

## Structure requirements for IJBCB articles

For each article type, IJBCB has its own demands regarding article structure. Please ensure your submission meets the requirements for the specific article type you are submitting.

The journal publishes

- Short communications (no invitation required, up to 3,000 words)
- Regular articles (no invitation required, up to 5,000 words)
- Full-length reviews (upon invitation, 5,000 – 7,000 words)
- ‘In Focus’ articles (upon invitation, up to 2,000 words)

Word counts are exclusive of references.

For more information regarding the peer review process of the various article types, please refer to the journal’s [Peer Review Policy](#).

### **Regular articles**

*Regular articles* should, in addition to an abstract and a reference list, contain the following sections: Introduction, Materials and Methods, Results, Discussion, Conclusions.

The abstract of a regular article should not contain more than 250 words. In addition to a regular abstract, a graphical abstract may be submitted.

The author may, but is not obliged to, submit a brief bulleted list of ‘Highlights’, which will be published under the abstract.

#### *Introduction*

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

#### *Materials and Methods*

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

#### *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.

## **IJBCB Preparation of Full-length Reviews**

**General.** All Full-length Reviews are by invitation and are commissioned by the Reviews Editor. Invited authors are recognised experts who are active researchers in their field. All reviews are peer-reviewed by an Editorial Board member and one to two external reviewers according to the peer-review policies of IJBCB. In general two Full-length Reviews are published in each regular issue of IJBCB. Authors who contribute a Review in this series cannot be re-invited for at least two years after publication.

**Scope and Purpose.** The intent of the Full-length Reviews Articles section of IJBCB is highlight major developments in modern biochemistry and cell biology and their relevance to physiology and medicine. Each Review serves as a vehicle to bring a balanced, rigorous, and accurate appraisal of current knowledge in the area to the broad readership of IJBCB. In surveying the area, open questions, anomalies and directions for future research may be highlighted, such that the Review provides a stimulus for further research.

### **Format Requirements.**

**Length.** The guideline is 5,000-7,000 words excluding references. Prospective authors should consult with the Reviews Editor if they think that a shorter - or somewhat longer - format is more appropriate for the topic of their Review.

**Title page.** The title page should include a running title (maximum 50 characters), list of 5 keywords, the address and email address of the corresponding author, and a list of any abbreviations used in the Review.

**Abstract:** 250 words maximum. The Abstract should include a clear statement of the scope and purpose of the Review. It should also indicate the context of the topic within the areas of cell biology and biochemistry and its physiological and/or medical relevance.

**Introductory section.** Each Review should begin with a short Introductory section that provides a background that will make the topic area accessible to non-specialists. Any specific terms or nomenclature essential to understanding the area and the topics to be critically discussed in the main part of the review should be introduced. A historical perspective, or inclusion of a diagram or table, may be appropriate.

**The main part of the Review.** Use of subheadings to define the main points of the Review is required. Subheadings should be made clear using uppercase, bold and italics. Within each major section, any subsection may be given a brief heading. Each heading should appear on its own separate line. Acronyms should not be used in subheadings. The overall presentation should be clear and succinct without repetition. Figures and tables should be brought in as necessary to make current knowledge coherent and accessible, and to assist the clarity and effectiveness of the presentation. All statements of current knowledge should be supported by appropriated citation of the literature. Literature citations should be balanced and unbiased and accurately reflect ongoing research in the area. While one of the purposes of a Review is to discuss with rigor the current uncertainties, ideas, and questions, the text should clearly distinguish experimentally-based knowledge from ideas and speculations. Extended, unsupported lines of speculation are discouraged. The Review should survey current knowledge from published literature, in the public domain (e.g., extracted from public sequence databases), or already in press: it is not appropriate for authors to describe unpublished experiments from their laboratories.

