

Instructions for Authors IVP

In Vitro Cellular & Developmental Biology – Plant (IVP) publishes peer-reviewed original research and reviews concerned with the latest developments and state-of-the-art research in plant cell and tissue culture and biotechnology from around the globe.

Established in 1965, IVP combines the official journals of the Society for In Vitro Biology's Plant Section (SIVB) and the International Association for Plant Biotechnology (IAPB).

There are six issues per year, containing highly relevant, original research.

Four issues - published on behalf of the SIVB cover cellular, molecular and developmental biology research using in vitro grown or maintained organs, tissues or cells derived from plants. These follow the matrix categories given below.

Two special issues – published on behalf of the IAPB (numbers 2 and 5, published March/April and September/October) include original manuscripts, feature and review articles, and IAPB official notifications. The IAPB maintains a completely separate and independent international editorial review board for these two issues, which are not divided into the matrix categories listed below. Specifically, IAPB issues are focused on publishing high impact innovative research dealing with plant tissue culture and molecular and cellular aspects of plant improvement, which employ state-of-the-art tools of plant biotechnology to demonstrate an applied application of the research. All articles are peer reviewed and must follow the format for regular original articles. Brief articles will be considered, using the same format as regular articles. Taking into consideration the number of submissions received, it is imperative that the novelty of the contribution is clearly emphasized. Articles must have significant original content including:

- Appropriate experimental design and data analysis procedures
- Understanding of a scientific problem
- Identification of gene(s), physiology or biochemistry with measurable and quantifiable impact on agriculture or the environment
- Broad applicability of knowledge to multiple species and environments

When submitting a manuscript for consideration by the SIVB editorial review board, authors should select the matrix heading below which best covers the scope of their manuscript.

Matrix Areas and Criteria for Consideration:

- 1. Invited Reviews and Feature Articles** - Review and feature articles of current interest that advance our understanding of recent research on focused topics are invited by the Invited Reviews Editor in consultation with the Editors-in-Chief. Authors may submit topics with brief outlines to the Invited Reviews Editor for consideration. *Criteria: By editorial invitation or pre-approval.*
- 2. Symposium and Workshop Proceedings** - Papers presented at the annual SIVB Congresses, and to other professional conferences, are encouraged to be written and submitted as Symposium or Workshop Proceedings for peer review. Collections of several papers from the same symposium or

conference are encouraged, but individual proceedings articles are also welcomed. *Criteria: Must satisfy criteria of appropriate matrix subject area below.*

- 3. Biotechnology/Genetic Transformation/Functional Genomics** - Transformation methods showing recovery of confirmed transgenic plants; transgene expression/regulation; plant expression vectors; promoter/enhancer/terminator effects; transgene product structure-function; transgene combinations; field evaluation; bioinformatics. *Criteria: Significant advance in conceptual knowledge and/or technological efficiency; molecular evidence of independent transformation events (Southern analysis using restriction enzyme that cuts once within the transferred DNA region for primary transformants; PCR analysis plus phenotype analysis for progeny generations; or insertional flanking sequence information); characterization of transgene expression levels (using Real Time PCR or other appropriate technology) and/or characterization of transgene product or functionality; recovery of whole plants.*
- 4. Cell Biology** - Cell cycle; cytodifferentiation and cytoskeleton; cell-cell interactions/signaling; protein targeting; organelles; structure-function relationships. *Criteria: Significant advance in conceptual knowledge; molecular characterization of system.*
- 5. Developmental Biology/Morphogenesis** - Embryogenesis/embryogeny; gametogenesis/androgenesis; organogenesis; floral differentiation/development. *Criteria: Significant advance in conceptual knowledge and/or technological efficiency applicable to multiple genotypes; recovery and characterization of whole plants and/or progeny; histological evidence of novel developmental pathway(s). Manuscripts will NOT be accepted that report on technical improvements on a specific variety/species where previous information is available, or on formation of shoots/roots without indicating the efficiency of recovery of transplantable plants.*
- 6. Micropropagation** - Automation; bioreactors; contamination control; disease indexing; scale-up; novel applications of technology; commercial production; cryogenic storage. *Criteria: Significant advance in conceptual knowledge and/or technological efficiency; recovery and characterization of whole plants; detailed molecular characterization of genetic fidelity; demonstrated application for ex situ conservation and/or restoration of endangered species when the efficiency of recovery of transplantable plants, or demonstration of no somaclonal variation through limited molecular analysis is indicated. Manuscripts will be accepted that report on technical improvements on a specific variety/species where a finished and tested protocol for culturing using common techniques of modifying growth regulator ratios and concentrations but where additional data on performance or molecular characterization of regenerants or chemical composition of regenerants is lacking*

