

Journal of Molecular Biosciences and Engineering

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Focus of JMBe

The *Journal of Molecular Biosciences and Engineering (JMBe)* is dedicated to publishing high-quality, original research that advances knowledge and applications at the intersection of molecular biology, biochemistry, biophysics, and engineering. We welcome a wide range of contributions, including fundamental studies of cellular and molecular mechanisms, applied research in bioprocess development and biomaterials, and interdisciplinary approaches that connect molecular biosciences with synthetic biology, drug delivery, diagnostics, and environmental science.

Our editorial policy emphasizes scientific rigor, transparency, and innovation. Submissions are evaluated not only on the novelty of results but also on the strength of experimental design, clarity of molecular or cellular methodology, and potential impact. We strongly encourage authors to share supplementary data, computational models, and cell lines or constructs to promote reproducibility and open science in the biosciences.

To ensure fairness, manuscripts undergo rigorous peer review by experts in relevant molecular and engineering disciplines. In addition to full research articles, JMBE publishes reviews, short communications, and perspectives that highlight emerging trends and future directions in molecular engineering and biotechnological innovation.

Collaboration across institutions, disciplines, and geographic regions is strongly encouraged to foster global perspectives and accelerate breakthroughs in bio-innovation.

General Information

Open Access Policy: JMBE is fully open access. All published articles are freely available online immediately upon publication without subscription charges.

Publication Fees: No article processing charges (APCs) or submission fees are required. Publication is free of charge.

Language: Manuscripts must be submitted in clear, concise English. Authors whose native language is not English are encouraged to seek professional editing services before submission.

Ethics Compliance: All submissions must adhere to international publishing ethics standards, including those outlined by COPE (Committee on Publication Ethics).

Types of Manuscripts Accepted

JMBE accepts the following categories of manuscripts:

Original Research Articles: These are detailed, full-length reports of original and significant research findings. They should present a complete study with a clear hypothesis, robust methodology, compelling results, and a well-supported conclusion.

Review Articles: Review articles provide a comprehensive and critical overview of a specific topic within the journal's scope. They should synthesize existing literature, identify key trends, highlight research gaps, and suggest future directions. Review articles are typically solicited by the Editorial Board, but unsolicited proposals may be considered.

Short Communications: Short Communications are concise and fast-tracked reports of novel and high-impact research findings. They are ideal for conveying preliminary but significant results that require rapid dissemination.

Initial Submission and Review Process

All manuscripts submitted to JMBE are first assessed by the editorial team to ensure they meet the journal's scope, formatting, and ethical standards. Only those that meet these requirements will be sent for peer review.

Authors should include a cover letter that briefly:

- Outlines the scientific significance and originality of the work.
- Confirms that all necessary approvals (funding, facilities, ethics) are in place.
- Provides an anticipated timeline for completion if the work is ongoing.
- States the authors' commitment to data transparency, including sharing data and materials where possible, or explaining any restrictions.
- Pre-submission inquiries are welcome if authors are unsure of suitability, but full submissions are required before review can proceed.

Manuscript Preparation

Formatting and Structure

Manuscripts should be prepared using Microsoft Word format. Authors are strongly encouraged to use a standardized structure to ensure readability, consistency, and international recognition. Each submission should include the following components:

Title Page

Title: The title should be concise, informative, and specific, clearly reflecting the main focus of the study. Avoid abbreviations or overly general phrases. A well-prepared title should immediately indicate the subject matter and significance of the work.

Author Names and Affiliations: Include full names, institutional affiliations, and addresses for all authors. Superscript numbers may be used to link authors to their affiliations.

Corresponding Author: Clearly indicate the corresponding author, including an active email address. This individual will handle all communication during the review and publication process.

ORCID IDs: Authors are encouraged to provide their ORCID identifiers to ensure accurate attribution of scholarly work.

Abstract

The abstract should provide a concise yet comprehensive summary of the research with max 300 words. It must include background, objectives, methodology, main results, and conclusions. Abstracts should be written in a way that allows readers to understand the essence of the work without referring to the full paper. The abstract should not contain references or undefined abbreviations.

