

Guidelines for Authors

1. Editorial Policy

1.1 Aims and Scope

PLANTA MEDICA – Journal of Medicinal Plant and Natural Product Research is published in 18 issues a year. The following areas of medicinal plant and natural product research are covered:

1. Biological and Pharmacological Activities
2. Natural Product Chemistry & Analytical Studies
3. Pharmacokinetic Investigations
4. Formulation and Delivery Systems of Natural Products

Contributions are not normally considered for publication and will be immediately rejected if:

- The manuscript does not fall into any of the above areas
- Activity data are reported without comparison to a recognized positive control
- Extracts have not been characterized by analysis of their major constituents (e.g. HPLC, GC, NMR)
- Predictable bioactivity is reported (e.g. antioxidant properties of phenolic compounds)

1.2 General terms of publication

Only papers of highest scientific quality, concisely written and complying with these Guidelines for Authors can be considered for publication. All contributions are peer-reviewed by independent referees.

Submission of a manuscript to *Planta Medica* implies that it represents original research not previously published and that it is not being considered for publication elsewhere. The corresponding author must declare that the manuscript is submitted on behalf of all authors. Copyright belongs to the publisher upon acceptance of the manuscript.

Important: Publication in *Planta Medica* is free of charge.

The language of publication is English. British or American spelling is accepted, but should be consistent throughout the manuscript. **Important: Incorrect English can result in the immediate rejection of your manuscript whereas correct English will facilitate a speedy publication process.** It is in your own interest to ensure that your paper has been read by a native English speaker; alternatively, you should use a copy-editing service like “American Journal Experts” if you have concerns about the English in your manuscript. Manuscripts which do not meet acceptable standards will be returned to the authors.

Authors investigating the chemistry of a single species should aim to publish their results in a single manuscript rather than in a series of papers. Manuscripts should not report fragmentary parts of a larger study.

Pharmacological investigations of extracts require detailed extract characterization (see 4.7.7).

Submission of a manuscript signifies acceptance of the journal's Guidelines for Authors. Submissions which are not in line with these principles will be returned directly to the authors by the Editorial Office.

A statement clarifying the **conflicts of interests of all authors** must be included at the end of the manuscript (before the references); this will be published. Conflicts of interest also need to be declared during the submission process. Declaration of conflicts of interest is mandatory; if none, this also needs to be stated.

Planta Medica takes biodiversity and the protection of species very seriously. We support CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) as well as The Rio de Janeiro Convention on Biological Diversity and we expect that during the conduct of the scientific research leading up to the results submitted to *Planta Medica* these conventions as well as the local rules and regulations have been adhered to.

2. Submission of Manuscripts

Manuscripts can be submitted exclusively online at <http://mc.manuscriptcentral.com/plamed>. Submissions of hardcopy manuscripts or by e-mail will not be accepted.

A sample manuscript (for Original Papers) is available at <http://mc.manuscriptcentral.com/plamed> → **Instructions and Forms**, and at www.thieme.de/plantamedica. In addition to the Guidelines, authors are urged to follow these formats when preparing a manuscript.

Commonly used file formats (Doc, DOCX, RTF) should be used for preparation of the manuscripts. **PDF files are not accepted.** The manuscript has to be accompanied by a **cover letter**, in which the authors briefly explain the significance of their findings and the interest to the readership of *Planta Medica*.

The manuscript (main text, including tables) should be submitted as one file. All figures should be submitted separately (detailed layout requirements see 4.12.). Figures will be automatically rendered in color online and black and white in print. Color reproduction in print will be subject to fees of EUR 600 for the first color figure and EUR 120 for any further figure (incl. 19% VAT). Authors are strongly encouraged to provide non-essential but useful data, figures and tables as Supporting Information (see 4.14).