**Final section.** The Review should end with a short section of "Conclusions" or "Future prospects", in which the main new concepts and conclusions that are emerging on the basis of the current knowledge surveyed in the Review are brought together, along with any major open questions and future prospects or directions. The purpose of this section is to make a definite summary and to articulate ongoing or new questions: repetition with the main part of the Review is to be avoided.

**Figures and Tables.** The use of figures and tables is expected. Figures must conform to the Journal guidelines for preparation of illustrations. Dense information, (e.g., the sites of expression of a protein as compiled from multiple publications), can be communicated most effectively in a Table. Colour figure are reproduced free of charge in the print edition for all commissioned reviews. All colour figures are reproduced free of charge in the web edition. No formal limit is set on the total numbers of figures and tables that can be included with a Full-length Review, but the complete article (text, figures, tables and reference list) should not take up more than 10 printed pages of the Journal.

### **In Focus articles**

Articles in the *In Focus* series are intended as a reference and teaching aid, highlighting new developments.

To ensure coverage of key areas and aid accessibility, articles should follow strict requirements regarding article structure, as indicated in the following.

For each of the In Focus series, articles should follow a strictly defined structure, as indicated below for each of the In Focus series. In addition, the article should meet the following requirements regarding abstract, reference list and figures:

- The abstract should contain up to 150 words. Acronyms should not be used in the abstract.
- Below the abstract, the author should provide a bulleted list of key ‘facts’ about the discussed cell, pathogen, signalling network, molecule or disease.
- The reference list should not contain more than 30 references, and contain 2 or 3 reviews plus a number of original articles.
- Each article should contain 2 figures. Each figure should have a caption summarizing the main points conveyed by the figure.
- The article should list 3-4 keywords

### *Cells in Focus*

In addition to an abstract and a reference list, Cells in Focus articles should contain the sections listed below.

The sections in a Cells in Focus article should be:

#### *Cell Facts*

Cell facts are a set of bulleted key and interesting facts about the cell, listed below the abstracts (similar to ‘Research Highlights’), e.g.

- Osteoblasts are the cells responsible for bone formation
- Osteoblasts indirectly control levels of bone resorption
- Osteoblasts play a key role in the pathophysiology of osteoporosis and the resulting fractures, which constitute a major public health burden in developed countries

#### *Introduction*

Set the background by giving the name(s) of the cell, its main morphological features and details of its discovery if appropriate.

#### *Cell origin and plasticity*

This section details the ontogeny of the cell and differentiation pathways. If appropriate, the capacity of the cell to de-differentiate is described.

#### *Functions*

Give details of specialised cell functions, with the emphasis on recent discoveries. A clear diagram highlighting key functions should also be included and referred to in this section.

### *Associated pathologies*

Outline known pathologies associated with the cell in focus. Include history of discovery if appropriate. Review current therapies directed at cell functions and discuss their successes and limitations. Any new approaches to therapy emanating from recent research should be highlighted. This paragraph may be as provocative as you see fit.

Figures can be for example one scanning electron micrograph of the cell and a diagram illustrating differentiation pathways or summarizing cell functions.

### ***Medicine in Focus***

'Medicine in Focus' provides concise information on the pathogenesis of a specific disease. The articles focus on the underlying biochemistry and cell biology of the disease processes. New developments are highlighted as well as any possible therapeutic applications coming from these studies.

### *Title*

Both the title and the abstract of a Medicine in Focus article should start with the name of the disease. If in the title you wish to highlight a particular theme covered, this can be done with a short phrase after a semi-colon, e.g. Sepsis: cell signalling as a target for new therapy.

### *Abstract*

The abstract should start with the name of the disease and should outline current concepts of pathogenesis and then describe the novel ideas and themes developed in this review. The final sentence of the abstract should mention possible implications of these developments for new therapeutic approaches.

In addition to an abstract and a reference list, Medicine in Focus articles should contain an Introduction, a Pathogenesis section, and a Therapy section.

### *Introduction*

Set the background by giving the name of the disease and key clinical features. Some history of discovery and/or epidemiology should be included.

