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 1985, 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 in 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 addition 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/or 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 originally 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.

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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/.

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**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 is a duplication. 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 in 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.

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**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 or knowledge.

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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.

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MANUSCRIPT PREPARATION
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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
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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 grey 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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