3. Types of Contribution

3.1. Original Papers are research articles describing original experimental results. The material should be arranged in the order: **Title Page/Abstract/Keywords/Abbreviations/Introduction/Results and Discussion/Materials and Methods/Acknowledgements/Conflicts of Interest/References/Figure Legends/Tables**. Figures should be uploaded as separate files (see section 4.12., **Graphics**). Results and Discussion sections may appear as two separate parts or as a combined “Results and Discussion” section. The normal length of the main text of an Original Paper, excluding references, tables, figures and figure legends, is **< 4,000 words**. **Original papers should not contain more than 45 references.**

3.2. Rapid Communications are intended for the publication of exceptionally significant new and original results, such as unusual structures, bioactivities and innovative analytical techniques that deserve rapid publication, in the format of an Original Paper. If authors want their submission to be considered as a Rapid Communication, they should provide a justification statement for this with their manuscript. However, also regular submissions can be selected by the Editors for rapid communication after the review process.

3.3. Reviews will generally be invited by the Editor-in-Chief. They should be as concise as possible and do not need to include experimental details. The main purpose of reviews is to provide a concise, accurate introduction to the subject matter and inform the reader critically of the latest developments in this area. All reviews should contain an abstract.

3.4. Minireviews and Perspectives will generally be invited by the Editor-in-Chief. Minireviews provide concise and critical updates on a subject of high interest. Perspectives are written by leading experts in an emerging field and provide a concise assessment of the current state-of-the-art and an outlook on future developments. The normal length of the main text of Minireviews and Perspectives, excluding references, tables, figures and figure legends, is about **2000 words**.

3.5. Editorials addressing topical issues of general interest to the readership of *Planta Medica* will be published on an irregular basis. They are written by the Editor-in-Chief, other Editors, or by experts on a specific issue in the form of an Invited Editorial.

4. Preparation of Manuscripts

Please note that papers published in *Planta Medica* follow the **IRDMACR** structure:

Introduction, Results and Discussion, Materials and Methods, Acknowledgements, Conflict of Interest Statement, References.

In addition to the Guidelines, authors should consult the sample manuscript (for Original Papers) at https://www.thieme.de/statics/dokumente/thieme/final/de/dokumente/zw_thieme-en/plantamedica_Sample_Manuscript prior to preparing their contribution. Commonly used file formats (DOC, DOCX, RTF) should be used for preparation of the manuscripts.

For submission of all manuscripts, follow the instructions of the online submission system. For general instructions on ScholarOne, please follow this link: <http://mchelp.manuscriptcentral.com/gethelpnow/training/author/>

Before submission, prepare the cover letter, and keep ready all information on the manuscript (title, full name and affiliation of all authors, abstract, name of all files to be submitted). The author submitting the manuscript will be corresponding author.

4.1. The Title Page must contain the title of the manuscript (**title should not exceed 20 words**), the full names referenced by numerical superscripts with affiliation and addresses of all authors, and the full address of the corresponding author, including e-mail, phone, and FAX number.

4.2. The Abstract should contain brief information on purpose, methods, results and conclusion (without subheadings). **Abstracts should not exceed 250 words**. Please note that during the upload of the manuscript files you will be asked to insert the abstract. This abstract needs to be identical to the abstract in the manuscript file itself.

4.3 The Keywords should include the scientific name and family of the organism(s) investigated. 4–6 keywords should be listed.

4.4. Abbreviations should generally be used sparingly. Abbreviations should be introduced only when repeatedly used. **Standard abbreviations** such as m. p., b. p., K, s, min, h, μ L, mL, μ g, mg, g, kg, nm, mm, cm, ppm, mmol, HPLC, TLC, GC, UV, CD, IR, MS, NMR, ELISA, PCR can be used throughout the manuscript (for a more extensive list follow this link: <https://www.thieme.de/de/planta-medica/authors-5605.htm>). **Non-standard abbreviations** must be defined in the text following their first use. Provide a list of **all nonstandard abbreviations** after the keywords. Define all symbols used in equations and formulas. If symbols are used extensively, provide a list of all symbols together with the list of abbreviations.

