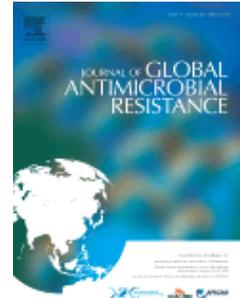




### TABLE OF CONTENTS

●	<b>Description</b>	<b>p.1</b>
●	<b>Impact Factor</b>	<b>p.2</b>
●	<b>Abstracting and Indexing</b>	<b>p.2</b>
●	<b>Editorial Board</b>	<b>p.2</b>
●	<b>Guide for Authors</b>	<b>p.5</b>



ISSN: 2213-7165

### DESCRIPTION

**Announcement:** From January 2020 *Journal of Global Antimicrobial Resistance (JGAR)* is an open access journal. Authors who publish in *JGAR* will be able make their work immediately, permanently, and freely accessible. *JGAR* authors will pay an article publishing charge (APC), have a choice of license options, and retain copyright to their published work.

*JGAR* continues with the same aims and scope, editorial team, submission system and rigorous peer review.

The APC will be requested after peer review and acceptance and will be required for all accepted articles submitted after 6 January 2020. The APC for *JGAR* is GBP 1500 (excluding taxes) for Original Research Articles and Review Articles and GBP 500 (excluding taxes) for Short Format Articles.

Please note: Authors who have submitted papers before 6 January 2020 will have their accepted paper published in *JGAR* at no charge. Authors submitting papers after this date will be requested to pay the APC.

For full information on publishing your paper open access in *JGAR*, visit the journal's [open access page](#) and [guide for authors](#), or visit our [FAQs](#) page. The ***Journal of Global Antimicrobial Resistance (JGAR)*** is a quarterly online Open Access journal run by an international Editorial Board that focuses on the global spread of antibiotic-resistant microbes.

*JGAR* is a dedicated journal for all professionals working in research, health care, the environment and animal infection control, aiming to track the resistance threat worldwide and provides a single voice devoted to antimicrobial resistance (AMR).

Featuring peer-reviewed and up to date research articles, reviews, short notes and hot topics *JGAR* covers the key topics related to antibacterial, antiviral, antifungal and antiparasitic resistance.

In particular:resistance mechanisms and gene transfer;molecular epidemiology of resistant organisms;resistome and proteome;drug-resistant viral emergence in treated and untreated patients;microbiological and clinical studies stewardship;resistance to disinfectants; antimicrobial resistance testing detection and diagnostic;viral resistant variants and impact on public health;PK/PD parameters and prediction of efficacy;surveillance studies of resistant pathogens affecting humans isolated from different hosts and environments.resistance and spread in animals and environment.

Moreover, JGAR has a dedicated section called **Genome Notes**, where scientists can publish genomes of resistant prokaryotic and eukaryotic together with viruses, and is interested in **Book Reviews**.

