

AUTHOR INSTRUCTIONS

Microphysiological Systems (MPS; ISSN 2616-275X) is an international, peer-reviewed journal featuring insights and updates on the developments of in vitro tissue and organ models that can be used for applications ranging from biological studies to areas such as regenerative engineering, organs-on-chips, pharmaceutical and pharmacological screening, nanomedicine evaluation, and environmental toxin assessment.

MANUSCRIPT CATEGORIES

Research Article

Research Articles are those describing original research. Abstract is limited to 250 words. The main text should be structured in sections including introduction, materials and methods, results and discussions, conclusions, acknowledgments, conflict of interest, and author contributions, followed by references, and supporting information if any. Typically, at least five figures should be contained to form a coherent story centered on the important findings of the research with a length of 5000–8000 words. Meta-analysis will be categorized into this type.

Communication

Communications are reports of original research that are highly innovative and time-sensitive. They are structured similarly with Research Articles but are generally shorter focused on validation of concepts, usually containing no more than three figures and 4000 words.

Review

Reviews are timely, in-depth discussions of particular fields of choices. They should provide general overviews of the selected topics, including summaries of recent developments, discussions of their importance, perspectives of future advancements, and guidance to the relevant literature. Manuscripts should be at least 5000 words and less than 10000 words, while exceptions for longer contributions may be made at the discretion of the Editor-in-Chief. Passport-type photos and short biographies (75 words maximum) of up to three authors can be included.

Reviews are generally solicited by the editors, but unsolicited contributions may be considered if the qualities meet the requirement of the journal. Both solicited and unsolicited review articles will undergo the peer review process prior to acceptance.

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Progress Reports highlight recent progresses in the authors' own research groups. Manuscripts do not have word limit but they should reflect comprehensive analyses of the research groups' recent contributions to the respective fields. Passport-type photos and short biographies (75 words maximum) of up to three authors can be included. Progress Reports are solicited by the editors and unsolicited contributions will not be considered.

Editorial

Editorials are contributed by recognized leader(s) in the field, solicited by the Editor-in-Chief and Associate Editors. Length should be 2,500 words maximum for the main text with no more than 25 references and no more than two figures/tables. No abstracts are required.

Editorial Commentary

The Editors will invite an expert in the field to discuss a paper or report or event within the past few months or so, or in the near future and provide a commentary on the importance of each accepted paper to outline its strengths and weaknesses. It should set the problems addressed by the paper/report/event in the wider context of the field. Length should be 2,500 words maximum for the main text with no more than 25 references and no more than two figures/tables. No abstracts are required.

MANUSCRIPT PREPARATION

MPS only accepts manuscripts that have not been published by and are not under consideration concurrently at any other journals. All articles are submitted electronically in word formats (.doc or .docx). The page layout should be set as A4 or letter-size paper with margins of at least 1 inch

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Title Page

The title page should contain the following information in order:

- a) The **Title** of the article, which should be as succinct as possible. The first letter of each word, unless prepositions, should be capitalized.
- b) The **Author List**, and an asterisk to indicate each corresponding author; at least one corresponding authors should be noted.
- c) The **Author Affiliations** (institution/company and the complete postal address); official email addresses are also required for all corresponding authors.
- d) A **Dedication** line may also be included if applicable.

Abstract and Keywords

The second page should contain an abstract of no more than 300 words (see also instructions for specific categories above). Do not use references, tables, or figures in the abstract. The abstract should be followed with three to six keywords separated by commas.

Main Text

The main text of a Research Article or a Communication should contain the following information in order:

- a) **Introduction** describing the background of the field and the uniqueness of the work to be presented.
- b) **Materials and Methods** detailing the materials and experimental methods used to produce the results in the work. In certain cases, detailed descriptions can be provided in the Supplementary Information; however, a short section on essential materials and methods should still be included in the main text.
- c) **Results** describing the main findings of the work.
- d) **Discussions** explaining the results and highlighting their comparisons with/improvements over existing literature.
- e) Alternatively, the Results section and the Discussions section can be merged together as a single section of **Results and Discussions** to allow for more fluent logical flow where applicable.
- f) **Conclusions** summarizing the work along with its limitations and future perspectives.

Acknowledgments

Textual material that names the parties which the author wishes to thank or recognize for their assistance in, for example, producing the work, funding the work, inspiring the work, or assisting in the research on which the work is based.