4.5. The Introduction should state the purpose of the investigation and relate to current knowledge in the specific topic addressed.

4.6. Results should be presented in a concise manner. The **Discussion** should provide an interpretation of the data and relate them to existing knowledge. The discussion should not be a repetition of the results. **Results and Discussion** may be combined. **No subheadings are allowed within these sections.** There should be no separate conclusions paragraph, the conclusion should be incorporated into the discussion.

4.7. In Materials and Methods specific details about test materials and test compounds, instrumentation and experimental protocols should be given. This section should contain sufficient details so that others are able to reproduce the experiment(s). Purity (%) of all reference and standard compounds should be mentioned, as well as the method of how it was determined. Previously reported methods should be referenced only. Suppliers for major equipment, cell lines,

chemicals, biochemical reagents and major disposables should be indicated. It should read in the manuscript for example 'Quercetin (purity > 98%) was purchased from Sigma' and not 'was purchased from Sigma (St. Louis, USA)'.

4.7.1. Documentation of plants and other organisms or starting materials. Use the correct scientific nomenclature. For plants, the Index Kewensis (electronic Plant Information Centre ePIC, Royal Botanic Gardens, Kew, UK: <http://www.kew.org/epic>), and/or the International Code of Botanical Nomenclature (www.bgbm.fu-berlin.de/iapt/nomenclature/code/tokyo-e/default.htm) should be followed. Give the scientific name (in italics), the author of this name and the family. **Indicate the person who identified the material as well as date and place of collection.** The manuscript must include references to **voucher specimens** of the plants (deposited in a major regional herbarium) or the material examined including their registration number(s). It should be mentioned which plant parts have been used.

4.7.2. Description of the preparation of extracts and isolation of compounds. The kind and amount of starting material, solvents (including volumes) and extraction methods (including temperature and extraction time) must be indicated. The description of chromatographic systems should contain the quantitative information that allows the reader to repeat the work. Column dimensions, stationary phase, particle size, mobile phase composition, flow rate, sample amount, and elution volumes (or retention times, k' values) of fractions should be given. E.g.: "MPLC on silica gel (40–63 μ m; 2 \times 50 cm), MeOH/EtOAc 8: 2, 3 mL/min; tR of 1: 60–70 mL, 2: 120–140 mL, 3: 145–175 mL; detection of eluates by TLC (SiO₂, MeOH/H₂O 9: 1; Dragendorff reagent), Rf 1: 0.35, 2: 0.55, 3: 0.73)." When using gradients the volumes of solvents should be presented; fractions should be defined by their elution volume. Similar information is necessary for HPLC, GLC, DCCC, MLCC and all other methods of purification. Figures of chromatograms will only be accepted if they are essential for understanding the methods or the results described. GC identifications of constituents of essential oils must be supported by retention indices on a polar and an apolar column. Identification by GC-MS is preferred.

4.7.3. Chemical nomenclature used should be based on the systematic rules adopted by Chemical Abstracts and IUPAC. Trivial names should be avoided unless they are definitely advantageous over the corresponding systematic names. Trivial names are not accepted for close analogues and derivatives of known compounds. For reference drug substances the INN names should be used.

4.7.4. Physico-chemical characterisation of compounds. Data provided for new compounds should enable an unambiguous identification of the substance and have to appear in the following order, if available: visual appearance, chromatographic mobility in TLC, GC, or HPLC, mp, UV-vis, specific optical rotation, CD, IR, 1H-NMR, 13C-NMR, low resolution MS, high resolution MS, elemental analysis. Note that for specific optical rotation $[\alpha]_D$ temp, the symbol c is defined as mass of substance (in g) in 100 mL of solution. For specific optical rotation no unit should be given; the "degree" symbol "°" should not be used. In case of spectroscopic work on known substances refer, if possible, to published data; the manuscript should then contain the following indication: Copies of the original spectra are obtainable from the corresponding author. Original spectra for new compounds should be provided as Supporting Information (see 4.14). IR, NMR, mass, and UV spectra should normally not be given in the manuscript as figures, unless the listing of characteristic signals is not sufficient.