ONLY as a short communication. The short communication format is similar to that for Articles and Reviews described above, except that the body of the text is not divided into sections or subheadings with introduction, methods results and discussion integrated into a single text.

7. **Molecular Farming/Metabolic Engineering/ Secondary Metabolism** - Transgenic production of recombinant proteins and pharmaceuticals such as antibodies, edible vaccines, industrial enzymes, etc.; biotransformation; metabolic flux; bioactive/ medicinal compounds; bioreactors; scale-up. *Criteria: Significant advance in production efficiency for targeted metabolites; analytical characterization of intermediates, products, enzymatic activities, and/or demonstration of biological efficacy; molecular evidence of transformation when applicable.*
8. **Physiology** - Plant growth regulators; primary metabolism; regulatory processes; biochemical and signal transduction pathways. *Criteria: Significant advance in conceptual knowledge; appropriate molecular, biophysical and/or biochemical characterization of system.*
9. **Somatic Cell Genetics** - Somaclonal variation; epigenetics; mutagenesis; somatic hybridization; haploidization; T-DNA/transposon tagging; homologous recombination. *Criteria: Significant advance in conceptual knowledge and/or technological efficiency; molecular characterization of somatic hybrids, haploids, or heritability of mutation(s).*

MANUSCRIPT SUBMISSION REQUIREMENTS

Professional Code of Conduct

Publication Ethics: The journals *In Vitro Cellular and Developmental Biology - Plant* (both SIVB and IAPB) subscribe to the editorial standards and guidelines for editors and authors of COPE (Committee on Publication Ethics). A detailed explanation of our ethical standards can be found at <http://publicationethics.org/resources/code-conduct>. These guidelines include a code of conduct and best practice guidelines for journal editors. All authors submitting articles to this journal are expected to comply with these standards. Reviewers and Editors will use the best practice guidelines for reviewing, evaluation and editing processes of manuscripts submitted to the journal. As a result of these guidelines the journal uses originality checking software as a tool to help identify plagiarized work. No manuscript with plagiarized verbiage will be accepted. Plagiarism refers to the inappropriate use of images or passages of text that have previously been published by the submitting authors (self-plagiarism) or by other authors that may or may not be referenced.

CHANGES TO AUTHORS

Author changes are not allowed after submission. Authors can be added at resubmission only when additional experiments are requested. No author changes are allowed after acceptance.

ETHICAL COMPLIANCE

Conflict of Interest (COI) forms with submission: As part of the submission process you must upload a completed and signed ICMJE disclosure form for

each author. Manuscripts submitted without all forms will be returned for corrections. Blank ICMJE forms are available for download at <http://www.icmje.org/>.

Disclosures: Disclosures are required for each author to be included within the manuscript text. Each statement must include the author's name and declare the conflict of interest, or "no conflict of interest". All potential benefits in any form from a commercial party related directly or indirectly to the subject of the manuscript or any of the authors must be acknowledged. For each source of funds, both the funding organization (written in full) and the grant number should be given. Please note that the manuscript will be returned to the corresponding author if the disclosure statement for each author is not included in the manuscript text. Details provided in the disclosure statement must correspond with the information provided in the COI forms uploaded during submission.

