DESCRIPTION

The Journal of Herbal Medicine is a peer reviewed journal which aims to serve its readers as an authoritative resource on the profession and practice of herbal medicine. The content areas of the journal reflect the interests of Medical Herbalists and other health professionals interested in the clinical and professional application of botanical medicines. The objective is to strengthen the research and educational base of herbal medicine with research papers in the form of case studies, original research articles and reviews, monographs, clinical trials and relevant in vitro studies. It also publishes policy statements, opinion pieces, book reviews, conference proceedings and profession related information such as pharmacovigilance reports providing an information source for not only the Herbal Practitioner but any Health professional with an interest in phytotherapy.

Potentially the premier journal in its field, the journal welcomes papers that stimulate research and interest in herbal medicine education and practice that disseminate information about its clinical tradition, best practices, skills and knowledge, e.g. in the area of

- Traditional medicine, ethnobotany and western herbal medicine
- Herbal therapeutics, phytomedicine and herbal preparations
- Medicinal plants in healthcare, clinical trials and pilot studies
- Biological and pharmacological effects of plant extracts
- Medicinal plants and their anti-inflammatory, anti-cholesterol, hypotensive, antispasmodic, anti-diabetic, anticancer, antiviral, antibacterial and antifungal activity

We do not publish papers
- whereby the focus and primary experimental method involves the use of animals
- where the evidence base of the research paper focuses primarily on animal models and actual descriptions of animal studies are used as the main evidence. In review papers, citations of animal studies should be limited as far as possible
- that only focus on in vitro studies relating to antioxidant activity

AUDIENCE

medical herbalists, pharmacologists, toxicologists, pharmacists, pharmacognosists, phytotherapists (clinicians), biochemists, botanists, general practitioners, CAM practitioners, allied health professionals
ABSTRACTING AND INDEXING

Embase
Scopus
Science Citation Index

EDITORIAL BOARD

Editor-in-Chief
Kofi Busia, Pentecost University, Faculty of Health and Allied Sciences, Accra, Ghana
History of African Traditional Medicine, Ethnobotany, Ethnopharmacology and phytochemistry, Rational use of medicinal plants, Phytopharmacology of antioxidant-containing herbs, Leadership and Governance in Public Health

Associate Editors
Gabrielle Bangay, Lusófona University of Humanities and Technologies, Lisboa, Portugal
Medicinal Plant Chemistry, Analytical Chemistry, Ethnobotany, Ethnopharmacology, Natural Product Chemistry
Mavis Boakye-Yiadom, Centre for Plant Medicine Research, Mampong-Akuapim, Ghana
Clinical, Phytochemistry, Pharmacology and Phytomedicine evaluation research
Rui Fang, Royal Botanic Gardens Kew, Richmond, United Kingdom
Ethnopharmacology, Phytochemistry, Metabolomics
Nceba Gqaleni, University of KwaZulu-Natal Discipline of Traditional Medicine, Durban, South Africa
African traditional medicine, Herbal medicine, Immunomodulation, Nutraceuticals
Marion Mackonochie, Pukka Herbs Ltd, Bristol, United Kingdom
Herbal medicine, History of herbal medicine, Phytochemistry, Natural product chemistry, Pharmacology
Gökhan Zengin, Selçuk University, Konya, Turkey
Biological activity, Enzyme inhibition, Phenolics, Antioxidants, Cancer
Michal Zweig, Royal Holloway University of London, Egham, United Kingdom
Plant biochemistry, Natural products chemistry, Metabolomics

Founding Editor
Barbara Pendry, University of East London, London, United Kingdom

Submissions Editor
Ally Broughton, The National Institute of Medical Herbalists Ltd, Exeter, United Kingdom

Editorial Office Manager
Marion Hoffmann, Lenggries, Germany
Editorial

Managing Editor
Gerda Fouche, Onderstepoort, South Africa
Pharmacology; Chemistry; Natural Products

