study general material for guidance on writing styles
Use minimum abbreviations and avoid non-standard difficult to comprehend versions- List the abbreviations in alphabetic order under the 'abbreviations'.
Plan appropriate *balance of* scientific touch with appropriate dose of humanity.
Be ready to *recommend peer-reviewers* if that option is extended by the journal
(and exclusion of some reviewers based on issues such as conflict of interest, academic competition, or potential of bias).

B. Actual preparation of the manuscript
Step 1: Write Materials and Methods
Mention all important details so that study can be reproduced.
For example important details related to immunological and molecular methodologies should include crucial details such as temperatures, clones of antibodies, titers, diluents, pH, molarity, buffers, primer sequences, incubation temperature, duration etc.
Already published areas may be mentioned in brief with appropriate citation.
Encourage tables with appropriate images and sketches as needed.
Involvement of human subjects- mention approval by the Institutional Review Board.
(CytoJournal has a place for separate statement at the end of the article).
Involvement of animal subjects, mention approval from the appropriate review board.
Most details may be copy-pasted from your 'study protocol'.
Abbreviations- Avoid novel abbreviations but if compelled 'Materials and Methods' is the place to introduce.
Include the details on the population such as age, sex, race etc.
Safety of the subjects including identity and confidentiality with statement about IRB.
Involve *a statistician for statistical approaches as needed for collection and analysis of data.*

Continued....

Table 4 continued....

Step 2: Document your results
'Results' section is soul of any study and critical part of the manuscript.
Assemble and communicate results in easy to understand format.
Should match 'materials and methods' section (in step 1)
Brainstorm and plan appropriate visual representations (such as sketches, figures, and tables).
Visual representations should be simple and elegant for easy and quick comprehension.
(it is generally intuitive to first prepare visual representations and then describe them in the text under results).
Lack of visual representations may lose interest of the readers.
Use appropriate number of visual representations (with appropriately descriptive brief titles and legends).
Step 3: *Discussion about the study*
Place to present results of study in a broader scientific perspective.
Establish which issues deciphered are important.
Initial paragraph with about three sentences- convey main findings.
Next paragraph explain the methodology and defend scientifically any potential criticism (e.g. justify techniques, protocol, inclusion/exclusion criteria, data analysis approach etc).
State important findings with scientific and clinical perspective (as sequentially organized paragraphs sufficient to cover important findings).
Compare your findings with the already published data
Confirm or contest published observations
Convey statistical *versus* clinical significance of the findings.
Mention pitfalls in study (if any).
Suggest future prospects.
End with summary or realistic *conclusions* (based only on your results).
Pitfalls (Avoid)
Unconfirmed claims.
Rambling prolong text.
Citation of references unrelated to the results.
Non-citation of previously published key work.
Step 4: Organize the introduction
Based on contents in steps 1 through 3.
Should convince:
i. Reviewers (initially) to spend their time and efforts on review process (during peer-review stage) and
ii. Authors (ultimately) to attract the curiosity to read entire article to be applied or cited in their work.
Preferably brief and not be more than one double spaced typed page.
Cover following points:
a. Identify and elaborate the clinical or scientific significance.
b. Refer to all possible unknowns related to the issue.
c. Design of the study and analytic approach.
d. Hypothesis unambiguously.
Step 5: References
Variety of citation styles, Check for individual journal
May use software such as Endnote® and WinWord® to manage the references
Should be accurate about the references statements and citations.
Sloppy and improper referencing lead to higher chances of rejection
Step 6:Write the abstract
Provide structured abstracts for CytoJournal with four areas: Background, Material and Methods, Results, and Conclusions.
Raise curiosity to proceed deeper scrutiny.
Step 7: Create the title page
Title: Quick to comprehend, catchy to grab the attention, and self explanatory
Provide general information including- names of all author, their degrees, affiliations and institutions, e-mail addresses, and contact details including phone number and fax number.
for CytoJournal also include- Acknowledgement (if any), Competing Interest Statement by all Authors, Authorship Statement by all Authors, Ethics Statement by all Authors, and other related information.
Step 8:Write-rewrite-rewrite-rewrite till perfection is reached.
Step 9: Circulate your manuscript
Step 10: Check the final Draft for obvious flaws

C. Some common questions to be considered

a. How to approach the request for revision as per reviewer's comments?
b. Consciousness about the menace of Plagiarism.
c. Steps after acceptance of the manuscript.

Summary

Although challenging, writing manuscripts to be published in scientific journals can be learned with some organization skills and help from your mentors and colleagues with input from resources like this article [Table 4]. Self-discipline and perseverance will be critical

assets for execution of this important and rewarding academic exercise to disseminate scientific achievements leading to sharing of experiences and personal successes for scientific progress.

Performing this exercise of publishing research under the *open access charter* is now possible in the modern era with the advent of internet. This will retain your copyright and still achieve broadcasting of your research achievements in the public domain.[13,39]

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