CONSENSUS STATEMENT ON SUBMISSION AND PUBLICATION OF MANUSCRIPTS

Duplicate Submission and Publication: In general, if a manuscript has been peer-reviewed and published, any subsequent publication must correspond with the information provided in the COI forms uploaded during submission. Exceptions to this general rule may be:

- a) Prior publication in meeting program abstract booklets or expanded abstracts such as those published by *In Vitro Cellular and Developmental Biology-Plant*. However, these must be referenced in the final manuscript.
- b) A manuscript which analyzes an original published database in a different way in order to prove or disprove a different hypothesis. Previous manuscripts reporting the original database must, however, be referenced.
- c) Manuscripts which have been published originally in non-English language journals provided that the prior publication is clearly indicated on the English language submission and referenced in the manuscript. In some circumstances, permission to publish may need to be obtained from the non-English language journal.
- d) Manuscripts derived from published Masters or Doctoral theses.

For example, any submission duplicating material previously published in full in "Proceedings" or book chapters is considered duplicate unless the exceptions in (a) above apply. Similarly, manuscripts dealing with subgroups of data (i.e., patients) that have previously been analyzed, discussed and published as a larger group are considered duplicate unless (b) above applies.

The Internet raises special concerns. If data have previously appeared on the Internet, submission of those data for publication is considered duplication. If Internet publication follows journal publication, the journal publication should be clearly referenced. Some journals may provide early Internet publication of accepted peer reviewed papers which are subsequently published in that journal. This does not constitute duplication if both manuscripts are identical and covered by the same single copyright.

Fraudulent Publication

The following activities are examples of fraudulent publication practices:

- Willful and knowing submissions of false data for publication.

- Submission of data from sources not the author's (or authors') own.
- Falsely certifying that the submitted work is original and has not been submitted to, or accepted by, another journal.
- Sponsoring or vouching for a manuscript containing data over which the sponsor has no control or knowledge.
- Allowing one's name to appear as an author without having contributed significantly to the study.
- Adding an author's name to a manuscript to which he/she has not contributed, or reviewed or agreed to in its current form.
- Flagrant omission of reference to the work of other investigators which established their priority.
- Falsification of any item on the copyright form.
- Failure to disclose potential conflict of interest with a sponsoring agency.

While not intended as an all-inclusive document, these examples and guidelines should alert authors to potential problems that should be avoided when they are considering submission of a manuscript to a peer-reviewed journal.

A. Authorship Criteria

Individuals claiming authorship should meet all of the following 3 conditions:

- 1) Authors make large contributions to conception and design, and/or acquisition of data, and/or analysis and interpretation of data;
- 2) Authors participate in drafting the article or revising it critically for important intellectual content;
- 3) Authors give final approval of the version to be submitted and any revised version to be published.

Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content. Allowing one's name to appear as an author without having contributed significantly to the study or adding the name of an individual who has not contributed or who has not agreed to the work in its current form is considered a breach of appropriate authorship.

An author is not an individual who allowed their experience to be included, or a person who provided purely technical help, writing assistance, funding acquisition, data collection, general group supervision, or a department Chair who provided only general guidance.

B. Order of Authors

The order of authorship on the byline should be a joint decision of the co-authors.

C. Contributors Listed in Acknowledgments

All contributors who do not meet the criteria for authorship should be listed in an acknowledgments section. Groups of persons who have contributed materially to the paper but whose contributions do not justify authorship may be listed under a heading such as "participating investigators," and their function or contribution should be described - for example, "served as scientific advisors," "critically reviewed the study proposal," "collected data." Because readers may infer their endorsement of the data and conclusions, all persons listed as contributors must give written permission to be acknowledged.

D. In Conclusion

This consensus statement is intended as the minimal criteria authors must adhere to. In the interest of promoting the highest ethics, all authors must adhere to these criteria when submitting a manuscript to a peer-reviewed journal.

