Peer review is an essential step and cornerstone to assess and improve the quality and impart credibility of scientific research. It helps to filter out papers with irrelevant, trivial, weak, misleading or potentially harmful contents and improves the clarity, transparency, accuracy and utility of the potential scientific publication for a biomedical journal. It is said to be the heart and soul of any journal and fundamentally a constructive process.

**Our Experience**

During the last 6-7 years, we have learnt that delay in publication of an article starts at the level of review process. The time bound review process is must for any journal for maintaining quality of articles. The question arises, why there is delay at this level? We have noted that most of the reviewers turn down to review, or do it casually writing one or two lines as acceptable or not acceptable. The reviewers must send rigorous and fair feedback that help authors to improve manuscript and editor for making decision.

Reviewing is a passion, an art, people do for their own interest and desire to contribute, to maintain the quality of publications. We give 3 weeks time to reviewers. In the event of inadequate comments, we again send the manuscript for peer review to more reviewers that consumes another 3 weeks resulting 6 weeks to review an article.

There is no formal training for the art of reviewing in the literature apart from how to judge design of study and data analysis. It can be gradually nurtured and improved with time and practice.

We published an editorial on this subject in 2009 with the hope to stimulate more and more reviewers to do this noble job, yet we lack in this field hence another editorial on it. Our intent is to provide broad guidelines on review process. Reviewers who are new to the task may find this helpful, in requirements of good paper. The guidelines are not the final report, reviewer’s own particular style is more likely to provide a good quality review.

**How to Review a Paper**

**Accept or decline**

The invited reviewer should not accept the manuscript if he thinks that he can’t review a paper with in time limit. The reviewers should always avoid reviewing if there is any conflict of interest. Institutions working on same subject will not be able to provide unbiased review. The reviewer should accept manuscripts for review only of his or her areas of expertise.

Once reviewer accepts the manuscript he should read it carefully and critically at first instance from beginning to the end, with emphasis to understand the research question properly. To crystallize the thought process, he should go for relevant search of literature and then start proper reviewing accordingly. It requires an average of 1-3 h and usually done in 500-1000 words.

Manuscript review is divided in two main heads:
- **Ethical**
- **Technical**

**Ethical**

- **Introduction**
  It should define the nature of problem and current state of knowledge and lacunae in literature. The most important is that the hypothesis or purpose of the study should be stated and the relevance of research question be clear, concise and complete.

- **Methods**
  The proper methodology is mainstay of scientific paper. The conceptual frame work should be explicit and justified. Do the methods match with the research question? Reviewer should assess originality of methods, is it clear what data are to be collected, how and why? Is the sample size adequate and representative to support conclusions? The controls have been correctly selected, proper randomization methods followed etc., are inclusion/exclusion criteria clearly defined? Is it a retrospective or prospective study? How the results are evaluated and whether statistical calculation has been...
done or not. Is the method for data analysis correct one? The strengths and weaknesses of the methods should be assessed.

Results
The reviewer should note, are the results straightforward and clearly presented? Are the appropriate tables and figures used? The follow-up is adequate or not? The number of patients, tests, outcome scores, length of follow-up etc. should match with those described in materials and methods. Is the statistical analysis of data clearly given?

Discussion
The discussion of any scientific manuscript should summarize the major findings and possible problems in methods used, compared it with previously published work. It should also discuss clinical and scientific implications of study, its limitations and suggest further work. The reviewer should note: Are the results discussed in relation to hypothesis? Are the limitations of study clearly defined? Are the results discussed in context with relevant literature and are compared with previous results? Has the research question been answered or not?

References
Are the references given in journal style and properly cited in text? Are latest references included in study?

Title and abstract
Is the title specific, clear, informative and does it reflect the context of manuscript? The abstract should be an accurate reflection of the paper. Reviewer should note whether it is structured or not as per journal’s style? Is it brief and does it indicate the purpose of study? What was done? What was found and the significance?

Presentation
It should be in third person passive voice. The reviewer should not spend time on language details rather concentrate on scientific contents as English may not be the first language of the author. If contents are strong and original with adequate followup the language may be corrected by English language checker.

Summary
Based on merits of paper the reviewer may opine to accept or reject it. However, the reviewers report should be helpful and courteous so that whether or not the paper is accepted for publication, the authors have a chance to improve it. The reviewer should provide an honest critical assessment of paper along with its strengths and weaknesses. Reviewing is a service to journal, to author, to science at large and to the reviewer himself because he learns what is the latest in cutting edge research. Most of the reviewers do it for a sense of duty, selflessness and desire to contribute to science. No monetary compensation is provided for this service.1

Peer review is constantly evolving. We have provided guidelines for reviewers with the hope that these could be useful tool for new reviewers [Table 1]. We hope more and more reviewers will contribute in scientific publication.

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Table 1: Check list at a glance for reviewers

| Ethical |
|---------------------|
| Consent from ethical committee |
| Declaration of Helsinki |
| Guiding principles - Animals |

| Technical |
|---------------------|
| Introduction |
| Relevant research question |
| Current state of knowledge |
| Lacunae in literature |

| Methods |
|---------------------|
| Original |
| Prospective/retrospective study |
| Methods match research question |

| Sample size |
|---------------------|
| Control group |
| Proper randomization |
| Inclusion/exclusion criteria |

| Statistical analysis |
|---------------------|

| Results |
|---------------------|
| Data clearly presented/analyzed |
| Criteria/outcome scores used to assess results |
| Table/figures |
| Length of follow-up |
| Data statistically analyzed |

| Discussion |
|---------------------|
| Major findings compared with published work |
| Clinical implications |
| Limitations |
| Concluding remark answers research question |
| References |
|---------------------|
| As per journal style |
| Cited in text |
| Latest references |
| Title and abstract |
| Title - reflects context of manuscript |

Abstract - accurate reflection of paper, format - as per Journal style

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1. Ish Kumar Dhammi, Sudhir Kumar.

2. Peer review is constantly evolving. We have provided guidelines for reviewers with the hope that these could be useful tool for new reviewers [Table 1]. We hope more and more reviewers will contribute in scientific publication.
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