### *Pathogenesis*

Give details of current concepts in pathogenesis with information at the protein and gene level. Further sub-headings may well be appropriate for this section. A clear diagram or flow chart, should be referred to in this section. Themes developed should be clearly outlined (diagram), such as 'Recent developments in...'

### *Therapy*

This section should review current therapy, the targets of this and discuss its success and limitations. Any new approaches emanating from recent research should be highlighted. This paragraph may be as provocative as you see fit. A diagram highlighting key functions should also be included and referred to in this section.

### ***Molecules in Focus***

'Molecules in Focus' provides concise information on the molecules of contemporary scientific interest. These articles describe the structure and function of important molecules in biochemistry. In most cases these will be recently discovered molecules for which there are rapid developments through molecules discovered some time ago, which are still the subject of research and new discovery, will also be addressed.

### *Title*

The title must start with the name of the molecule or molecule family. If you wish to highlight a particular theme covered, this can be done with a short phrase after a semi-colon, e.g. Radixin: Cytoskeletal adaptor and signalling protein.

Of the two figures in the article, one should show the molecule's structure and one the molecule's function.

In addition to the abstract and the reference list, sections of a Molecules in Focus article should be 'Introduction', 'Structure', 'Expression, activation and turnover', 'Biological function' and 'Possible medical and industrial applications', as described hereunder.

### *Introduction*

Set the background by giving the name of the molecule (with synonyms), date and context of its discovery if available.

### *Structure*

Give details with information at the protein and gene level. A clear diagram, professionally drawn should be referred to in this section.

### *Expression, activation and turnover*

Outline pathways of synthesis and degradation and their control. Discuss sites of synthesis (i.e. cells involved) if known.

### *Biological function*

If functions are uncertain, say so, but give current speculations. This paragraph may be as provocative as you see fit. A diagram highlighting key functions should also be included. If data on "knockouts" is available, it should be referred to in this section.

### *Possible medical and industrial applications*

For this section, the author may change the title as appropriate. The section should detail pathologies or metabolic disorders associated with the molecule, matched, if appropriate, to a clinical manifestation with the biochemical defect. If the molecule has potential commercial/industrial uses this should be alluded to in this section.

### *Signalling Networks in Focus*

Signalling Networks in Focus should highlight new developments in signalling pathway biology, detailing the pathway's components and important cascades. The article should also cover its function, molecules/inhibitors, cell and tissue type specificity, and associated pathologies. All authors should include a section presenting the signalling network described as a (putative) therapeutic target.

### *Title*

The title should start with the name of the signalling network and should highlight any recent discoveries, novel therapeutic potential associated with the given signalling pathway, or any potential targets in the pathway. This should be done with a short and possibly witty phrase after a semi-colon e.g. IGF signalling: From aging flies to dwarf mice.

In addition to an abstract and a reference list, Signalling Networks in Focus articles should contain the sections 'Signalling Network Facts', 'Introduction', 'Functions', 'Cascades', 'Key molecules', and 'Associated pathologies and therapeutic implications', as described below.

Each article should have two figures of high quality. The first figure should usually show how the signalling pathway and how it fits into the wider scheme of cell signalling and cell function. As such it would likely illustrate a complete pathway from the cell surface to the nucleus showing possible effects on gene function. The second figure should focus in more detail on the specific network and the themes covered in the title. Both figures are intended as a teaching aid around which the rest of the detail can revolve and should visually flow from beginning to end.

### *Signalling Network Facts*

- To be listed below the abstract, as a set of bulleted key and interesting facts about the signalling network. The last bullet point should list important websites that give additional insight into crosstalks. E.g.
- MAPK signalling pathways modulate IL-1 expression in human keratinocytes
- MAPKs directly control gene expression by phosphorylating transcription factors
- MAPKs are activated by phosphorylation on Thr and Tyr by dual-specificity MAP kinase kinases (MAPKK), which in turn are activated by Ser/Thr phosphorylation by MAP kinase kinase kinases
- Further insight into MAPK signalling can be found at <http://geo.nihs.go.jp/csndb/>

### *Introduction*

Set the background by giving the name(s) of the signalling network, its main features and details of its discovery if appropriate.

