

Journal of Life Sciences and Bioengineering Research (JLSBER)

Journal of Life Sciences and Bioengineering Research (JLSBER) is a peer-reviewed, open access multidisciplinary journal that publishes original research articles, review articles and short-communication on all areas of Life Sciences, Bioengineering and Technology. Submission of manuscript to this journal implies that the work is original. The work has not been published elsewhere and that is not consideration for publication to any other scientific journals.

Scope of the journal

The Journal of Life Sciences and Bioengineering Research (**JLSBER**) publishes original and significant articles on all aspects of Life Sciences (Botany, Zoology, Environmental Science, Agricultural Sciences, Medical Sciences, Veterinary Sciences, Anthropology, Biochemistry, Genetics, Biophysics, Biotechnology, Endocrinology, Molecular Biology, Home Sciences, Cellular Biology, chemical sciences, bioscience & health science and related fields) and Bioengineering (Bionics and biological cybernetics, Bioelectronics, Bioprocess and biosystems engineering and applications, Biomolecular, cellular and tissue engineering and applications, Biomedical engineering and applications, Biochemical engineering and applications). The journal publishes original papers on current research and practical programs, short notes, news items, book reviews etc.

Manuscript preparation

Contributors submitting manuscript for consideration for publication should follow the following guidelines.

Style and format

Manuscripts should be prepared in MS word format and typewritten on an A4 sheet having '1.5' line-spacing throughout the text. The margins should be 2.54cm (1inch) in all sides and page number should be consecutively on the bottom of the page. The manuscript should be written in Time new roman using '12' font size and not exceed 30 pages. Manuscripts must be written in English. For non-native English language authors, the article should be proof read by a language specialist. Poor use of English could result in rejection of the manuscript.

Manuscript content

For original research paper, the manuscript should be arranged in the following order: Title page (Title, Full Author name, Author affiliate address & email of corresponding author), Abstract, keywords, Introduction, Materials and methods, Results, Discussion (this section may be combined with results), Acknowledgements, References, Tables with legends, Figures with legends and Supplementary materials (if applicable).

Title and contact information

The first page should contain the full title, the full names of authors and affiliations of all authors (Department, Faculty, University, City, and Country) including a valid e-mail address for

the corresponding author along with telephone and fax numbers. The Title of the manuscript should be specific and concise but sufficiently informative.

Abstract

The abstract should contain brief summary of findings and conclusion of the study. The abstract should not contain abbreviations references or diagrams. The abstract must not go to more than 300 words each for original and review papers or 150 words for short communications.

Key words

Author should provide no more than 6 key words. The **Key words** should arrange alphabetically. Acronyms should be avoided.

Introduction

The introduction should be arguing the case study, outlining essential background and the objectives of the work. Avoid a detailed literature survey or a summary of the results.

Materials and methods

The materials and methods section should be include sufficient technical information about the materials and the analytical and statistical procedures used. Describe new methods completely and give sources of useful chemicals and equipment.

Results

Result and discussion can be written separately or combined. The results obtained from the experiments including their statistical evaluation and any explanation should be presented graphically or in tables in this section. This section may be organized into subheadings. Extensive interpretation of the results should be reserved for the Discussion section. Avoid similar data in both table and figure form. Photographs to those that is absolutely necessary to show the experimental findings. Number figures and tables in the order in which they are cited in the text, and be sure to cite all figures and tables.

Discussion

The Discussion section should provide an interpretation of the results in relation to previously published works. It should not contain extensive repetition of the Results section. The Discussion may be organized into subheadings.

Conclusion

In the conclusion section, author should state the most important outcome of the work by interpreting the findings at a higher level of abstraction than the Discussion and by relating these findings to the motivation stated in the Introduction. Do not simply summarize the points already made in the body. Conclusions must not contain references to the cited literature.

Acknowledgements

In this section author should give credit to people who have helped author with the research or with writing the paper. If the author work has been supported by a grant, author should also give credit for that in this section.

Scientific names

Scientific names should be complete and italics (genus, species, and authority, and cultivar where appropriate) for every organism at the first mention. The generic name can be abbreviated from second times. In addition, gene name must be italics.

