DESCRIPTION

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

Part B: Biochemical and Molecular Biology, 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, 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.

AUDIENCE

Physiologists, Biochemists, Biologists, Veterinary and Medical Researchers.

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Ecology and evolution, diabetes

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Metal homeostasis, fish physiology, cell biology, molecular ecotoxicology

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Fish physiology and biochemistry, adaptations to cold temperature, bioenergetics

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Effects of climate warming, ocean acidification, and hypoxia on marine animals and ecosystems

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Fish, aquatic invertebrates, amphibians, olfaction, chemical communication, behaviour, chemosensory neurophysiology, aquatic ecotoxicology, metals, oil sands, hydrocarbons

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Molecular mechanisms of cellular responses to environmental stress

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Ecotoxicology, effects of environmental stressors on aquatic organisms

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Comparative animal physiology, neuroethology, cellular neurobiology, insect behavior

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Fatty acid metabolism, metabolic biochemistry, thermoregulation

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Molecular biology, biochemistry, physiology, genomics, population genetics, evolutionary biology

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Physiological ecology, evolutionary physiology, thermal biology, heat transfer, ectothermy, endothermy, cardiac function, heart rate, reptiles, crocodilians, dinosaurs, lizard

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Aquatic ecotoxicology, cytoprotective systems, hormone-active chemicals

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Environmental physiology and toxicology of marine organisms, adaptation to environmental stressors, effects of environmental change

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Biochemical and physiological adaptation to physical and chemical stressors

James Staples, University of Western Ontario, London, Ontario, Canada
Hibernation metabolism

Tomohiko Suzuki, Kochi University, Kochi, Japan
Fish biology, receptors, fish migration

Akihiro Takemura, University of the Ryukyus, Okinawa, Japan
Aquaculture, biological rhythm, circadian, coral reef, fish, gonadotropin, lunar cycle, melatonin, ovary, reproduction, sex steroids, tide, Internal and external regulation of enigmatic rhythms in fish and marine invertebrates, reproductive physiology, biological clock

Glen Van Der Kraak, University of Guelph, Guelph, Ontario, Canada
Reproductive physiology, endocrine disruption

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Cellular and molecular mechanisms of stress tolerance

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Fish endocrinology and reproduction, Sex determination and differentiation, Sex steroids

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Metabolic rate, thermogenesis, thermoregulation, thermal physiology, energy metabolism, mammals

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Marine Genomics, Genome Sequencing, Genotyping, Gene Expression, Epigenetics, Evolution, Shellfish

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Tobias Wang, Aarhus University, Århus C, Denmark

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Human cellular physiology, comparative animal physiology, ecological physiology, comparative biochemistry

Shugo Watabe, Kitasato University, Kanagawa, Japan
Muscle biochemistry, environmental adaptation, marine genomics and biotechnology

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Genomics, comparative genomics

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Comparative physiology, amphibians and reptiles, metabolism, thermoregulation, water and solute balance, phylogenetic methods, biostatistics

Tianjun Xu, Shanghai Ocean University, Shanghai, China
Innate immune; Signaling pathway; Molecular regulation; Immune gene evolution; Non-coding RNA; microRNA

Tania Zenteno-Savín, Centro de Investigaciones Biologicas del Noroeste, S.C. (CIBNOR), Playa Palo Santa Rita, La Paz, Baja California Sur, Mexico
Oxidative stress
GUIDE FOR AUTHORS

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.

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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.

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• Word count: less than 3000 words, with no more than 2 figures / tables.
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