

Guidelines for Authors

1. Editorial Policy

PLANTA MEDICA – Journal of Medicinal Plant and Natural Product Research appears with 15 issues a year. The following areas of medicinal plant and natural product research are covered:

1. Pharmacology and clinical studies
2. Natural product chemistry
3. Analytical studies
4. Biochemistry, molecular biology and biotechnology
5. Biological screening

Only papers that are of highest scientific quality, that are concisely written and that comply 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. There is no page charge.

Language of publication is **English**. Manuscripts written by authors whose mother language is not English should be checked by a native speaker or a professional language editing service before submission. **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 characterisation** (see below).

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

2. Submission of Manuscripts

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

A **sample manuscript** (for Original Papers) and a **sample letter** are 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 text processors should be used for preparation of the manuscripts. No pdf files should be submitted. 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*.

10 Basic Rules for a Publication in *Planta Medica*

Manuscripts will not be considered for publication in *Planta Medica* unless the following conditions, if applicable, are fulfilled:

1. Ethical considerations: 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**. 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.**

2. Language of publication is English. Manuscripts written by authors whose mother language is not English should be checked by a native speaker or a professional language editing service before submission.

3. Plant material (as well as other organisms) must be properly identified. The scientific name (in *italic*), the author of this name and the family must be given. It should be mentioned who identified the material. The manuscript must include references to **voucher specimens** of the plants (deposited in a major regional herbarium) or the material examined.

4. Isolation of compounds: Extraction and isolation should be described in detail. The kind and amount of material, solvents and extraction methods must be indicated. The description of chromatographic systems should contain the quantitative information that allows the reader to repeat the work. Column dimensions, elution volumes, fraction sizes, etc. should be reported.

5. 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.

6. Pharmacological investigations of extracts require detailed extract characterisation. Chromatographic profiling (e.g. HPLC profile with at least the major peaks identified) should be carried out, or qualitative and quantitative information on active or typical constituents should be provided.

7. Pharmacological investigations: *Planta Medica* will only consider manuscripts in which conclusions are based on adequate statistics. In each case **positive controls** (reference compounds) should be used and the dose/activity dependence should be shown.

8. Pharmacological investigations: 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.

9. Clinical studies must be designed, implemented and analyzed in a manner to meet current standards of randomized controlled trials.

10. 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. Biological activities should be reported by listing IC₅₀ values, or at least a dose-response relationship should be shown by using 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.

The **manuscript** (main text, tables, structural formulas and figures) should be submitted as **one file**. Colour reproduction of figures is available without any charge, if necessary for scientific reasons. If not, colour prints can only be reproduced without charge when submitted as Supporting Information. Authors are strongly encouraged to provide non-essential but useful data, figures and tables as **Supporting Information** (see below).

3. Format of Manuscripts

3.1. Original Papers. Original papers are research articles describing original experimental results. The material should be arranged in the order: Title Page / Abstract / Keywords / Abbreviations / Introduction / Materials and Methods / Results / Discussion / Acknowledgements / References / Figure Legends / Tables / Structural Formulas / Figures. Results and Discussion sections may appear as two separate parts or as a combined "Results and Discussion" section. No subheadings are allowed within this section. The normal length of the **main text** of an Original Paper, **excluding** references, tables, figures and figure legends, is about **3,000 words**. In exceptional and well justified cases longer manuscripts may be accepted. When submitting such manuscripts, authors should provide a justification statement, giving compelling reasons for the length of the paper.

3.2. Letters should be concise reports on new specific results of general interest. The Letter should be arranged in the order: Title Page / short Abstract / Keywords / Abbreviations / Introductory Remarks, Results and Discussion as one body of text without headlines / Materials and Methods with brief experimental details without subheadings / Acknowledgements / References / Figure Legends / Tables / Structural Formulas / Figures. The normal length of the **main text** of a Letter, **excluding** references, tables, figures and figure legends, is about **1,000 words**. The number of references should normally not exceed 30.

3.3. 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 or a Letter. 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.

3.4. Reviews will generally be **invited** by the Editor-in-Chief or the Review Editor. 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. Reviews should contain an abstract, and 4–6 keywords should be listed.

3.5. Minireviews and Perspectives will generally be **invited** by the Editor-in-Chief or the Review Editor. 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 **1,500 words**.