ONLINE SUBMISSION

Authors must submit their articles to In Vitro Cellular and Developmental Biology - Plant online. A wide range of submission file formats is supported, including: Word, RTF, TIFF, GIF, JPEG, EPS, Excel and PowerPoint. PDF is NOT an acceptable file format for submission. During the submission process authors will be given the option between submitting their manuscript for publication in the regular In Vitro Cellular and Developmental Biology - Plant issues or in the special two IAPB issues. The manuscripts will then be assigned to the respective Editor in Chief.

Editor in Chief, SIVB issues:

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SUBMIT ONLINE

<http://www.editorialmanager.com/ivpl/>

Please submit papers on animal-related materials to:
<http://www.editorialmanager.com/ivan/default.aspx>

MANUSCRIPT PREPARATION

Manuscripts are to be submitted in their final form. Papers must be written in English, and authors are strongly encouraged to aim for clarity, brevity, and accuracy of information and language. Authors whose first language is not English should have their papers checked for linguistic accuracy by a native English speaker. The Editors in Chief may be contacted for recommendations on a scientific editing service, if the English presentation is not to the journal standards but it is the responsibility of the corresponding author to ensure that their submission is to the highest standard. Failure to do so can lead to rejection by the Editors in Chief.

Submitted manuscripts should conform to the following format and sequence. The Reviews format is similar to that for articles described below, except that the body of the text may substitute major topic headings for Materials and Methods, Result, and Discussion. In Reviews, the Methods are integrated into the text or legend to figures and Results and Discussion are combined. Type double-spaced, and order the elements comprising the manuscript as follows:

- Title Page
- Abstract
- Key Words
- Introduction
- Materials and Methods
- Results
- Discussion (may be combined with Results)
- Conclusions
- Appendix (if any)
- Acknowledgements
- References
- Tables

- Figure Legends
- Figures

TITLE PAGE: The title page should include

- the title of the article
- author(s)' name(s) and affiliation(s) (the department and institution from which the work originated)
- complete contact information for the one corresponding author including mailing and email address. More than one corresponding author will not be accepted.
- suggested running head (not to exceed 40 characters, including spaces) Note that the affiliation should be a footnote to the author's name.

ABSTRACT: An abstract is to be provided, preferably no longer than 250 words. Do not use abbreviations, footnotes, or references in the abstract. NOTE: there is no abbreviation section in submissions. Abbreviations are identified on their first use in the main text of the article.

KEY WORDS: A list of 4–5 key words is to be provided directly below the abstract. Key words should express the precise content of the manuscript, as they are used for indexing purposes.

INTRODUCTION: The introduction provides a brief review of relevant literature and contains embedded justification for the research. The introduction usually ends with a brief and general overview of key results.

MATERIALS AND METHODS: Materials and Methods should provide sufficient detail so that procedures are well understood and can be repeated. Any initial reference to equipment, kits, reagents, lights, etc must be followed by the manufacturer or supplier, city of origin, state (if in the USA) and country of origin.

RESULTS AND DISCUSSION: The Results and Discussion sections may be combined or kept separate.

ACKNOWLEDGMENTS: All acknowledgments, including those for grant, financial support, and potential conflicts of interest should be included in one separate paragraph that directly precedes the references section.

REFERENCES

The list of original references should only include works that are cited in the text and that have been published or accepted for publication. Personal communications should only be mentioned in the text.

In the text, references should be cited by author and year (e.g. Jordan 2000; Jordan and Somers 2006; Jordan et al. 2007) and listed in alphabetical order in the reference list.

JOURNAL ARTICLES:

Name(s) and initial(s) of all authors; year; title of article; Journal title; volume number:page numbers.

Example: Abdel-Rahman MM, Widholm JM (2010) Maize tissue culture plant regeneration ability can be improved by polyethylene glycol treatment. *In Vitro Cell Dev Biol - Plant* 46:509–515

SINGLE CONTRIBUTIONS IN A BOOK:

Name(s) and initial(s) of all authors; year; title of article; editor(s); title of book; edition; volume number; publisher; place of publication; page numbers.