Nomenclature

Nomenclature for genes and proteins must follow international standards. All gene symbol and loci should be in italics and capital. All chemical, biochemical, and molecular biology nomenclature should be followed by IUBMB recommendation (<http://www.chem.qmul.ac.uk/iubmb/>). Database for gene or protein sequence or others should be given reference according to EMBL; GenBank, or the Protein Data Bank.

Tables and Figures

- All illustrations (photographs, drawings, graphs, etc.), not including tables, must be labelled “Figure.” Figures and table must be submitted at the end of the manuscript, after the references, not in the running text.
- All tables and figures must have a caption and/or legend and be numbered (e.g., Table 1, Figure 2), unless there is only one table or figure, in which case it should be labelled “Table” or “Figure” with no numbering. Captions must be written in sentence case (e.g., Microscopic view of *Trichoderma*). The font used in the figures should be Times New Roman.

Symbols, units, and abbreviations

- In general, the journal follows CSE Style and Format, The CSE Manual for Authors, Editors, and Publishers, Council of Science Editors, Reston, VA, USA (7th ed.).
- If symbols such as \times , μ , η , or v are used, they should be added using the Symbols menu of Word.
- Degree symbols ($^{\circ}$) must be used from the Symbol menu, not superscripted letter o or number 0.
- The International System of Units (SI) should be employed for measurements. When one unit appears in a denominator, the unit should be presented as a fraction (g/m^2); for two or more units in a denominator, use negative exponents ($\text{g m}^{-2} \text{d}^{-1}$).
- Insert one space between figures and units, except for % and units of temperature, latitude, and longitude (e.g., 5 m, 55 $^{\circ}\text{C}$, 500 kg).
- Times of day should be presented using a 24 hour clock (e.g., 0800 hr, 2.030 hr). Dates should be presented as for example, 30 Jan 2013.
- In the text, numbers should be Arabic numerals, except when beginning a sentence. Numbers greater than 999 should have commas (e.g., 10,000).
- Spaces must be inserted between numbers and units (e.g., 3 kg) and between numbers and mathematical symbols (+, $-$, \times , =,), but not between numbers and percent symbols (e.g., 45%).

- All abbreviations and acronyms should be defined at first mention. Latin terms such as et al., in vitro, or in situ should not be italicized.
- Common molecular, chemical, immunological, and hematological terms can be used without definition in the title, abstract, text, tables, and figure legends (e.g., bp, kb, kDa, DNA, cDNA, RNA, mRNA, PCR, SDS-PAGE, ELISA, IgG, RBC, and WBC). Other common abbreviations are as follows (the same abbreviations are used for plural forms): hr (hour; use 0-24:00 h for time), sec (second), min (minute), day (not abbreviated), week (not abbreviated), month (not abbreviated), year (not abbreviated), L (liter), mL (milliliter), μ L (microliter), g (gram), kg (kilogram), mg (milligram), μ g (microgram), ng (nanogram), pg (picogram), g (gravity; not \times g), n (sample size), SD (standard deviation of the mean), SE (standard error of the mean).

Statistical analysis

Statistical analysis is to be done if necessary. Biological data without statistical analysis cannot be accepted.

References

The manuscript should be checked carefully to ensure that the spellings of the authors' names and the years are exactly the same in the text as given in the reference list.

- Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'.
- Citation of a reference as 'in press' implies that the item has been accepted for publication.
- In the case of publications in languages other than English, the published English title should be provided. If the publication is not published with an English title, provide the original title only; do not provide a self-translation.

Citation in the text

- In-text citations appear in brackets, and consist of the author(s) last name, as well as the document's year of publication (e.g. Rahman 2012). The end reference list appears in alphabetical order by author last name.
- If the author's name is clearly mentioned in the text, it can be directly followed by the year of publication, in parentheses: Zakaria (2020) isolated and identified 5 species of *Trichoderma* from the rhizosphere of rubber trees in Malaysia, namely.....
- If a document has two authors, include both surnames separated by "and". For works with three or more authors, include only the first author name, followed by "et al.": ... (Rahman and Illias 2012). ... (Rahman et al. 2013).
- If the author cites several sources at once, list them in chronological order, or alphabetically if two or more works were published in the same year, and separate each

one with a semicolon: ... (Rahman, 1963; Rahman and Alam, 1975; Beagum, 1975; Alam et al. 1992).