Editorial Board
Richard Adams, Richard Adams Herbalist, London, United Kingdom
Herbal medicine
Alex Asase, University of Ghana, Department of Plant and Environmental Biology, Accra, Ghana
Ethnobotany / Ethnopharmacology, Medicinal plants, Botany, Climate Change, Conservation
Julian Barker, Medical Herbalist, The Practice & Dispensary, Lewes, United Kingdom
Phytotherapy, Phytochemistry, Plant Taxonomy, Field Botany
Chanchal Cabrera, Innisfree Farm and Botanic Garden, Courtenay, British Columbia, Canada
botanical medicine
Üğur Çakılcıoğlu, Munzur University, Tunceli, Turkey
Ethnobotany, Medicinal plant, Edible plants, Enzyme inhibition, Multivariate analysis, Plant anatomy, Botany
Andrew Chevallier, The National Institute of Medical Herbalists Ltd, Exeter, United Kingdom
Pharmacognosy, Phytotherapy
Daphne Christie, University of Cambridge, Cambridge, United Kingdom
Pharmacology, chemistry
Peter Conway, Pacific Rim College, Victoria, British Columbia, Canada
Chronic and complex conditions, Consultation Dynamics, Complexity in Phytotherapy, Plant Entheogens

Tony Elujoba, Obafemi Awolowo University, Ile-Ife, Nigeria
Sue Evans, University of Tasmania School of Pharmacy and Pharmacology, Hobart, Australia

Botanical medicine

Rachael H. Frost, University College London, London, United Kingdom
herbal medicine, ageing, frailty, adherence, reviews, qualitative, health promotion, mental health, trials

Jiayu Gao, Henan University of Technology, Zhengzhou, China
Pharmacology

Shantha Godagama, University of East London, London, United Kingdom
Ayurvedic medicine/marmapuncture

Michael Heinrich, University College London School of Pharmacy, London, United Kingdom
Ethnopharmacology, herbal drug safety, anti-inflammatory natural products, dermatology, Mexico, phytopharmaceutical analysis, food-medicine interface, ethnobotany

Peter Houghton, King's College London, London, United Kingdom
Ethnopharmacology, Phytochemistry

J. C. Kalita, Gauhati University, Department of Zoology, Guwahati, India
Animal Reproduction, Endocrine disruption, Phytoestrogens, Traditionally used Medicinal plants of Northeastern Region of India (belong to Biodiversity Hotspot), Anti diabetic, anti cancer, fertility/antifertility plants, Biodegradation in water bodies

Ossy M. J. Kasilo, World Health Organization Regional Office for Africa, Brazzaville, Congo
Ethnobotany, Pharmacognosy, Ethnopharmacology, Traditional medicine and herbal medicine regulation

Sue Lannan, Edinburgh Napier University, Edinburgh, United Kingdom
M. Fawzi Mahomoodally, University of Mauritius, Reduit, Mauritius
Phytotherapy, Biomedicine, Bio-Pharmaceuticals, Alternative Medicine, Ethnopharmacology, Pharmacovigilance, Ethnobotany

Motlalepula Matsabisa, University of the Free State, Bloemfontein, South Africa
Pharmacology and Pharmacology of Traditional Medicines

Michael McIntyre, Midsummer Clinic, Chipping Norton, United Kingdom
Acupuncture, Western and Chinese Herbal medicine

Amanda McQuade Crawford, Livingston Memorial Visiting Nurse Association, Ventura, California, United States of America
Integrative medicine, mental health

Pulok Kumar Mukherjee, Jadavpur University, Kolkata, India
Pharmacology, Ethnopharmacology

Mohammad Rashid, University of Dhaka, Dhaka, Bangladesh
Phil Rasmussen, Harvest Natural Health Centre, Auckland, New Zealand
Aviva Romm, The UltraWellness Center, Lenox, Massachusetts, United States of America
Alberto Sanchez-Medina, Veracruzana University, Xalapa, Mexico
chemometrics, metabolomics, natural products, medicinal plants

Majid Sharifi-Rad, University of Zabol, Department of Range and Watershed Management, Zabol, Iran
Pharmacognosy, Herbal medicine, Ethnobotany, Biosynthesis of nanoparticles, Phytomedicines

Anne Stobart, University of Exeter, Faculty of Humanities Arts and Social Sciences, Exeter, United Kingdom
Herbal medicine, History of domestic medicine, Medicinal agroforestry

Graeme Tobyn, University of Central Lancashire School of Health Sciences, Preston, United Kingdom
History of medicine, Herbal medicine, Health and wellbeing, modern history.