Example: Klein TM (2011) Particle bombardment; An established weapon in the arsenal of plant biotechnologists. In: Stewart CN, Touraev A, Citovsky V, Tzfira T (eds) *Plant transformation technologies*, Wiley-Blackwell, Ames West Sussex Oxford, pp 53–71

BOOK:

Name and initial(s) of all authors; year; title; publisher; place of publication.

Example: Wang K (2006) *Methods in Molecular Biology: Agrobacterium Protocols*, vol 1. Humana Press, Totowa New Jersey

AGENCY PUBLICATION:

Council of science editors (CSE) style guide. 7th ed. Reston, VA: Council of Science Editors; 2006.

WEB PAGES:

Article by DOI (with page numbers): Nguyen KT, Arsenault PR, Weathers PJ (2011) Trichomes + roots + ROS = artemisinin: regulating artemisinin biosynthesis in *Artemisia annua* L. *In Vitro Cell Dev Biol – Plant* 47:329-338. doi: 10.1007/s11627-011-9343-x

Article by DOI (before issue publication with page numbers): Nguyen KT, Arsenault PR, Weathers PJ (2011) Trichomes + roots + ROS = artemisinin: regulating artemisinin biosynthesis in *Artemisia annua* L. *In Vitro Cell Dev Biol – Plant* (in press). doi: 10.1007/s11627-011-9343-x

Article in electronic journal by DOI (no paginated version): Nguyen KT, Arsenault PR, Weathers PJ (2011) Trichomes + roots + ROS = artemisinin: regulating artemisinin biosynthesis in *Artemisia annua* L. *In Vitro Cell Dev Biol – Plant*. doi: 10.1007/s11627-011-9343-x

Online document: Doe J (2010) Title of subordinate document. In: The dictionary of substances and their effects. Royal Society of Chemistry. Available via DIALOG. <http://www.rsc.org/dose/title> of subordinate document. Cited 15 Jan 2010

Online database: Healthwise Knowledgebase (2011) US Pharmacopeia, Rockville. <http://www.healthwise.org>. Cited 21 July 2011

Supplementary material/private homepage: Doe J (2010) Title of supplementary material. <http://www.privatehomepage.com>. Cited 22 Feb 2010 University site: Doe J (2008) Title of preprint. <http://www.uni-heidelberg.de/mydata>. html. Cited 25 Dec 2008

FTP site Doe J (2010) Trivial HTTP, RFC2169. <ftp://ftp.isi.edu/in-notes/rfc2169.txt>. Cited 12 Nov 2010

Organization site: ISSN International Centre (2006) Global ISSN database. <http://www.issn.org>. Cited 20 Feb 2007

NOMENCLATURE

The recommendations of the Society for In Vitro Biology Committee on Terminology should be followed. Schaeffer WI (1990) Terminology associated with cell, tissue and organ culture, molecular biology and molecular genetics. *In Vitro Cell Dev Biol* 26:97–101.

TABLES AND FIGURES

TABLES: Each table should be numbered consecutively with Arabic numerals. Footnotes to tables should be indicated by lower-case superscript letters. If you use data from another published or unpublished source, obtain permission and acknowledge fully.

LEGENDS: Legends must be brief, self-sufficient explanations of the figures and tables in no more than four or five lines. Remarks such as “For explanation, see text” should be avoided. The figure legends should be typed double-spaced and grouped together on a separate page. When symbols, arrows, numbers or letters are used to identify parts of the illustration, identify and explain each one clearly.

FIGURES: Figures should be limited to those essential for the text. Results should not be duplicated by presentation of the same results in both a graph and table. Color may be used without charge for the electronic edition of the journal if files are supplied but will appear in the printed version in black and white. **NOTE:** If the authors wish to have their figures printed in color, the authors will be questioned about color options after the paper enters production and the pictures will be published in color at the author's expense: \$534 per article (+VAT). At such time an e-mail will be sent to authors asking them to select an option for color printing of figures. Except for the cost of color printing there are no publication charges for publishing in IVP, unless the author chooses to publish his/her paper Open Access (Open Choice). More information on Open Choice can be found on the journal homepage (<http://www.springer.com/life+sciences/plant+sciences/journal/11627>).

