TABLE OF CONTENTS

• Description p.1
• Audience p.1
• Impact Factor p.1
• Abstracting and Indexing p.2
• Editorial Board p.2
• Guide for Authors p.5

DESCRIPTION

The Journal of Molecular Biology provides high quality, comprehensive and broad coverage in all areas of molecular biology. The journal publishes original scientific research papers that provide mechanistic and functional insights and report a significant advance to the field. The journal encourages the submission of multidisciplinary studies that use complementary experimental and computational approaches to address challenging biological questions.

Research areas include but are not limited to: Biomolecular interactions, signaling networks, systems biology Cell cycle, cell growth, cell differentiation Cell death, autophagy Cell signaling and regulation Chemical biology Computational biology, in combination with experimental studies DNA replication, repair, and recombination Development, regenerative biology, mechanistic and functional studies of stem cells Epigenetics, chromatin structure and function Gene expression Membrane processes, cell surface proteins and cell–cell interactions Methodological advances, both experimental and theoretical, including databases Microbiology, virology, and interactions with the host or environment Microbiota mechanistic and functional studies Nuclear organization Post-translational modifications, proteomics Processing and function of biologically important macromolecules and complexes Molecular basis of disease RNA processing, structure and functions of non-coding RNAs, transcription Sorting, spatiotemporal organization, trafficking Structural biology Synthetic biology Translation, protein folding, chaperones, protein degradation and quality control !!! Important information for NIH authors !!!

AUDIENCE

Molecular biologists, biochemists, structural biochemists, geneticists, virologists and cell biologists.

IMPACT FACTOR

2018: 5.067 © Clarivate Analytics Journal Citation Reports 2019
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GUIDE FOR AUTHORS

INTRODUCTION
The Journal of Molecular Biology provides high quality, comprehensive and broad coverage in all areas of molecular biology. The journal publishes original scientific research papers that provide functional and mechanistic insights and report a significant advance to the field. The journal encourages the submission of multidisciplinary studies that use complementary experimental and computational approaches to address challenging biological questions.

In addition to research Communications and Articles, the journal welcomes submission of Methods Notes Databases/ Web Servers, Brevia, Perspectives and Reviews

Research areas include but are not limited to: DNA replication, repair and recombination, gene expression, epigenetics and chromatin structure and function, RNA processing, functions of non coding RNAs, transcription, Structure, chemistry, processing and function of biologically important macromolecules and complexes, Biomolecular interactions, systems biology, Computational biology, Translation, protein folding, processing and degradation, Sorting, spatiotemporal organization, trafficking, signal transduction and intracellular signaling, Membrane processes, cell surface proteins and cell-cell interactions, Molecular basis of disease, Methodological advances, both experimental and theoretical, including databases.

The Journal will not, as a rule, publish papers which fall outside the areas defined above.

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As soon as the paper has been reviewed, the corresponding author will receive a decision letter from the Editor. Revised manuscripts and correspondence concerning such manuscripts should be addressed to the Editor at the address indicated on the decision letter.

The Journal of Molecular Biology discourages authors from submitting multiple manuscripts on closely related topics. Submission of two or more related manuscripts intended for simultaneous publication will be permitted only under exceptional circumstances. Authors wishing to submit related manuscripts must obtain prior permission from the Editors.

The Board will editorially reject papers, without outside review, if in their opinion the paper falls outside the scope of papers normally published by JMB, if the paper lacks originality, or if the paper fails to meet expected technical standards. The following specific points are brought to the attention of authors:
(a) **Originality.** The Board will reject those papers that it considers to provide only slight or incremental advances over previously published material.

(b) **Methodology papers.** Papers that deal only with new methods and do not contain important new results discovered by means of these methods will be accepted only when the general applicability and interest of the method are immediately obvious and clearly documented in the manuscript. Improvements on existing methods will in general be viewed as appropriate to more specialized journals unless it can be shown that they lead to important new insights that were not accessible with current technologies.

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(e) **Modeled structures.** Papers describing modeled structures will in general be considered only if they provide novel and important biological insights. The reliability of the model must be clearly documented, including evidence that the expected accuracy level of the model is consistent with the application that is described. This could be based, for example, on the known success rate of the modeling procedure at specified levels of sequence identity, or the application of model validation procedures. Validation of the model through experimental tests is always desirable.

(f) **Theory and computer simulation.** Papers reporting theoretical studies should have direct applicability to experimental work in a field normally represented in papers published in JMB or should address issues of current interest to the broader biological community. As a general rule, all theory papers should deal directly with experimental data; the papers should provide predictions that are testable experimentally or provide an interpretation of experimental observations. Papers describing computer simulations are generally acceptable only if they provide new insights of high biological significance or lead to novel interpretations of experimental data. As is the case for modeled structures, evidence must be provided that the accuracy level of the method is consistent with the application that is described. This might involve, for example, control simulations on systems that have been well-characterized experimentally.

(g) **Database papers.** Papers describing biological or molecular databases will be considered if they report important new results discovered by means of that database, or if the database permits novel integration of biological information that will be of general applicability and lead to important new insights. The biological principles used in the construction of the database must be clearly documented in the paper.