Roy Upton, American Herbal Pharmacopoeia, Scotts Valley, California, United States of America
Medicinal Plant Resource Science

Geoffrey Webb, University of East London, London, United Kingdom
Nutrition, dietary supplements, research error and fraud

Julie Whitehouse, University of Westminster, London, United Kingdom

David Winston, David Winston's Center for Herbal Studies, Riegelsville, Pennsylvania, United States of America
Botanical Medicine, Ethnobotany

Rodney Young, Oxford, United Kingdom
Medicinal Chemistry, Pharmacology
INTRODUCTION

The Journal of Herbal Medicine is a peer reviewed journal which aims to serve its readers as an authoritative resource on the profession and practice of herbal medicine. The content areas of the journal reflect the interests of Medical Herbalists and other health professionals interested in the clinical and professional application of botanical medicines. The objective is to strengthen the research and educational base of herbal medicine with research papers in the form of case studies, original research articles and reviews, monographs, clinical trials and relevant in vitro studies. It also publishes policy statements, opinion pieces, book reviews, conference proceedings and profession related information such as pharmacovigilance reports providing an information source for not only the Herbal Practitioner but any Health professional with an interest in botanical medicine.

Potentially the premier journal in its field, the journal welcomes papers that stimulate research and interest in herbal medicine education and practice that disseminate information about its clinical tradition, best practices, skills and knowledge.

We do not publish papers:

Whereby the focus and primary experimental method involves the use of animals. We also will not publish articles that only focus on in vitro studies relating to antioxidant activity. Where the evidence base of the research paper focuses primarily on animal models and actual descriptions of animal studies are used as the main evidence. In review papers, citations of animal studies should be limited as far as possible.

Submission checklist

You must use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details. Please confirm with your signature that your submission adheres to the author instructions and submit the signed checklist along with your article (mandatory).

For further information, visit our Support Center.

BEFORE YOU BEGIN

Ethics in publishing

Please see our information on Ethics in publishing.

Informed consent and patient details

Studies on patients or volunteers require ethics committee approval and informed consent, which should be documented in the paper. Appropriate consents, permissions and releases must be obtained where an author wishes to include case details or other personal information or images of patients and any other individuals in an Elsevier publication. Written consents must be retained by the author but copies should not be provided to the journal. Only if specifically requested by the journal in exceptional circumstances (for example if a legal issue arises) the author must provide copies of the consents or evidence that such consents have been obtained. For more information, please review the Elsevier Policy on the Use of Images or Personal Information of Patients or other Individuals. Unless you have written permission from the patient (or, where applicable, the next of kin), the personal details of any patient included in any part of the article and in any supplementary materials (including all illustrations and videos) must be removed before submission.

Informed consent

Identifying information, including patients' names, initials, or hospital numbers, should not be published in written descriptions, photographs, and pedigrees unless the information is essential for scientific purposes and the patient (or parent or guardian) gives written informed consent for publication. Images of patients or volunteers should not be used unless the information is essential for scientific purposes and explicit permission has been given as part of the consent. When informed consent has been obtained it should be indicated in the published article.

Human rights

Studies on humans require local organizational ethics committee approval. When reporting experiments on human subjects, authors should indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation.
(institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5). If doubt exists whether the research was conducted in accordance with the Helsinki Declaration, the authors must explain the rationale for their approach, and demonstrate that the institutional review body (ethics committee) explicitly approved the doubtful aspects of the study.

**Declaration of interest**

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double anonymized) or the manuscript file (if single anonymized). If there are no interests to declare then please state this: 'Declarations of interest: none'. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. More information.

**Taxonomy - voucher specimens**

It is general practice that in research involving plant material voucher specimens should be deposited in a recognised herbarium. These voucher specimens need to be fully cited within the article (herbarium reference number) along with the origin of the plant material, method of authentication (e.g. expert botanist) and form of the plant material being used.