ALL FIGURES, whether photographs, graphs, or diagrams, should be numbered consecutively. If figures are created electronically, please see Guidelines for Electronically Produced Figures for Print. Line drawings should be supplied as clear black and white drawings suitable for reproduction. All lines should be of uniform thickness. Letters and numbers should be of professional quality and proper dimensions. All figures submitted should allow for high quality reproduction at a same size permitting direct printing (with no reduction), usually 12.7 by 17.3 cm (5 by 7 inches) but no larger than 20.3 by 25.4 cm (8 by 10 inches). The publisher reserves the right to reduce figures. Micrographs should have an internal magnification marker; the marker size should be stated in the figure legend. If photographs of persons are used, either the subjects must not be identifiable or their pictures must be accompanied by written permission to use the photograph.

Guidelines for Electronically Produced Illustrations for Print

GENERAL

- Send figures separately from the text (i.e. files should not be integrated with text files).

VECTOR (line) GRAPHICS

- Vector graphics exported from a drawing program should be stored in EPS format. High quality Excel files are also acceptable.
- Suitable drawing program: Adobe Illustrator. For simple line art the following drawing programs are also acceptable: PowerPoint, Corel Draw, Freehand, Canvas.
- No rules narrower than 0.25 pt.
- No gray screens paler than 15% or darker than 60%.
- Screens meant to be differentiated from one another must differ by at least 15%.

HALFTONE FIGURES

- Black & white and color figures should be saved in JPG, TIFF or EPS formats.
- Figures should be created using Adobe Photoshop whenever possible.

GRAPHICS FROM VIDEOS

- Separate files should be prepared for the frames from a video that are to be printed in the journal. When preparing these files you should follow the same rules as listed under Halftone Figures.

MULTIMEDIA ARTICLE AND DYNAMIC MANUSCRIPT SUBMISSION REQUIREMENTS (I.E. STREAMING VIDEOS)

Multimedia articles are papers where the heart of the article is the video and, generally, only an abstract and references are included. Dynamic articles are regular articles with video(s) included as electronic supplementary material.

Upon submission of multimedia or dynamic articles, the author(s) will be required to submit the video in the following format:

- For multimedia articles, video clips should not exceed 9 minutes. For dynamic articles, video clips should not exceed 3 minutes and each manuscript should not contain more than 3 video clips.
- Multimedia file for review and submission: MPEG-1 file with the largest frame size (usually 320 x 240 pixels) that will fit on a CD and will be playable on a Windows-based computer.
- The content of these files must be identical to that reviewed and accepted by the editors of the In Vitro Plant and Animal Journals.
- All narration should be in English.
- There should be a "manuscript" submitted with the video that includes a title page, abstract and key words, as well as references if needed.

DYNAMIC MANUSCRIPT

A dynamic manuscript is a print article with imbedded video material. Up to 3 (one minute maximum each) videos per manuscript submission will be accepted. Make sure to note in your manuscript the placement of the video clips. All standard instructions for manuscript and video submission should be followed for a dynamic manuscript submission.

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Upon submitting an article to In Vitro Cellular and Developmental Biology – Plant for review and possible publication, authors are requested to add the following notice for the first screen of any posted electronic preprint versions of the paper. "This work has been submitted to the Society for In Vitro Biology for possible publication in In Vitro Cellular and Developmental Biology – Plant. Copyright may be transferred without notice, after which this version may no longer be accessible."

When the work has been accepted for publication, the author may post it, in its final accepted form, on their personal server or on their institution's server (but not on any organized preprint server) with a notice: "Accepted for publication in In Vitro Cellular and Developmental Biology – Plant as of (date), until it is published by the Society in print or electronic form."

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