



# COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY - PART C: TOXICOLOGY & PHARMACOLOGY

An International Journal

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### DESCRIPTION

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

*Part C: Toxicology and Pharmacology*, focuses on toxicological mechanisms at different levels of organization, primarily chemical and drug action, biotransformation of xenobiotics, endocrine disruptors, nanoparticles, pharmaceuticals, and natural products chemistry. Most studies employ a molecular approach in combination with observations of higher levels of organization to assess the mechanism by which xenobiotics affect physiology. Analytical verification of exposure concentrations is strongly recommended for manuscripts reporting toxicological studies.

All four CBP journals, receive editorial direction from all the major societies in the field [European Society for Comparative Physiology and Biochemistry](#), [Chinese Association for Physiological Sciences](#), [Japanese Society for Comparative Physiology and Biochemistry](#), [Canadian Society of Zoologists \(CBP Section\)](#), [Society for Experimental Biology](#), (formerly the [American Society for Zoologists](#)) [Society for Integrative and Comparative Biology](#), [Australian and New Zealand Society for Comparative Physiology and Biochemistry](#), [Russian Physiological Society](#).

Part A: Molecular & Integrative Physiology

Part B: Biochemistry & Molecular Biology

Part D: Genomics & Proteomics

### AUDIENCE

Physiologists, Toxicologists, Pharmacologists, Biologists, Veterinary and Medical Researchers.

### IMPACT FACTOR

2018: 2.697 © Clarivate Analytics Journal Citation Reports 2019

## ABSTRACTING AND INDEXING

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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.

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- 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**

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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*

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### *Theory/calculation*

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.

### *Conclusions*

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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Highlights are optional yet highly encouraged for this journal, as they increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: [example Highlights](#).

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

## **Abstract**

A concise and factual abstract of a maximum of 250 words is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

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

## **Graphical Abstract**

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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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