Authors are requested to check the taxonomic validity of the plant names using one of the international data bases, and preferably http://www.theplantlist.org. These requirements are often ignored in clinical studies of herbal preparations. Authors are referred to the following paper that clearly indicates that correct taxonomic nomenclature is an essential requirement in such studies: Rivera et al. J. Ethnopharmacology 2014

The methods of extraction and processing as well as any quality assurance tests undertaken must be reported. If a proprietary or licensed product is used, the manufacturer and batch number of the product should be reported as a minimum. Further details on sourcing and quality assurance should also be provided where available from the manufacturer.

**Declaration of generative AI in scientific writing**

The below guidance only refers to the writing process, and not to the use of AI tools to analyse and draw insights from data as part of the research process.

Where authors use generative artificial intelligence (AI) and AI-assisted technologies in the writing process, authors should only use these technologies to improve readability and language. Applying the technology should be done with human oversight and control, and authors should carefully review and edit the result, as AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. AI and AI-assisted technologies should not be listed as an author or co-author, or be cited as an author. Authorship implies responsibilities and tasks that can only be attributed to and performed by humans, as outlined in Elsevier’s AI policy for authors.

Authors should disclose in their manuscript the use of AI and AI-assisted technologies in the writing process by following the instructions below. A statement will appear in the published work. Please note that authors are ultimately responsible and accountable for the contents of the work.

**Disclosure instructions**

Authors must disclose the use of generative AI and AI-assisted technologies in the writing process by adding a statement at the end of their manuscript in the core manuscript file, before the References list. The statement should be placed in a new section entitled ‘Declaration of Generative AI and AI-assisted technologies in the writing process’.

**Statement**: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

This declaration does not apply to the use of basic tools for checking grammar, spelling, references etc. If there is nothing to disclose, there is no need to add a statement.
Submission declaration and verification
Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify compliance, your article may be checked by Crossref Similarity Check and other originality or duplicate checking software.

Preprints
Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

Preprint posting on SSRN
In support of Open Science, this journal offers its authors a free preprint posting service. Preprints provide early registration and dissemination of your research, which facilitates early citations and collaboration.

During submission to Editorial Manager, you can choose to release your manuscript publicly as a preprint on the preprint server SSRN once it enters peer-review with the journal. Your choice will have no effect on the editorial process or outcome with the journal. Please note that the corresponding author is expected to seek approval from all co-authors before agreeing to release the manuscript publicly on SSRN.

You will be notified via email when your preprint is posted online and a Digital Object Identifier (DOI) is assigned. Your preprint will remain globally available free to read whether the journal accepts or rejects your manuscript.

For more information about posting to SSRN, please consult the SSRN Terms of Use and FAQs.

Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. When coding terminology is used, we recommend to avoid offensive or exclusionary terms such as "master", "slave", "blacklist" and "whitelist". We suggest using alternatives that are more appropriate and (self-) explanatory such as "primary", "secondary", "blocklist" and "allowlist". These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

Reporting sex- and gender-based analyses
Reporting guidance
For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their research's generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.
Definitions
Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth ("sex assigned at birth"), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging whereas these constructs actually exist along a spectrum and include additional sex categorizations and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms “sex” and “gender” can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

Author contributions
For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should be formatted with the names of authors first and CRediT role(s) following. Please do not reveal detailed author information in this statement. More details and an example.

Clinical trial results
In line with the position of the International Committee of Medical Journal Editors, the journal will not consider results posted in the same clinical trials registry in which primary registration resides to be prior publication if the results posted are presented in the form of a brief structured (less than 500 words) abstract or table. However, divulging results in other circumstances (e.g., investors’ meetings) is discouraged and may jeopardise consideration of the manuscript. Authors should fully disclose all posting in registries of results of the same or closely related work. A sample size calculation is required, alternatively the reason one is absent must be given (e.g. a pilot trial). The herbal consort must be specified.

Reporting clinical trials
Randomized controlled trials should be presented according to the CONSORT guidelines. At manuscript submission, authors must provide the CONSORT checklist accompanied by a flow diagram that illustrates the progress of patients through the trial, including recruitment, enrollment, randomization, withdrawal and completion, and a detailed description of the randomization procedure. The CONSORT checklist and template flow diagram are available online.