- Citing two or more works written by the same author in the same year, add a designator (a, b, c...) to distinguish them.

(Rahman 2011a, 2011b).

Use the same designators in the reference list: ...

Rahman MA. 2011a. Isolation and Identification...

Rahman MA. 2011b. Screening of *Trichoderma* spp. and ...

- If the author would like to cite a source that is cited in another document, it is always best to consult and cite the original source. The original author can be acknowledged within the text, but only the item seen appears in the reference list. ... (Rahman, 2001, cited in Alam, 2010) or ... Alam (2010) describes Rahman 2001 study on... In this example, the reference list would include only Alam work: Alam, M. F. 2010. The Commonwealth of Life: Economics for a Flourishing Earth. 2nd ed. Montreal (QC): Black Rose Books.

- If the author of a document is an organization, corporation, government department, university, etc., use an abbreviated form of the organization in the in text citation, by retaining the first letter of each word in the name, or some other recognized abbreviation:

UNESCO. 2006.

Reference list

Compile all references together in a list at the end of the manuscript text. Authors must reference all previous publications in which portions of the present work has appeared. Articles accepted for publication should be cited as “in press”; the DOI should be given if the paper is published online only. **South Asian Research Publishing Organization (SARPO)** will use the following reference style for published articles.

References should be listed alphabetically. Abbreviated journals names must be written, not full name of journal.

Author's Names

- The names of authors are written in reverse order. Include the initials for the first and middle names. End this information with a period.

Example: Full name: Mohammad Ahsanur Rahman

Structure: Last name, First initial. Middle initial.

Example: Rahman, M. A.

Two or More Authors

- When two or more authors work together on a source, write them in the order in which they appear on the source, using this format:

Structure: Last name, F. M.; Last name, F. M.; Last name, F. M.; Last name, F. M.; Last name, F. M.

Example: Rahman, M. A.; Begum, M. F.; Rahman, M. M.; Bari, M. A.; Ilias, G. N. M.; Alam, M. F.

Journal article

For journals

Structure: Author(s) last name, First initial. Middle initial. Article title. Abbreviated journal name in italic. Year, Volume (Issue), Pages.

Example: Rahman, M. A.; Begum, M. F.; Rahman, M. M.; Bari, M. A.; Ilias, G. N. M.; Alam, M. F. Isolation and identification of *Trichoderma* species from different habitats and their use for bioconversion of organic solid waste. *Turk. J. Biol.* 2009, 35(2), 183-194.

For journal articles published online ahead of print or online only, the DOI should be used:

Rahman, M. A.; Moni, Z. R.; Hussien, M. A.; Ansari, T. H. Prevalence of fungal diseases in medicinal plants in northern region of Bangladesh. *SAARC J. Agric.* 2009, 17(2), 197-212. DOI: <https://doi.org/10.3329/sja.v17i2.45306>

For Books

Structure: Author(s). Book Title (In Italic), Edition,; Publisher: Place of Publication, Year; pages.

Example: Falero, E. M.; Fernandez, S. M.; Antonio, D.; Abril, G. *Quantitative techniques in participatory forest management*. 4th ed.; Bota, R., Ed.; Academic Press: New York, 2003; pp 1-39.

Chapter in a book

Structure: Author(s). Book title (In italic). Edition,; Publisher: Place of Publication. Chapter #, Chapter title, Year; pp. Pages of the chapter.

Example: Shmulsky, R.; Jones, D. P. *Forest product and wood science an introduction*. 6th ed.; John Wiley & Sons: Surrey (U.K). Chapter 6, Juvenile wood, reaction wood, and wood of branches; pp 107-139.

Thesis or dissertation

Structure: Author. Title of the Thesis. Level of Thesis, Degree-Granting University, Location of University, Date of Completion.

