

INSTRUCTIONS TO AUTHORS

Proceedings of the Pakistan Academy of Sciences publishes original research papers on a broad range of topics of basic and applied sciences. State-of-the-art reviews (~ 20 pages, well supported by recent references) which adequately summarise work in a particular area of science, especially in the context of Pakistan and indicate lines of further research are also considered for publication. All original research articles are classified under 4 sections: **Life Sciences, Physical Sciences, Medical Sciences and Engineering Sciences & Technology**. All papers are refereed externally. Authors are not required to be members or fellows of the Academy. Manuscripts may be submitted from any country; however, all manuscripts must be submitted in English.

The authors are requested to read the following instructions carefully before submitting a manuscript. Failure to comply with these guidelines is liable to delay the review process and possible publication of the manuscript.

Manuscript preparation:

Manuscripts should be typewritten, double-spaced on 8.5" x 11" paper with 1" margin on all sides. Two copies should be submitted, including Figures and Tables. Papers are subject to editorial revision for purpose of conformity to the style adopted. Manuscripts should in general not exceed 20 typewritten pages including Tables, Figures and illustrations. The authors must submit a 3.5" high density (HD) diskette containing a copy in **Microsoft (MS) Word** of the final version of the manuscript, or as e-mail attachment preferably to **Sectional Editors** (or Editor-in-Chief) through a fellow of the Academy (see Website).

Each of the following sections of the manuscript should be typed on a separate page and in the sequence shown below:

TITLE PAGE: Should carry: (A) title (in capital letters) of the article to have no more than 160 characters, in a concise but informative style. Do not use abbreviations or acronyms, (B) first name, middle initial, last name of each author, (C): name of the department(s) and institution(s) to which the work should be attributed, (D) name and address of author to whom correspondence should be addressed, include Email address if available, (E) short running title of no more than 50 characters.

ABSTRACT AND KEYWORDS: The second page should carry an **abstract** of 250 words or less. The abstract should be self-explanatory, without reference to the text. The abstract should state the objective of the study, the methods used, main findings and principal conclusions. Abbreviations may be used provided they are defined on first mention in the abstract and in the main text. Review articles may be submitted without an abstract. Please suggest five to eight **keywords** excluding any that are already used in the title.

TEXT: For *original research articles* the text should be divided into sections with the headings: Introduction: provide a clear and concise statement of the problem and the aims of the investigation, and cite the relevant literature on the subject.

Materials and Methods: Provide an adequate account of the procedures including statistical tests (if any). Describe briefly but in such a way that sufficient information is provided to replicate the work. **Results:** to be clearly and concisely described with the help of appropriate tables, figures and other illustrative material. Results should have no repetition of data in figures, tables and text. **Discussion.** Provide a brief interpretation of your results in the light of relevant previous studies. Comments and interpretations should be supported by evidence or references. Do not use more than 3 levels of heads in the text. *For review articles* the text can be appropriately sectioned.

ACKNOWLEDGEMENTS: Acknowledge financial support and other types of assistance in a brief statement.

REFERENCES: References must be limited to directly related published papers. Authors bear total responsibility for the accuracy of the references. All references in the text are to be included in the list of References and *vice versa*. Only published articles or articles accepted for publication qualify for references. References to manuscripts submitted to other journals but not yet accepted are not permitted. In the text, references should be cited as consecutive numerals in square brackets, for example. "Brown *et al.* [2] reported ..." or "... as previously described [3,6-8]". They should be listed in the same numerical order in the References list at the end of the manuscript on a separate sheet or sheets. List all authors.

Examples of references:

- a. Articles in Journals-
 1. **Speh, B. and Vogan, D.A.** 1980. Reducibility of generalized principal series representations. *Acta Math.* 145: 227-299.
 2. **Williams, R.L., Hilton, D.J., Pease, S., Wilson, T.A., Stewart, C.L., Grearing, D.P., Wagner, .F., Metcalf, D., Nicola, N.A. and Gough, N.M.** 1988. Myeloid leukaemia inhibitory factor (LIF) maintains the developmental potential of embryonic stem cells. *Nature* 336: 684-687
- b. Chapters in books
 3. **Cox, A.W.** 1988. Solar and geothermal energy. In: *Information Sources in Energy Technology*. Ed. Anthony, L.J. pp. 263-289. Butterworths, London.

4. **Smolen, J.E. and Boxer, L.A.** 1991. Functions of neutrophils. In: *Hematology*. Eds. Williams, W.J., Butler, E. and Litchman, M.A. 4th ed. pp. 3-101. McGraw Hill, New York.
- c. Books:
5. **Leeper, G.W.** 1978. *Managing Heavy Metals on the Land*. Marcel Dekker, New York.
6. **Adams, D.O., Edelson, P.J. and Koren, H.S.** 1981. *Methods for studying Mononuclear Phagocytes*. Academic Press, San Diego.

TABLES: Tables must be typewritten on separate sheets and submitted in duplicate. They should be numbered consecutively according to order of citation, using arabic numbers. Each table must have a concise heading and should be comprehensible without reference to the text. The approximate position of each table in text should be indicated. Tables should be as simple as possible. Round off numbers within the table to the nearest whole number or significant digit. Place essential explanatory material below the table. Identify footnotes with superscript letters or symbols keyed to data in the table. Do not use vertical lines. Use horizontal lines only to separate the column heads from the data. Refer to published tables in a recent issue of the journal to verify the appropriate style.

ILLUSTRATIONS: Figures should be carefully and professionally prepared. Two sets of high quality camera-ready illustrative material are required. Number figures consecutively with Arabic numerals (1,2,3) in the order in which they are cited in the text. Glossy prints must be submitted for photomicrographs, gels and other halftones. Photocopies of line drawings are acceptable at submission as long as two sets of high quality camera copies are provided. Figures should be identified by a black lead pencil, on the top or back of each figure with figure number and the last name of the first author. Type **legends**, double-spaced, in numerical order, on a separate sheet or sheets. Use numbers and letters consistent in style with those used in the illustration.

Please note that the Figures may be printed (with or without reduction) in two styles. Figures layouts may either match the columns size of 8.2 x 24.0 cm or the entire page of 16.0 x 24.0 cm maximum size.

Line drawings: Computer generated figures produced on a laser printer are acceptable. Alternatively, original line drawings should be made with black ink on white drawing or tracing paper. Do not use lettering smaller than 9 points or unnecessarily large. Lettering should be proportional on all figures within an article. In graphs, the abscissa and ordinate should be clearly labelled, and the units of measurement given.

Photographs: Photographs must be of the highest quality and provided as glossy prints. They should be mounted if they are to form multiple panels on the journal page. All prints should be trimmed to exclude areas not relevant to the paper and be separated from adjacent photographs by uniform spaces. A scale bar should be included on all photomicrographs or magnification (e.g. x 400, x 8000 etc.) be given at the end of the legend. .

Declaration: Submission of the manuscript must be accompanied by the declaration that the results are original; approval of all authors concerned has been obtained to submit manuscript for consideration; the same material is neither 'in press' nor under consideration elsewhere and that the copyright of the paper will be assigned to the *Pakistan Academy of Sciences* in case the article is accepted for publication.

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