### *Functions*

Give details of specialised pathway functions, with the emphasis on recent discoveries. A clear diagram highlighting key functions should also be included and referred to in this section.

### *Cascades*

Summarise the most crucial cascades or pathways within the network. This section should include recent advances in our understanding of the pathways and cascades and should be accompanied by a figure.

### *Key molecules*

Discuss the key molecules, hormones, inhibitors and receptors that are important for the regulation of the signalling network, emphasising recent research.

### *Associated pathologies and therapeutic implications*

Outline known pathologies associated with the signalling network. Include history of discovery if appropriate. Review current therapies directed at the network functions and discuss their successes and limitations. Any new approaches to therapy emanating from recent research should be highlighted. This paragraph may be as provocative as you see fit.

### ***Organelles in Focus***

Articles in the Organelles In Focus section are short articles of fundamental science highlighting new developments in biology, physiology, pathology and biotechnology of cellular organelles.

Topics of particular interest are: organellar structure and dynamics, genetics and evolution, membrane biogenesis and turnover, functional regulation and inter-organellar cross-talk. Organelles in Focus features articles on mitochondria, autophagosomes, endosomes, Golgi apparatus, endoplasmic reticulum, cytoskeleton, peroxisomes, nucleus, and lysosomes.

In addition to an abstract and a reference list, articles should contain the sections 'Organelle Facts', 'Introduction', 'Organelle function', 'Cell Physiology', 'Organelle Pathology' and 'Future Outlook'.

### *Title*

The title should start with the name of the organelle(s) in capital letters followed, after a semi-colon, by the title of the article (e.g., MITOCHONDRIA: Sirtuin 1 promotes



mitochondrial biogenesis during exercise-training). The title should highlight the molecular mechanisms investigated in the article, and possible links with physiology and pathology.

### *Abstract*

We require a few introductory sentences on the biology of the organelle followed by a summary of the key themes and conclusions of the article. If there are possible implications for commercial exploitation or medical treatment this should be alluded to in the final sentence.

### *Organelle facts*

To be listed below the abstract, as a bulleted list of six key facts about the organelle and the physiological aspects detailed in the article. For example:

- Mitochondria produce the vital energy in the form of ATP
- The mitochondrial compartment is organized as a dynamic network capable of fusion and fission.
- Mitochondrial diseases encompass a wide spectrum of neuromuscular disorders (>140 syndromes).
- Mitochondrial biogenesis requires the coordinated synthesis of proteins encoded by mtDNA and nuclear DNA.
- Mitochondrial biogenesis is altered in several metabolic diseases, such as type 2 diabetes, mitochondrial diseases and cancer.
- Exercise training, cold and caloric restriction stimulate mitochondrial biogenesis.

### *Introduction*

In this section, authors should overview the key concepts of the article and highlight the article's importance for advancing the basic knowledge of the organelle biology and pathology.

### *Organelle function*

This section presents the biological function of the organelle featured in the article (e.g. "Mitochondrial ATP synthesis" and "Mitochondrial calcium signalling"). This section should indicate the biochemical mechanisms involved in this function, present the main molecular players, and summarise the current theories and controversies associated with these mechanisms.

### *Cell Physiology*

This section should describe the link between the organellar function (described above) and cell physiology (e.g., interaction between the cell cycle and mitochondrial dynamics).

### *Organelle Pathology*

This section should outline the known pathologies associated with the featured organelle function, and discuss possible therapies.

### *Future Outlook*

Indicate the information needed in basic science to better understand the biological processes described in the article and propose means to acquire this knowledge.