Example:

1. Rahman, M. A. Screening of *Trichoderma* spp. and their efficacy as a bioconversion agent of municipal solid waste through appropriate technique of solid state fermentation. Ph.D. Dissertation, University of Rajshahi, Bangladesh, 2009.
2. Mäckel, H. Capturing the spectra of silicon solar cells. Ph.D. Thesis, The Australian National University, December 2004.

Conference papers or proceedings



Manly, S. Collective flow with PHOBOS. Presented at the 20th Winter Workshop on Nuclear Dynamics [Online], Trelawny Beach, Jamaica, March 15–20, 2004. University of Rochester, DSpace Web site. <http://hdl.handle.net/1802/228> (accessed Oct 13, 2004).

Structure: Author(s). Title of paper/presentation. Presented at conference title [Online], Place, Date; Paper Number. Title of the Site. URL (accessed Month Day, Year).

Example: Torreta, N. K.; Takeda, H.; Azuma, J. I. Presented at the 20th Winter Workshop on Nuclear Dynamics [Online], Trelawny Beach, Jamaica, March 15–20, 2004. University of Rochester, DSpace Web site. <http://hdl.handle.net/1802/228> (accessed Oct 13, 2004).

Online source

For online articles provided as content in a subscription database, use the reference style for periodicals or nonscientific magazines as appropriate, and include the name of the database provider, the URL of the top page, and the date accessed.

Example: Hallet, V. Scanning the Globe for Organic Chemistry. *U.S. News and World Report* [Online], April 19, 2004, p 59. Business Source Premier. <http://www.epnet.com/academic/bussourceprem.asp> (accessed April 24, 2005).

Articles published online

Structure: Authors. Title of Article. *Journal Abbreviation* [Online early access]. DOI or other identifying information. Published Online: Month Day, Year. URL (accessed Month Day, Year).

Example:

Rahman, M. A.; Begum, M. F.; Alam, M. F. Screening of *Trichoderma* Isolates as a biological control agent against *Ceratocystis paradoxa* causing pineapple disease of Sugarcane. *Mycobiology*. [Online early access]. DOI: 10.4489/MYCO.2009.37.4.277. Published Online: December 31, 2009. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3749418/>. htm (accessed September 20, 2020).

Electronic book

Books published online generally correspond to printed versions, and the reference styles are similar. Online location and access date should always be included when citing online books. Reference works published online are often updated with new content, and the dates on which sections were posted or updated should also be included.

Structure: Author(s). *Book Title* [Online]; Series Information (if any); Publisher: Place of Publication, Year, Volume Number, Pagination. URL (accessed Month Day, Year).



Example: Grebner, D.; Bettinger, P.; Siry, J. *Introduction to Forestry and Natural Resources* [Online]; Academic Press, Amsterdam, 2013; pp 177-180. <https://www.sciencedirect.com/science/book/9780123869012> [accessed 2017 Dec 30].

Online books with editors

Authors. Chapter Title. In *Book Title* [Online]; Editor 1, Editor 2, etc., Eds.; Series Information (if any); Publisher: Place of Publication, Year; Volume Number, Pagination. URL (accessed Month Day, Year).

Oleksyn, B. J.; Stadnicka, K.; Sliwinski, J. Structural Chemistry of Enamines: A Statistical Approach. In *The Chemistry of Enamines* [Online]; Rappoport, Z., Ed.; The Chemistry of Functional Groups; Patai, S., Rappoport, Z., Series Eds.; Wiley & Sons: New York, 1994; Chapter 2, pp 87–218. <http://www3.interscience.wiley.com/cgi-bin/summary/109560980/SUMMARY> (accessed April 24, 2005).

Online encyclopedias

Structure: Article Title. *Encyclopedia Title*, edition [Online]; Publisher, Posted Online Posting Date. URL (accessed Month Day, Year).

Example: Alkanolamines from Nitro Alcohols. *Kirk-Othmer Encyclopedia of Chemical Technology* [Online]; Wiley & Sons, Posted March 14, 2003. <http://www.mrw.interscience.wiley.com/kirk/articles/alkaboll.a01/frame.html> (accessed Nov 7, 2004).