3.6. 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

In addition to the Guidelines, authors should consult the **sample manuscript** (for Original Papers) or the **sample letter** at <http://mc.manuscriptcentral.com/plamed> → Instructions and Forms, or at www.thieme.de/fz/plantamedica prior to preparing their contribution. Commonly used text processors should be used for preparation of the manuscripts.

For submission of all manuscripts, follow the instructions of the online submission system. 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, the full names referenced by numerical superscripts with affiliation and addresses of all authors, and the full address of the corresponding author.

4.2. The Abstract should contain brief information on purpose, methods, results and conclusion (without subheadings).

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

4.4. Abbreviations should generally be used sparingly. Standard abbreviations such as m.p., b.p., K, s, min, h, μL , mL, μg , mg, g, kg, nm, mm, cm, ppm, mmol, HPLC, TLC, GC, UV, CD, IR, MS, NMR can be used throughout the manuscript. Non-standard abbreviations must be defined in the text following their first use. Provide a list of all non-standard 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. Materials and Methods. Specific details about test materials and test compounds, instrumentation and experimental protocols should be given here. 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 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.

4.6.1. 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 *italic*), the author of this name and the family. Indicate who identified the material. 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.

4.6.2. Description of the preparation of extracts and isolation of compounds. The kind and amount of starting material, solvents and extraction methods 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 μm ; 2 \times 50 cm), MeOH/ EtOAc 8:2, 3 mL/min; t_{R} 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.

4.6.3. Physico-chemical characterization 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 $[\alpha]_{\text{D}}^{\text{temp}}$, the symbol c is defined as mass of substance (in g) in 100 mL of solution. For specific optical rotation no unit should be specified; 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 author of correspondence.* Such original spectra and/or spectral assignments can be provided as Supporting Information (see below), as well as structural formula outlining NMR spectral correlations, MS fragmentations, etc. IR, NMR, mass, and UV spectra should normally not be given in the manuscript as figures, but only if the listing of characteristic signals is not sufficient.

4.6.4. 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.

4.6.5. 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.

4.6.6. 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.

4.6.7. Pharmacological investigations. *Planta Medica* will only consider manuscripts in which conclusions are based on adequate statistics which account for the type of data distribution, on the number of experimental observations required for the application of the respective statistical method, and which incorporate the appropriate tests of significance. In each case **positive controls** (reference compounds) should be used and the dose/activity dependence should be shown. 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.

Pharmacological investigations of extracts require **detailed extract characterisation**. This includes botanical characterisation of plant material, solvent(s), duration and temperature of extraction, plus other method(s) used for preparation(s). 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 standardisation of an extract and/or fraction(s) require state of the art methods.

4.6.8. Clinical studies. Studies reporting on plant preparations tested in humans will be accepted for review and publication. Clinical studies must be designed, implemented and analyzed in a manner to meet current standards of randomized controlled trials. For guidelines see the following reviews: Begg C et al. *JAMA* 1996; 276: 637–639 and Altmann DG. *BMJ* 1996; 313: 570–571. Reference must be made to approval of the study by the local ethical committee. All methods and variables used in a trial should be described; the data must be based on adequate statistics. Herbal medicinal products used must be characterized as described above for pharmacological investigations.

4.6.9. 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 4.6.1 and 4.6.2). Biological activities should be reported by listing IC₅₀ values, or a dose-response relationship should be shown by using 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.

4.7. Results should be presented in a concise manner. Tables and figures should be presented in a manner which maximizes clarity and comprehension. The **Discussion** should provide an interpretation of the data and relate them to existing knowledge. Subtitles are only admitted in exceptional cases.

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

4.9. References should be numbered in the order in which they are cited in the text as 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. 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

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 4554399; 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.

If reference is made to papers submitted or in press, authors are requested to add a file of the manuscript or galley proof to the online submission. Avoid references to unpublished personal communications.

4.10. Structural formulas 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 Helvetica 10, compound numbers Helvetica 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. The formulas should be integrated into the manuscript file (see above: 2. Submission of Manuscripts). They will be reproduced without reduction and the charts should be prepared with maximum widths of up to 8.0 cm for single column print and up to 17 cm for double column print.

4.11. 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: High-resolution halftone and colour illustrations, 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 must contain the title of the manuscript, names and affiliations of all authors, and the full address of the corresponding author. Legends for Figures and Tables must appear directly on the respective figure pages. Pages have to be numbered consecutively. **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.

July, 2009

© 2009 Georg Thieme Verlag KG Stuttgart New York.

All rights reserved.

For further information, please contact plantamedica@thieme.de