Keywords: Provide 4–8 relevant keywords that describe the core themes of the paper. Keywords should be specific and reflect terminology commonly used in the field for indexing purposes.

Main Text

Introduction: Clearly state the problem being addressed, its scientific or practical significance, and the objectives of the study. Provide sufficient background and literature review to place the research in context.

You may not alter the Introduction or amend or append the hypotheses submitted in the approved manuscript.

Materials and Methods: Describe the experimental design, materials, instruments, and procedures in sufficient detail to allow reproducibility. Previously published methods should be cited, and modifications must be clearly explained.

Results: Present findings logically and clearly. Use tables and figures to illustrate important data. Avoid duplicating data in multiple formats (do not repeat in text what is already shown in a figure). Including supplementary (exploratory) material in a Registered Report is permitted but strictly controlled: Any additional analyses or studies must be reported in a separate "Exploratory analyses" section. This exploratory content must not outweigh the core pre-registered work (typically a 1:1 study ratio maximum), and authors must consult with editors regarding any major additions. Conclusions cannot be based entirely on exploratory results.

Discussion: Interpret the results, compare them with existing literature, highlight the novelty, and discuss limitations and implications. The discussion should not simply repeat results but provide meaningful interpretation.

Conclusion: Provide a concise summary of key findings and their broader relevance. Future research directions may also be mentioned.

Acknowledgments

Acknowledge individuals, institutions, or organizations that contributed to the research but do not meet the criteria for authorship. This may include technical assistance, valuable discussions, or provided resources. Authors must obtain consent from all individuals acknowledged.

Funding Information

Full disclosure of funding sources is mandatory. Authors must list the names of funding organizations and specific grant numbers. If no external funding was received, this must be explicitly stated ("This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors").

Conflict of Interest Statement

Authors are required to disclose any financial, professional, or personal conflicts of interest. If no conflicts exist, authors must include a formal statement such as: “The authors declare no conflicts of interest.”

References

All works cited in the manuscript must be included in the reference list and formatted consistently.

Completeness and Accuracy: References should be complete and accurate, including all author names, publication year, article titles, journal names, volume and issue numbers, page ranges, and Digital Object Identifier (DOI) where available.

Citation Style: Use a consistent citation style, such as APA 7. In-text citations must correspond exactly to the reference list.

Content: Authors are encouraged to cite a balanced range of sources, prioritizing recent and high-quality international literature. Unpublished work or inaccessible sources should be avoided.

Tools: To minimize formatting errors, authors are advised to use reference management tools such as EndNote, Mendeley, or Zotero.

Figures and Tables

Figures and tables should be prepared to complement the text and enhance clarity.

Figures: Submit high-resolution files (minimum 300 dpi) in formats such as JPEG, PNG, TIFF, or EPS. Each figure must have a clear, descriptive caption and be numbered consecutively. Ensure all labels, symbols, and scale bars are legible.

Tables: Create tables in an editable format (Word) rather than as images. Tables must include informative titles and explanatory footnotes when necessary.

General Guidelines for Registered Reports (RR) based on Existing Data at JMBE

JMBE considers Registered Reports (RR) that involve the secondary analysis of existing data. This typically includes publicly available, third-party datasets or compiled experimental data from prior studies. If you wish to use a large dataset that you personally collected, you must consult with the Editors before submission.

The core focus of these submissions will be the theoretical contribution and the analytical rigor of the proposed investigation.

Key Requirements for Analysis and Data

Publicly Available Data: The dataset used for the analysis must be publicly accessible.

High Analytical Standards: Given the existing nature of the data, the evaluation standard for analytical rigor is high. Authors should employ appropriate, robust statistical and computational approaches for the dataset's size and characteristics.

Model Validation: To ensure reliability, analysis plans should include robust validation methods. This requires splitting the dataset into learn/trial and test subsets. Where feasible, cross-validation is highly recommended.

Comparative Modeling: Ideally, the submission should propose a comparison of different models or analytical approaches (comparing various machine learning algorithms for materials property prediction).