Registration of clinical trials
Registration in a public trials registry is a condition for publication of clinical trials in this journal in accordance with International Committee of Medical Journal Editors recommendations. Trials must register at or before the onset of patient enrolment. The clinical trial registration number should be included at the end of the abstract of the article. A clinical trial is defined as any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects of health outcomes. Health-related interventions include any intervention used to modify a biomedical or health-related outcome (for example drugs, surgical procedures, devices, behavioural treatments, dietary interventions, and process-of-care changes). Health outcomes include any biomedical or health-related measures obtained in patients or participants, including pharmacokinetic measures and adverse events. Purely observational studies (those in which the assignment of the medical intervention is not at the discretion of the investigator) will not require registration.

Article transfer service
This journal uses the Elsevier Article Transfer Service to find the best home for your manuscript. This means that if an editor feels your manuscript is more suitable for an alternative journal, you might be asked to consider transferring the manuscript to such a journal. The recommendation might be provided by a Journal Editor, a dedicated Scientific Managing Editor, a tool assisted recommendation,
or a combination. If you agree, your manuscript will be transferred, though you will have the opportunity to make changes to the manuscript before the submission is complete. Please note that your manuscript will be independently reviewed by the new journal. More information.

Copyright
Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see more information on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases.

For gold open access articles: Upon acceptance of an article, authors will be asked to complete a 'License Agreement' (more information). Permitted third party reuse of gold open access articles is determined by the author's choice of user license.

Author rights
As an author you (or your employer or institution) have certain rights to reuse your work. More information.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement, it is recommended to state this.

Open access
Please visit our Open Access page for more information.

Language (usage and editing services)
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier’s Author Services.

Submission
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor’s decision and requests for revision, is sent by e-mail.

Submission address
Please submit your article via https://www.editorialmanager.com/hermed/default.aspx (available as of early 2011).

Suggesting reviewers
Please submit the names and institutional e-mail addresses of several potential reviewers.

You should not suggest reviewers who are colleagues, or who have co-authored or collaborated with you during the last three years. Editors do not invite reviewers who have potential competing interests with the authors. Further, in order to provide a broad and balanced assessment of the work, and ensure scientific rigor, please suggest diverse candidate reviewers who are located in different countries/
regions from the author group. Also consider other diversity attributes e.g. gender, race and ethnicity, career stage, etc. Finally, you should not include existing members of the journal's editorial team, of whom the journal are already aware.

Note: the editor decides whether or not to invite your suggested reviewers.

**PREPARATION**

**Queries**
For questions about the editorial process (including the status of manuscripts under review) or for technical support on submissions, please visit our Support Center.

**Peer review**
This journal operates a double anonymized review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor’s decision is final. Editors are not involved in decisions about papers which they have written themselves or have been written by family members or colleagues or which relate to products or services in which the editor has an interest. Any such submission is subject to all of the journal’s usual procedures, with peer review handled independently of the relevant editor and their research groups. More information on types of peer review.

**Use of word processing software**
It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

**Article structure**

**Subdivision - numbered sections**
Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

**Introduction**
State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

**Material and methods**
Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

**Results**
Results should be clear and concise.

**Discussion**
This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

**Conclusions**
The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.
Appendices
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information
• Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
• Author names and affiliations. Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
• Corresponding author. Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.
• Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Highlights
Highlights are optional yet highly encouraged for this journal, as they increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

Abstract
Structured abstract:

The abstract should be structured with four sub-headings: Introduction (which should include the aim of the study), Methods (materials used, methodology), Results, Discussion/Conclusions. The text should not exceed 250 words and has to be presented at the beginning of the paper. Unsubstantiated speculation should not be included. Footnotes may not be used. References must provide complete publication data.

Graphical abstract
Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view Example Graphical Abstracts on our information site.

Keywords
Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations
Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.
Acknowledgements
Collate acknowledgements in a separate document and submit the document along with your article. (Kindly make the acknowledgements a separate optional submission item. We need this separately to ensure that the peer review process is fully anonymized.)

Formatting of funding sources
List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, it is recommended to include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Units
Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

Footnotes
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork

Image manipulation
Whilst it is accepted that authors sometimes need to manipulate images for clarity, manipulation for purposes of deception or fraud will be seen as scientific ethical abuse and will be dealt with accordingly. For graphical images, this journal is applying the following policy: no specific feature within an image may be enhanced, obscured, moved, removed, or introduced. Adjustments of brightness, contrast, or color balance are acceptable if and as long as they do not obscure or eliminate any information present in the original. Nonlinear adjustments (e.g. changes to gamma settings) must be disclosed in the figure legend.