(h) **Preprints.** Authors are required to disclose in their cover letter if their manuscript has been previously posted on a preprint server.

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Papers dealing with amino acid sequences of proteins or with nucleotide sequences must carry a statement that the data have been deposited with an appropriate data bank, e.g., the European Molecular Biology Laboratory (EMBL) or GenBank Data Libraries. The data base accession number must be given at the end of the Materials and Methods section of the manuscript under the separate heading 'Accession numbers'. For example: Coordinates and structure factors have been deposited in the Protein Data Bank with accession number 2XYZ. Lengthy nucleotide sequences will be published only if, in the judgement of the Editorial Board, these results are of general interest and importance.

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For papers describing structures of biological macromolecules, the atomic coordinates and the related experimental data (structure factor amplitudes/intensities and/or NMR restraints) must be deposited at a member site of the Worldwide Protein Data Bank (http://www.wwpdb.org): RCSB PDB (http://www.pdb.org), MSD-EBI (http://www.ebi.ac.uk/pdbe/), PDBj (http://www.pdbj.org), or BMRB (http://www.bmrb.wisc.edu). Manuscripts must carry a statement that coordinates and structure factors (or NMR restraints) have been deposited in the Protein Data Bank. The accession number(s) must be cited in the manuscript at the end of the Materials and Methods section. Authors must agree to release the atomic coordinates and experimental data immediately upon publication. Small angle scattering (Small angle X-ray and neutron scattering (SAXS and SANS)) data and structural models must be deposited at SASBDB (https://www.sasbdb.org/) prior to submission. The database accession numbers must be cited in the manuscript and authors must agree to release the experimental data and structural models immediately upon publication.

For papers reporting structures determined by electron microscopy, the 3D map must be deposited at the EMBL-EMBL or RCSB EMDB site (http://www.emdatabank.org). The fitted atomic coordinates must be deposited at a member site of the Worldwide Protein Data Bank (see links above). The database accession numbers must be cited in the manuscript and authors must agree to release the atomic coordinates and experimental data immediately upon publication.

It is increasingly common for coordinates to be deposited in the Protein Data Bank without an associated publication. Before submission to JMB, authors are expected to search the Protein Data Bank for related structures using one or more alignment programs and report the outcome. Prior deposition of related coordinates, without an associated publication, does not necessarily preclude publication in JMB. The primary criteria for publication of a structure in JMB are that it provides novel structural insights or important new functional and biological insights that are likely to be of general interest.

You can enrich your online articles by providing 3D molecular models (optional) in PDB, PSE or MOL/MOL2 format, which will be visualized using the interactive viewer embedded within the article. Using the viewer, it will be possible to zoom into the model, rotate and pan the model, and change display settings. Submitted models will also be available for downloading from your online article on ScienceDirect. Each molecular model will have to be uploaded to the online submission system separately, via the "3D molecular models" submission category. For more information see: www.elsevier.com/3DMolecularModels.

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NMR assignment data must be deposited in the BioMagResBank (BMRB; http://www.bmrb.wisc.edu). The accession number(s) must be cited in the manuscript at the end of the Materials and Methods section. Tables listing resonance assignments will not be published in the Journal but may be deposited as Supplemental data that will be actively linked to the online version of the paper. Supplemental data must be included with the manuscript submitted for review (see below for full instructions).

**Cell lines**

In keeping with NIH guidelines, the Journal considers it to be good practice for cultured cell lines to be authenticated. A description of the methods used to authenticate cells should be included in the Materials and Methods section. Authors are expected to check that cell lines used in their experiments are free from mycoplasma infections.

**Types of paper**

The Journal of Molecular Biology will publish full Articles, Communications, Reviews, Perspectives, Brevia, Methods Notes, Databases/ Web Servers.
Articles are not limited in length but the editors recommend that in most cases they should be no longer than 15 printed pages with no more than 10 figures and 4 tables. Note that 1 printed page is roughly equivalent to 2.5 pages in a Word document using double spacing and Arial Font 11.

Communications are brief papers that make a specific well-documented point. In general, a Communication should include no more than four figures and tables. The text will be continuous, with technical and methodological detail printed in the legend to the tables and figures.

Reviews are scholarly and balanced accounts of progress in fields of interest to the general reader. Reviews should be no longer than 12 printed pages and with no more than 12 figures and tables. Authorship is normally by invitation: an Editor should be consulted in advance by anyone wishing to submit an unsolicited Review.

Perspectives are brief reviews that present a sharply focused view of a rapidly advancing area of research. Authorship is normally by invitation: the Editor-in-Chief or Scientific Editor should be consulted in advance by anyone wishing to submit an unsolicited Perspective.

Brevia are brief notes that report a specific well-documented result. Brevia are limited to a single page, including references and captions, and contain only one figure or table. Details of methods must be provided as Supplemental Material.

Methods Notes report novel methods of immediate and general interest and applicability. Methods Notes are limited to 5 pages, including references and captions, with a maximum of 3 displayed items (figures or tables). Additional details required to implement the new method must be provided as Supplemental Material. Preliminary enquiries about the suitability of a submission to this section are encouraged.

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