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Footnote

- a. Conflicts of Interest: See section "Conflict of interest" for details.
- b. Financial Disclose: Some variables, such as "measures of income inequality and degree of financial openness, are not included in our study because of the limited availability of good-quality data across countries over the sample period". When there is no financial disclose, authors should also indicate "Financial Disclose" section as "None".
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Author Contributions

This section is only required for original article, review article, systematic review and meta-analysis article. It describes the contribution each author made to the manuscript. Authorship credit should be based on 1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3. Please note that acquisition of funding, collection of data, language editing or general supervision of the research group alone does not constitute authorship.

The Author contributions section should be completed as follow:

- (I) Conception and design:
- (II) Administrative support:
- (III) Provision of study materials or patients:
- (IV) Collection and assembly of data:
- (V) Data analysis and interpretation:
- (VI) Manuscript writing: All authors
- (VII) Final approval of manuscript: All authors

Note: 1. VI and VII of all authors are obligatory while the rest information are case based; 2. Contributions section is not required when there is only one author.

References

The Vancouver system of referencing should be used (examples are given below). In the text, references should be cited using numbers in round brackets in which they appear consecutively [e.g., “cancer-related mortality (19)”]; “adenocarcinoma (29,30)”]. If cited in tables or figure legends, number according to the first identification of the table or figure in the text. In the reference list, cite the names of all authors when there are three or fewer; when more than three, list only the first three followed by et al. Reference to unpublished data and personal communications should not appear in the list but should be cited in the text only (e.g., Smith A, 2000, unpublished data). All citations mentioned in the text, tables, or figures

must be listed in the reference list. Journal names should be abbreviated according to Index Medicus: <http://www.ncbi.nlm.nih.gov/nlmcatalog/journals>. Authors are responsible for the accuracy of the references.

To optimize hyperlinking of references to enable editors and reviewers to cross-reference online, the format and punctuation should be as given in the examples below:

Journal articles

[1] Angeli E, Gerelli S, Beyler C, et al. Bicuspid pulmonary valve in transposition of the great arteries: impact on outcome. *Eur J Cardiothorac Surg* 2012; 41:248-255.

Books

[2] Kouchoukos N, Blackstone E, Doty D, Hanley F, Karp R. *Cardiac Surgery*, WB Saunders, 2003:11-17.

Multi-author books

[3] Laine GA, Melhorn U, Davis KL, Allen SJ. Myocardial interstitium lymphatics: pathophysiology and effects on cardiac function. In: Reed RK, McHale NH, Bert JL, Winlowe CP, Laine GA, editors. *Interstitial, connective tissue and lymphatics*, London: Portland Press, 1995:271-282.

Online-only publications

[4] Hraska V, Photiadis J, Poruban R, Asfour B. Ross-Konno operation in children. *Multimed Man Cardiothorac Surg* doi: 10.1510/mmcts.2008.003160.

Or

[5] Thurber JS, Deb SJ, Collazo LR. Ascending-to-descending aortic bypass for coarctation of the aorta. *CTSNet* [published 12 May 2008, accessed 30 November 2011]. Available from: <http://www.ctsnet.org/sections/clinicalresources/adultcardiac/>

Webpage

[6] Drug-interactions.com [homepage on the Internet]. Indianapolis: Indiana University Department of Medicine; 2003 [updated 17 May 2006; cited 30 May 2006]. Available from: <http://medicine.iupui.edu/flockhart/>

Note that the Endnote reference style for MPS is available for download at:

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Tables

All tables should be numbered consecutively in the order of reference in the text. Each column must carry

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Figures

All illustrations (line drawings, photographs, and hybrids) are classified as figures. Figures should be cited in consecutive order as they are referenced in the text. Scale bars should be always presented where applicable. If figures have been reproduced from other sources, permissions indicating authorization to reproduce the materials must be submitted as well. More specifications of the figures are detailed below:

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The supplementary information should contain the same title page as in the main manuscript file, followed by relevant texts (such as methods), figures, tables, and references. The references in the supplementary information should not be included in the main reference

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Use abbreviations and acronyms sparingly, and all usage should be defined at the first occurrence in the text. The Latin names of biological species and genera should be written in italics, with the full name always used when it appears for the first time in the text (e.g., *Homo sapiens*); the abbreviated form (e.g., *H. sapiens*) may be used thereafter.

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Statistical methods used for all analyses should be clearly indicated. P values or confidence intervals should be cited in the text for any statistically significant findings reported; wherever possible, exact P values should be given.

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- e) **Video:** Video files should numbered (e.g., Video 1) and uploaded as "Supplementary Files".
- f) **Other files:** Other supplementary information, such as computer programs and models, can be named accordingly and uploaded as "Supplementary Files".

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