Complementary Studies: If applicable and possible, authors should consider pre-registering plans for additional experimental or computational tests to complement and validate the relationships derived from the large secondary dataset.

Final Manuscript Structure and Editorial Review at JMBE

The final manuscript cannot include an Appendix; all supplementary materials (extra figures, raw data, or code) must be included in the Online Supplemental Material. The manuscript must adhere strictly to the approved plan: the Introduction and hypotheses must remain unchanged, and the Method must detail any minor deviations from the registered procedures. The Results section must clearly separate "Preregistered" findings from any "Exploratory" findings. Final editorial review focuses entirely on protocol fidelity (passing pre-approved quality checks and following registered methods), the integrity of the initial approved submission, and the justification of the conclusions. Crucially, editorial decisions are not based on the perceived impact or novelty of the results themselves, guaranteeing acceptance if the approved protocol was followed precisely.

Protocol and Publication

Transparency: Upon final submission, the data and full syntax/code (scripts for modeling and analysis) must be provided for editorial review.

Protocol Adherence: If the submission is accepted in-principle, publication is contingent on completing the analysis exactly according to the pre-registered protocol. Any deviation, regardless of how minor, must be immediately reported to the editorial board.

Exploratory Analysis: Analyses not included in the original pre-registered plan are generally not accepted for this format.

Ethical and Legal Considerations

Originality: Submissions must be original and not under consideration elsewhere.

Plagiarism: Manuscripts will be checked using plagiarism detection software. Submissions with >15% similarity (excluding references) may be rejected.

Data Transparency: Authors must ensure that data are accurately represented and available upon request.

Human and Animal Studies: Submissions involving human participants or animals must include ethical approval statements.

Conflict of Interest: Authors must disclose any potential conflicts.

Publication and Withdrawal Policies for Registered Reports

The journal publicly lists all In-Principle Acceptances (IPAs) as an advanced content record. If authors decide to withdraw their manuscript after receiving an IPA (due to technical errors or unforeseen circumstances), the entire paper must be withdrawn (partial withdrawal of registered components is not permitted). The journal will publicly log all such cases in a "Withdrawn Registrations" section, noting the title, abstract, and reason for withdrawal.

Authors have the option of Incremental Registration, allowing them to propose new experiments to add to an approved submission. These additions receive a fast-track review, particularly when following up on a major unexpected finding. If an incremental addition is rejected, authors retain the right to publish the most recently approved version of their manuscript.

The journal encourages Replication Studies, especially when they offer meaningful theoretical or empirical extensions. The policy aims to support collaboration with the original authors; if direct collaboration is not feasible, the original authors may be offered a commentary opportunity or the chance to pre-register their own replication study.

Reference Examples:

Journal Article, example:

Lee, H. J., & Patel, S. D. (2022). Synthetic pathways in protein engineering. *Journal of Molecular Engineering*, 28(2), 99–115. <https://doi.org/10.xxxx/jme.2022.02802>

Book, example:

Nguyen, T. (2020). Principles of molecular bioengineering. CRC Press.

Chapter in Edited Book, example:

Ali, R. (2021). CRISPR technologies in molecular therapy. In J. Kwon & M. Silva (Eds.), *Molecular innovations in biomedical science* (pp. 45–70). Elsevier.

Conference Paper, example:

Fernandez, L. M. (2023). Biomolecular circuit design. *Proceedings of the International Symposium on Molecular Systems Biology*, 9(1), 33–39.

Website, example: National Institutes of Health. (2024, February 18). Advances in gene-editing technologies. <https://www.nih.gov/gene-editing-advances>

Newspaper Article, example:

Morgan, A. (2023, October 10). DNA computing makes a leap forward. The Science Herald, p. D5.

Non-Latin Scripts (Transliteration Required), example:

Yamamoto, S. [山本進]. (2021). Saibō kōgaku no shintenkai [New developments in cell engineering]. Molecular Science Press.

Online Forum, Computer Network, or Dataset, example:

Human Genome Project. (2022). Gene expression dataset (Version 4.1) [Data set]. <https://data.genome.gov/hgp-v4>