Electronic artwork
General points
- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.
- Ensure that color images are accessible to all, including those with impaired color vision.

A detailed guide on electronic artwork is available. You are urged to visit this site; some excerpts from the detailed information are given here.

Formats
If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format. Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings, embed all used fonts.
TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.  
TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.  
TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.  

**Please do not:**  
- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;  
- Supply files that are too low in resolution;  
- Submit graphics that are disproportionately large for the content.

**Figure captions**  
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

**Tables**  
Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

**References**  

**Citation in text**  
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

**Web references**  
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

**Data references**  
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] Immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

**Preprint references**  
Where a preprint has subsequently become available as a peer-reviewed publication, the formal publication should be used as the reference. If there are preprints that are central to your work or that cover crucial developments in the topic, but are not yet formally published, these may be referenced. Preprints should be clearly marked as such, for example by including the word preprint, or the name of the preprint server, as part of the reference. The preprint DOI should also be provided.

**References in a special issue**  
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

**Reference management software**  
Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use
reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Reference style

Text: All citations in the text should refer to:
1. Single author: the author's name (without initials, unless there is ambiguity) and the year of publication;
2. Two authors: both authors' names and the year of publication;
3. Three or more authors: first author's name followed by 'et al.' and the year of publication.

Citations may be made directly (or parenthetically). Groups of references can be listed either first alphabetically, then chronologically.

Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999).... Or, as demonstrated (Jones, 1999; Allan, 2000)... Kramer et al. (2010) have recently shown ...'

List: References shall be listed in alphabetical order. Groups of references can be listed either first alphabetically, then chronologically. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

Examples:
Reference to a journal publication:
Reference to a journal publication with an article number:
Reference to a book:
Reference to a chapter in an edited book:
Reference to a website:
Reference to a dataset:
Reference to software:

Journal abbreviations source

Journal names should be abbreviated according to the List of Title Word Abbreviations.

Supplementary material

Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

Research data

This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experiment that validate research findings, which may also include software, code, models, algorithms, protocols, methods and other useful materials related to the project.
Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

**Data linking**
If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the database linking page.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

**Research Elements**
This journal enables you to publish research objects related to your original research – such as data, methods, protocols, software and hardware – as an additional paper in a Research Elements journal.

Research Elements is a suite of peer-reviewed, open access journals which make your research objects findable, accessible and reusable. Articles place research objects into context by providing detailed descriptions of objects and their application, and linking to the associated original research articles. Research Elements articles can be prepared by you, or by one of your collaborators.

During submission, you will be alerted to the opportunity to prepare and submit a manuscript to one of the Research Elements journals.

More information can be found on the Research Elements page.

**Data statement**
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

**Writing a review article**
A review article is a critical, constructive, scientific analysis of the literature in a specific field that relies on previously published literature or data. It is a stand-alone publication. Literature reviews as part of undergraduate/Masters and doctoral theses are not acceptable. Reviews submitted to the Journal of Herbal Medicine must show relevance to herbal practice. The introduction should give theoretical or practical justification for the need for a review and provide information about the context, indicate the motivation for the review, define the focus, the research question and explain the text structure. All reviews must have a methods section. The methods section contains for example: information about data sources (e.g. bibliographical databases), search terms and search strategies, selection criteria (inclusion/exclusion criteria) the number of studies screened, and the number of studies included, statistical methods of meta analysis. Systematic reviews and meta-analysis should follow the PRISMA guidelines. A review article should include a critical analysis of the data presented in a discussion and conclusion, this should include implications of the findings and needs to highlight the achievements and specific scientific gaps in our knowledge and identify what further research is the priority.

**AFTER ACCEPTANCE**
**Online proof correction**

To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.

If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

**Offprints**

The corresponding author will, at no cost, receive a customized Share Link providing 50 days free access to the final published version of the article on ScienceDirect. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

**AUTHOR INQUIRIES**

Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also check the status of your submitted article or find out when your accepted article will be published.