4.7.5. X-Ray crystallographic data must include a line drawing of the structure, a perspective drawing, and a discussion of bond lengths and angles. A supplement describing full details of the structure and

methods and means of its determination in a form suitable for deposition must be submitted to the Cambridge Crystallographic Data Centre, 12 Union Road, Cambridge CB2 1EZ, UK (fax: +44 (0) 1223 33 60 33 or e-mail: deposit@ccdc.cam.ac.uk). Deposition of the data has to be prior to submission of the manuscript, and appropriate reference has to be made in the Materials and Methods section, including the deposition number.

4.7.6. Analytical studies. Key data on method validation must be provided and should typically include information on specificity, linearity, limit of detection, limit of quantification, accuracy, precision, intermediate precision, and some robustness studies. Information on the purity of reference compounds, and on the methods used for the determination of purity must be given. Recoveries of extraction and sample pre-purification steps have to be indicated. Adequate statistical treatment of data is required. For more information regarding validation issues, prospective authors should also refer to ICH guidelines. Analytical studies of a routine nature will not be considered for publication.

4.7.7. Pharmacological investigations. *Planta Medica* will only consider manuscripts in which conclusions are based on adequate statistics that incorporate the appropriate tests of significance, account for the type of data distribution, and are based on the number of experimental observations required for the application of the respective statistical method. In each case, positive controls (reference compounds) have to be used and the dose-activity dependence should be shown. If IC₅₀ values are given, the dose-response relation should be displayed graphically at least as supplementary data, and the method of calculation should be given. Authors should be conscious of the differences between EC₅₀, IC₅₀, TC₅₀, LC₅₀, ED₅₀, LD₅₀ values. Compounds should follow accepted guidelines when represented as “active”. For example, the cytotoxic effect of a pure substance when tested against a cancer cell line would exhibit an IC₅₀ value of < 10 μM. Authors should pay attention to the following definitions: Compounds that suppress the growth of, or kill, isolated tumor cell lines grown in culture should be referred to as either “cytostatic” or “cytotoxic”, as appropriate. Only compounds that inhibit the growth of tumors in animal-based models should be called “antitumor”. The term “anticancer” should be reserved for compounds that show specific activity in human-based clinical studies.

When working with experimental animals, reference must be made to principles of laboratory animal care or similar regulations and to approval by the local ethical committee. **The protocol approval number and the exact date of approval (e.g. January 1st 2016) must be provided.**

Pharmacological investigations of extracts require detailed extract characterization. This includes botanical characterization of plant material, solvent(s), duration and temperature of extraction, plus other method(s) used for preparation(s). For starting material coming from a company/commercially obtained samples the batch/Lot. Number has to be provided. The drug to extract ratio (DER) must be given. Chromatographic profiling (e.g. HPLC profile with a reference compound recorded at different wavelengths) should be carried out, with at least the major peaks identified, or qualitative and quantitative information on active or typical constituents should be provided. Altogether the phytochemical standardization of an extract and/or fraction(s) requires state-of-the-art methods.

4.7.8. Biological screening. Papers dealing with the biological screening of a meaningful number of extracts of plants or other organisms can be considered for publication in *Planta Medica*. Identification of the material should properly be documented, and preparation of the extracts should clearly be described (see above, sections 4.7.1 and 4.7.7). Biological activities should be reported by listing IC₅₀ or EC₅₀ values, or a dose-response relationship should be shown by us-

ing at least two test concentrations. Positive controls (reference compounds) should be included. Results should be presented in a concise format, and the discussion should be kept to a minimum.

4.8. Acknowledgements should list persons who made minor contributions to the investigation and organisations providing support.

