

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

Editorial

Editorials are contributed by recognized leader(s) in the field, solicited by the Editor-in-Chief and Associate Editors. Length should be 2,000 words maximum for the main text with no more than 25 references and no more than two figures/tables. No abstracts are required.

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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Mini-Reviews are short reviews usually focusing on timely topics of interest. Manuscripts should be no more than 3000 words and 50 references. A passport-type photo and short biography (75 words maximum) of the corresponding authors may be included. Mini-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.

Progress Report

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.

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

on all sides. Times New Roman font with a size of at least 11-point and 1.5-line spacing are preferred. The pages should be numbered consecutively, beginning with the title page. Authors are requested to follow the suggested style and organization detailed below.

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 **Running Title** of no more than 45 characters including spaces.
- e) 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

This section should contain any funding information if applicable, and any associated acknowledgments.

Conflict of Interest

Conflict of interest should be indicated if applicable. If no conflict is present, a statement writing “the authors declare no conflict of interest” should be included.

Author Contributions

The contribution of each author made to the manuscript should be indicated. Authorship credit should be based on substantial contributions to:

- a) Overall conception and design of the work.
- b) Data acquisition, analysis, and/or interpretation.
- c) Technical and material support.
- d) Writing and revision of the manuscript.

The final manuscript for submission should be internally approved by all authors.

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. Interstitium, 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 an appropriate heading and, if measurements are given, the units should be given in the column heading. Place explanatory matter in footnotes, not in the heading. Explain in footnotes all non-standard abbreviations that are used in each table. For initial submission, insert tables at the end of the text or in places where they are most closely referenced. When a manuscript is accepted for publication, tables must be submitted as editable file formats (e.g., .doc, .docx, .rtf, .xls, or .xlsx).

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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- d) **Figure legends:** figure legends should be positioned immediately below each corresponding figure. Legends should be concise but comprehensive – the figures and their legends must be understandable without referencing the texts. Include definitions of any symbols used and define/explain all abbreviations and units of measurement.

Supplementary Information

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 list. The supplementary information must be submitted in a single word (.doc or .docx) or high-resolution pdf (.pdf) file. The supplementary information will not be edited for style. The published article will contain a statement that supplementary information exists online (if applicable) and will provide the reader with a URL directing to it.

Videos

Videos are considered a format of Supplementary Information, and will be accepted in a variety of formats, including but are not limited to, .mp4, .mov, .avi, .wmv, and .mpeg/.mpg. The videos should be as succinct as possible, while the Editor-in-Chief reserves the rights to request to shorten the videos if necessary. The resolution of the videos

should be no less than 320p with frame rates of no less than 24 frames per second (fps). All the text notes, explanations, or descriptions in the videos must be in English. Any logo should have associated copyrights and permissions for use. Still images and legends for the video files should be provided at the end of the Supplementary Information. The video files should be numbered consecutively in the order of reference in the text.

Nomenclature, Symbols, and Units

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.

Animals and Human Subjects

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Statistics

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.

ADDITIONAL INFORMATION

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We ask all authors to confirm that:

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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".

Please note that change of author information (except for grammatical errors) is not allowed after the manuscript is accepted.

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