



# COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY - PART B: BIOCHEMISTRY & MOLECULAR BIOLOGY

An International Journal

## AUTHOR INFORMATION PACK

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### DESCRIPTION

*Comparative Biochemistry & Physiology (CBP)* publishes papers in comparative, environmental and evolutionary physiology.

**Part B: Biochemical and Molecular Biology (CBPB)**, focuses on biochemical physiology, primarily bioenergetics/energy metabolism, cell biology, cellular stress responses, enzymology, intermediary metabolism, macromolecular structure and function, gene regulation, evolutionary genetics. Most studies focus on biochemical or molecular analyses that have clear ramifications for physiological processes.

All four *CBP* journals support and follow the editorial direction from all the major societies in the field: Australia & New Zealand Society of Comparative Physiology and Biochemistry (ANZSCPB) American Physiological Society (APS) Canadian Society of Zoologists (CSZ) Deutsche Zoologische Gesellschaft (DZG) European Society of Comparative Physiology and Biochemistry (ESCPB) Japanese Society for Comparative Physiology and Biochemistry (JSCPB) South American Society for Comparative Physiology and Biochemistry (SASCPB) Societe de Physiologie (SDP) Society for Experimental Biology (SEB) Society for Integrative & Comparative Biology (SICB)

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[Part A \(CBPA\): Molecular & Integrative Physiology](#)

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## AUDIENCE

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Physiologists, Biochemists, Biologists, Veterinary and Medical Researchers.

## IMPACT FACTOR

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## GUIDE FOR AUTHORS

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### INTRODUCTION

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The journal publishes original articles emphasizing comparative and environmental aspects of the physiology, biochemistry, molecular biology, pharmacology, toxicology and endocrinology of animals. Adaptation and evolution as organizing principles are encouraged. Studies on other organisms will be considered if approached in a comparative context.

**Part A. Molecular and Integrative Physiology** covers molecular, cellular, integrative, and ecological physiology. Topics include bioenergetics, circulation, development, excretion, ion regulation, endocrinology, neurobiology, nutrition, respiration, and thermal biology. Studies on regulatory mechanisms at any level or organization such as signal transduction and cellular interactions and control of behaviour are encouraged.

**Part B. Biochemistry and Molecular Biology** covers biochemical and molecular biological aspects of metabolism, enzymology, regulation, nutrition, signal transduction, promoters, gene structure and regulation, metabolite and cell constituents, macromolecular structures, adaptational mechanisms and evolutionary principles.

**Part C. Toxicology and Pharmacology** covers chemical and drug action at different levels of organization, biotransformation of xenobiotics, mechanisms of toxicity, including reactive oxygen species and carcinogenesis, endocrine disruptors, natural products chemistry, and signal transduction. A molecular approach to these fields is encouraged. Measured rather than nominal exposure concentrations of toxicants must be reported whenever possible. For water-borne exposures of aquatic organisms, reporting of detailed chemistry data for the exposure waters is encouraged. When reporting data obtained from bioassays (e.g., LC50 tests), raw data (i.e., the value of the measured biological response variable(s) for each treatment and each observation time) should be submitted as online supplementary material.

**Part D. Genomics and Proteomics** covers the broader comprehensive approaches to comparative biochemistry and physiology that can be generally termed as "-omics", e.g., genomics, functional genomics (transcriptomics), proteomics, metabolomics, and underlying bioinformatics. Papers dealing with fundamental aspects and hypotheses in comparative physiology and biochemistry are encouraged rather than studies whose main focus is purely technical or methodological.

Naturally, a certain degree of overlap exists between the different sections, and the final decision as to where a particular manuscript will be published after passing the rigorous review process lies with the editorial office.

### *Types of articles published in CBP journals*

A **Research Paper** is a paper that focuses on an experimental question of broad interest to the comparative physiology community.

- Word count (excluding references): typically 4000 -8000 words, with at least 2 figures / tables.
- Papers are normally subdivided into sections titled: Abstract, Introduction, Materials and Methods, Results, Discussion, and References. Results and discussion may be combined if appropriate.

A **Short Communication** is like a Regular Article in scope, but is of a nature that a complete story can be presented in a brief communication. As Short Communications are expected to have higher than average impact on the field rather than report on incremental research, they will receive prioritized and rapid publication.

- Word count: less than 3000 words, with no more than 2 figures / tables.
- Each paper will begin with "Short Communication:" followed by the title.
- The paper includes an Abstract, but is otherwise not subdivided into sections.

A **Methods** article is focused on applying a novel technology or approach that would inform the CBP readership about a novel technology applied to a comparative physiology question.

- Word count: typically less than 3000 words, with no more than 2 figures / tables.
- Each paper will begin with "Methods:" followed by the title.

- The paper is subdivided into abstract, background, methods, applications.

An **Invited Review** is a submission that is solicited by an Editor-in-Chief, Associate Editor or member of the Editorial Board. An invited review is published with free access for the first year.

- Word count: typically 6,000- 10,000, with 2 or more figures / tables.
- Each paper will begin with "Invited Review:" followed by the title.

A **Review** article can be submitted without a specific invitation, but authors are encouraged to request input from the appropriate Editor-in-Chief to ensure that the paper falls within the scope of the journal. Each paper will begin with "Review" followed by the title. The paper is not subdivided into sections. A review is published with free access for the first year.

- Word count: typically 6,000- 10,000 words, with 2-4 figures or tables
- Each paper will begin with "Review:" followed by the title.

A **Commentary** is a more narrowly written review, typically focused on a specific concept of immediate importance to the discipline. While it is expected that authors survey the peer-reviewed literature on the subject, a Commentary paper offers more room for more speculative consideration of a topic. Authors are advised to contact the Editor-in-Chief to determine if your topic is suitable.

- Word count: less than 3000 words, with no more than 2 figures / tables.
- Each paper will begin with "Commentary:" followed by the title.
- The paper is not normally subdivided into sections

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## **PREPARATION**

### **Peer review**

This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of one independent expert reviewer to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. [More information on types of peer review](#).

### *Use of word processing software*

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text graphics will be required for publication, but are not needed during the review process. Most word-processing programmes (Word, Word-Perfect, OpenOffice, LibreOffice, etc.) possess built in PDF makers. Resulting PDF files should be checked very carefully, especially for transposition of mathematical and other symbols and non-standard characters. SI units must be used.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

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### *Introduction*

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

### *Material and methods*

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

### *Statistics*

Submissions are incomplete without detailed information on independent replication of experiments, statistical approaches and statistical analysis.

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A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

### *Results*

Results should be clear and concise.

### *Discussion*

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

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The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

### *Appendices*

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

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The abstract should be a single paragraph not exceeding 250 words.

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Up to eight key words, which may or may not appear in the title, should be listed in alphabetical order after the abstract. Only these key words, together with the title, will be used for indexing purposes.

### **Keywords**

Authors should supply five keywords after the Abstract. Please take the time to choose your keywords as they increase the discoverability of your article via search engines. They should not be words from the title or the abstract specifically because that would not improve the discoverability.

### **Abbreviations**

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

### **Acknowledgements**

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

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Hiramatsu, N., Cheek, A.O., Sullivan, C.V., Matsubara, T., Hara, A., 2005. Vitellogenesis and endocrine disruption. In: Mommsen, T.P., Moon, T.W. (Eds.), *Biochemistry and Molecular Biology of Fishes*, vol. 6. Environmental Toxicology, Elsevier, Amsterdam, pp. 431-471.

Lushchak, V.I. 2011. Adaptive response to oxidative stress: Bacteria, fungi, plants and animals. *Comp. Biochem. Physiol. C* 153, 175-190.

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