4.9. Conflict of Interest Disclosure. A statement describing any financial conflicts of interest or lack thereof is published with each manuscript. The statement should describe all potential sources of bias, including affiliations, funding sources, and financial or management relationships, that may constitute conflicts of interest (please see the ACS Ethical Guidelines to Publication of Chemical Research). The statement will be published in the final article. If no conflict of interest is declared, the following statement will be published in the article: **“The authors declare no conflict of interest.”**

4.10. References, including those in tables and figure legends, should be numbered in the order in which they are cited in the text, using arabic numbers between square brackets, e.g. [1]; for multiple references, e.g. [1–3] or [1,2,5]. The list of references should be arranged consecutively according to the numbers in the text. Use Index Medicus abbreviations for journal titles. Authors bear complete responsibility for the accuracy of the references. **Original Research articles should not have more than 45 references.**

The following examples illustrate the format for references:

a) Journals

Trute A, Nahrstedt A. Separation of rosmarinic acid enantiomers by three different chromatographic methods and the determination of rosmarinic acid in *Hedera helix*. *Phytochem Anal* 1996; 7: 204–208

Article in press **without** doi:

Lim EK, Ashford DA, Hou B, Jackson RG, Bowles DJ. Arabidopsis glycosyltransferases as biocatalysts in fermentation for regioselective synthesis of diverse quercetin glucosides. *Biotech Bioeng*, in press

Note: If reference is made to papers that are in press, authors are requested to add the galley proof or acceptance letter to the online submission. Avoid references to unpublished personal communications. These have to be included in the body of the text as ‘unpublished data’.

Article in press **with** doi:

Lim EK, Bowles DJ. A class of plant glycosyltransferases involved in cellular homeostasis. *EMBO J*, advance online publication 8 July 2004; doi: 10.1038/sj.emboj.7600295

b) Books

Citation to complete book:

Mabberley DJ. The plant book, 2nd edition. Cambridge: Cambridge University Press; 1997: 520–521

Citation to article within a book:

Lechtenberg M, Nahrstedt A. Cyanogenic glycosides. In: *Ikan R*, editor. Naturally occurring glycosides. Chichester: Wiley & Sons; 1999: 147–191

Lorberg A, Hall MN. TOR: the first ten years. In: *Thomas G, Sabatini DM, Hall MN*, editors. TOR – target of rapamycin. Heidelberg: Springer-Verlag; 2004: 1–18

Multi-volume books and encyclopedias:

Warren SA. Mental retardation and environment. In: International encyclopedia of psychiatry, psychology, psychoanalysis and neurology, Vol. 7. New York: Aesculapius Publishers; 1977: 202–207

Pharmacopoeia of China, Part 1. Beijing: People's Health Press; 1977: 531 – 534

c) *PhD and Diploma Theses*

Dettmers JM. Assessing the trophic cascade in reservoirs: the role of an introduced predator [dissertation]. Columbus: Ohio State University; 1995

d) *Patents*

Cookson AH. Particle trap for compressed gas insulated transmission system. US Patent 4554 399; 1985

e) *Conference Paper*

Okada K, Kamiya Y, Saito T, Nakagawa T, Kaawamukai M. Localization and expression of geranylgeranyldiphosphate synthases in *Arabidopsis thaliana*. Annual Meeting of the American Society of Plant Physiologists, Baltimore, MD; 1999

f) *Electronic Sources*

Agatep R, Kirkpatrick RD, Parchaliuk DL, Woods RA, Gietz RD. Transformation of *S. cerevisiae* by the lithium acetate/single-stranded carrier DNA/polyethylene glycol protocol. Technical tips online. Available at <http://research.bmn.com/tto>. Accessed September 22, 2005.

If no author is given, the title is used as the first element of the citation.

