

# *Proceedings of the Pakistan Academy of Sciences*

## Instructions for Authors

**Aims and Scope:** *Proceedings of the Pakistan Academy of Sciences* is official journal of the Academy, published quarterly, in English. This open access journal publishes research papers in *Engineering Sciences & Technology, Life Sciences, Medical Sciences, and Physical Sciences*. State-of-the-art reviews (~20 pages, supported by recent references) summarizing R&D in a particular area of science, especially in the context of Pakistan, and suggesting further R&D are also considered. Manuscripts undergo double-blind review. Authors are not required to be Fellows or Members of the *Pakistan Academy of Sciences* or citizens of Pakistan.

### Manuscript Format

*Manuscript may contain Abstract, Keywords, INTRODUCTION, MATERIALS AND METHODS, RESULTS, DISCUSSION (or RESULTS AND DISCUSSION), CONCLUSIONS, ACKNOWLEDGEMENTS and REFERENCES and any other information that the author(s) may consider necessary.* The Manuscript sections must be numbered, i.e., **1. INTRODUCTION, 2. MATERIALS AND METHODS**, and so on.

Manuscripts, in *Times New Roman*, 1.5-spaced (but single-space the Tables), with line numbering and one-inch margins on all sides on A-4 size paper, should not exceed 20 pages including Tables and Figures. Number manuscript pages throughout. The text (in **Font Size 11**, except for the sections mentioned in **Font Size 10**) must be typed in a single column across the paper width. All Tables and Figures must be placed after the text, i.e., after REFERENCES section.

(a) **Title** of the article (Capitalize initial letter of each main word; font size 16; **bold**), max 160 characters (no abbreviations or acronyms), depicting article's contents; (b) Author's first name, middle initial and last name (font size 12, **bold**), and professional affiliation (i.e., each author's Department, Institution, Mailing address and Email; but no position titles) (font size 12); (c) Indicate the corresponding author with \*; (d) **Short running title**, max 50 characters (font size 10). The **next Page** should start with **Title** of the Article, followed by entire manuscript. **Headings and Subheadings** (font size 11): All flush left

**LEVEL-1: ALL CAPITAL LETTERS; bold**

**Level-2: Capitalize each main word; bold**

**Level-3: Capitalize each main word; Bold, Italic**

*Level-4: Run-in head; Italics, in the normal paragraph position. Capitalize the initial word only and end in a colon (i.e., :)*

**Abstract** (font size 10; max 250 words): Must be self-explanatory, stating rationale, objective(s), methodology, main results and conclusions of the study. Abbreviations, if used, must be defined on first mention in the Abstract as well as in the main text. Abstract of review articles may have variable format.

**Keywords** (font size 10): Three to eight keywords, depicting the article.

**INTRODUCTION:** Provide a clear and concise statement of the problem, citing relevant recent literature, and objectives of the investigation.

**MATERIALS AND METHODS:** Provide an adequate account of the procedures or experimental details, including statistical tests (if any), in a concise manner but sufficient enough to replicate the study.

**RESULTS:** Be clear and concise with the help of appropriate Tables, Figures and other illustrations. Data should not be repeated in Tables and Figures, but must be supported with statistics.

**DISCUSSION:** Provide interpretation of the RESULTS in the light of previous relevant studies, citing published references.

**ACKNOWLEDGEMENTS** (font size 10): In a brief statement, acknowledge financial support and other assistance.

**REFERENCES** (font size 10): Cite references in the text **by number only in square brackets**, e.g. "Brown et al [2] reported ..." or "... as previously described [3, 6–8]", and list them in REFERENCES section, in the order of citation in the text, Tables and Figures (not alphabetically). Only published (and accepted for publication) journal articles, books, and book chapters qualify for REFERENCES.

List of REFERENCES must be prepared as under:

a. **Journal Articles** (*Name of journals must be stated in full*)

1. Golding, I. Real time kinetics of gene activity in individual bacteria. *Cell* 123: 1025–1036 (2005).
2. Bialek, W. & S. Setayeshgar. Cooperative sensitivity and noise in biochemical signaling. *Physical Review Letters* 100: 258–263 (2008).
3. Kay, R.R. & C.R.L. Thompson. Forming patterns in development without morphogen gradients: differentiation and sorting. *Cold Spring Harbor Perspectives in Biology* 1: doi: 10.1101/cshperspect.a001503 (2009).

b. **Books**

4. Luellen, W.R. *Fine-Tuning Your Writing*. Wise Owl Publishing Company, Madison, WI, USA (2001).
5. Alon, U. & D.N. Wegner (Ed.). *An Introduction to Systems Biology: Design Principles of Biological Circuits*. Chapman & Hall/CRC, Boca Raton, FL, USA (2006).

c. **Book Chapters**

6. Sarnthein, M.S. & J.D. Stanford. Basal sauropodomorpha: historical and recent phylogenetic developments. In: *The Northern North Atlantic: A Changing Environment*. Schafer, P.R. & W. Schluter (Ed.), Springer, Berlin, Germany, p. 365–410 (2000).
7. Smolen, J.E. & L.A. Boxer. Functions of Europhiles. In: *Hematology*, 4<sup>th</sup> ed. Williams, W.J., E. Butler & M.A. Litchman (Ed.), McGraw Hill, New York, USA, p. 103–101 (1991).

**Tables**, with concise but self-explanatory headings must be numbered according to the order of citation (like **Table 1**, **Table 2**). Round off data to the nearest three significant digits. Provide essential explanatory footnotes, with superscript letters or symbols keyed to the data. Do not use vertical or horizontal lines, except for separating column heads from the data and at end of the Table.

**Figures** may be printed in two sizes: column width of 8.0 cm or page width of 16.5 cm; number them as **Fig. 1**, **Fig. 2**, ... in the order of citation in the text. Captions to Figures must be concise but self-explanatory. Laser printed line drawings are acceptable. Do not use lettering smaller than 9 points or unnecessarily large. Photographs must be of high quality. A scale bar should be provided on all photomicrographs.

**Declaration:** Provide a declaration that: (i) the results are original; (ii) the same material is neither published nor under consideration elsewhere; (iii) approval of all authors has been obtained; and, (iv) in case the article is accepted for publication, its copyright will be assigned to *Pakistan Academy of Sciences*. Authors must obtain permission to reproduce, where needed, copyrighted material from other sources and ensure that no copyrights are infringed upon.

**Reviewers:** Authors may suggest four relevant reviewers, two local and two from scientifically advanced countries.

Manuscripts must be submitted in Microsoft Word (.doc or .docx format; **pdf** files not acceptable). Figures can be submitted in Word format, TIFF, GIF, JPEG, EPS, PPT.

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