4.11. Chemical structures should be prepared with ChemDraw or a similar program using the following settings: bond lengths 0.508 cm, bond width 0.021 cm, bold bond width 0.071 cm, bond spacing 18% of length, hash spacing 0.088 cm, atom labels Arial 10, compound numbers Arial 10 bold. These settings correspond to American Chemical Society document settings preset in ChemDraw. The configuration of all stereocenters present should be indicated; use of bold and dashed lines rather than solid and dashed wedges is recommended. **They will be reproduced without reduction and the charts should be prepared with maximum widths of up to 8.5 cm for single column print and up to 17.5 cm for double column print.**

Authors using other drawing packages should modify their program's parameters so that they reflect the above guidelines.

4.12. Graphics: Figures are numbered with Arabic numerals. The quality of the illustrations depends on the quality of the originals provided. Graphics cannot be modified or enhanced by the journal production staff. **The graphics must be submitted as separate files. The legend should not appear under the figures but should be included as a separate figure legend after the references in the manuscript file.** The figure legend needs to be self explanatory.

Acceptable file formats are TIFF, EPS (vector artwork), or CDX (ChemDraw file). Labeling of all figure parts should be present, and the parts should be assembled into a single graphic.

TIFF files should have the following resolution requirements:

Line Art (Black and White, Color):	800 – 1200 dpi
Greyscale Art:	600 dpi
Color Art (RGB mode):	300 dpi

For efficient use of journal space, single-column illustrations are preferred.

	Single (preferred)	Double
Width		
minimum	5.5 cm (2.16 in)	11.5 cm (4.5 in.)
maximum	8.5 cm (3.33 in)	17.5 cm (7 in.)
Maximum depth	25.4 cm (10 in.)	25.4 cm (10 in.)

For best results, illustrations should be submitted in the actual size at which they should appear in the Journal. Consistently sized letters and labels in graphics throughout the manuscript will help ensure consistent graphic presentation for publication. Lettering should be no smaller than 5 points. (Arial type works well for lettering.) Lines should be exactly 0.5 point. Lettering and lines should be of uniform density. If artwork that should be reduced must be submitted, larger lettering and thicker lines should be used so that, when reduced, the artwork meets the above-mentioned parameters.

Complex textures and shading to achieve a three-dimensional effect should be avoided. Different grey scale tones to show group differences are preferred.

4.13. Tables: These should be numbered consecutively with Arabic numerals. Tables should be placed in the manuscript or uploaded as separate file (file format DOC, DOCX) after the figure legends. Footnotes in tables should be given lowercase letter designations and be cited in the table by italic superscript letters. The sequence of letters should proceed by line rather than by column. If a footnote is cited both in the text and in a table, insert a lettered footnote in the table to refer to the numbered footnote in the text.

Each table should be provided with a descriptive heading, which, together with the individual column headings, should make the table, as nearly as possible, self-explanatory. Arrangements that leave many columns partially filled or that contain much blank space should be avoided. **The table legend should appear directly under the tables.**

4.14. Supporting Information: To keep articles as concise and at the same time as informative as possible, authors are strongly encouraged to submit part of their tables and figures as Supporting Information. The following type of data will be preferentially published as Supporting Information rather than in the print article: Spectra, chromatograms, structural drawings outlining NMR correlations, experimental procedures of secondary importance, tables summarizing data that are non-essential but useful to the understanding of an article. Tables, figures and text provided as Supporting Information must be referred to in the manuscript as follows: (Table 1S, Supporting Information, etc.). The cover page for Supporting Information should be identical to the cover page of the manuscript. Legends for Figures and Tables must appear directly on the respective figure pages. Pages have to be numbered consecutively. All figures and tables should be referenced in the main manuscript. Supporting Information has to be submitted as a separate file.

Supporting Information is published on the journals homepage at <http://www.thieme-connect.de/ejournals/toc/plantamedica>.

5. Proofs and Reprints: Galley proofs will be sent to the corresponding author as a PDF file. An electronic author reprint will be supplied free of charge after online publication.