## IMPACT FACTOR

---

2018: 2.469 © Clarivate Analytics Journal Citation Reports 2019

## ABSTRACTING AND INDEXING

---

Scopus  
ScienceDirect  
Science Citation Index  
PubMed/Medline

## EDITORIAL BOARD

---

### *Editor-in-Chief*

**Stefania Stefani**, University of Catania, Catania, Italy

### *Founding Editors*

**Ian Gould**, Aberdeen Royal Infirmary, Aberdeen, United Kingdom

**Wing-Hong Seto**, Queen Mary Hospital, Hong Kong, Hong Kong

**Po-Ren Hsueh**, National Taiwan University, Taipei, Taiwan

### *Scientific Secretariat*

**Simona Purrello**, University of Catania, Catania, Italy

### *Resistance Mechanisms and Gene Transfer, Resistome and Proteome*

**Robert Bonomo**, University Hospitals, Cleveland, Ohio, United States

**Peter M. Hawkey**, University of Birmingham, Birmingham, England, United Kingdom

**Francesco Iannelli**, University of Siena, Siena, Italy

**Holger Rohde**, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

**Athanasios Tsakris**, National and Kapodistrian University of Athens, Athens, Greece

### *Molecular Epidemiology of Resistant Organisms*

**Robert Yen-Hsu Chen**, Kaohsiung Medical University, Kaohsiung, Taiwan

**Teresa Coque**, Ramon y Cajal University Hospital, Madrid, Spain

**Camilla Rodrigues**, PD Hinduja National Hospital and Medical Research Centre, Mumbai, India

**Harald Seifert**, University of Cologne, Cologne, Germany

### *Microbiological and Clinical Studies Stewardship*

**George L. Daikos**, National and Kapodistrian University of Athens, Athens, Greece

**Marco Falcone**, University of Rome La Sapienza, Roma, Italy

**Evangelos Giamarellos-Bourboulis**, University General Hospital Athinon, Athens, Greece

**Wen-Chien Ko**, National Cheng Kung University Hospital, Div. of Infectious Diseases, Taiwan, Taiwan

**Gabriel Levy Hara**, Acute Care General Hospital Carlos G Durand, Buenos Aires, Argentina

**Mingui Wang**, Huashan Hospital Fudan University, Shanghai, China

**Richard R. Watkins**, Cleveland Clinic, Cleveland, OH, United States

**Heiman Wertheim**, National Hospital of Tropical Diseases, Ha Noi, Viet Nam

### *Resistance to Disinfectants, Microbicides and Biofilm*

**Karolin Hijazi**, University of Aberdeen, Aberdeen, United Kingdom

**Charles Kelly**, King's College London, London, United Kingdom

**Mark Webber**, Quadram Institute Bioscience, Norwich, England, United Kingdom

### *Antimicrobial Resistance Detection and Diagnostics*

**Andrea Endimiani**, University of Bern, Bern, Switzerland

**Yun F (Wayne) Wang**, Emory University Department of Pathology and Laboratory Medicine, Atlanta, Georgia, United States

### *Immunity and Vaccine Escape Viral Mutants, Drug-Resistant Viral Emergence in Treated and Untreated Patients, Viral Resistant Variants and Impact on Public Health*

**Guido Antonelli**, University of Rome La Sapienza, Roma, Italy

**Carlo-Federico Perno**, University of Rome Tor Vergata

***PK/PD Parameters and Prediction of Efficacy***

**Federico Pea**, University Hospital Santa Maria della Misericordia, Udine, Italy

**Vincent H. Tam**, University of Houston College of Pharmacy, Houston, Texas, United States

***Surveillance Studies of Resistant Pathogens Affecting Humans Isolated from Different Hosts and Environments***

**Fabio Arena**, Foggia, Italy

**Geoffrey Coombs**, Murdoch, Australia

**Alexander W. Friedrich**, Groningen, Netherlands

**Ana C. Gales**, São Paulo, São Paulo, Brazil

**Shahana Urooj Kazmi**, Karachi, Pakistan

***Resistance and Spread in Animals, Environment and Food***

**Marisa Haenni**, Anses Laboratoire de Lyon, Lyon, France

**Jon Hobman**, University of Nottingham, Nottingham, United Kingdom

**Jean Yves Madec**, Lyon Catholic University, Lyon, France

**Herbert Tomaso**, Friedrich-Loeffler-Institute Federal Research Institute for Animal Health, Greifswald, Germany

***Antifungal Resistance***

**Anuradha Chowdhary**, University of Delhi, New Delhi, India

**Eric Dannaoui**, European Hospital Group Georges-Pompidou, Paris, France

***Resistance in Mycobacterium Tuberculosis***

**Daniela Cirillo**, San Raffaele Hospital, Milano, Italy

**Giovanni Delogu**, University Hospital Agostino Gemelli, Rome, Italy

**Delia Goletti**, INMI Lazzaro Spallanzani IRCCS, Roma, Italy

**Diana Machado**, New University of Lisbon, Lisboa, Portugal

***Genome Notes***

**Michael Kemp**, University of Southern Denmark, Odense, Denmark

**Marco Oggioni**, Siena University Hospital, Siena, Italy

**Francesco Santoro**, Università degli Studi di Siena, Siena SI, Italy

**Marc Stegger**, State Serum Institute, København, Denmark

***Antiparasitic Resistance***

**Fabrizio Bruschi**, University of Pisa, Pisa, Italy

***Advisory Board***

**Nisheeth Agarwal**, Translational Health Science and Technology Institute, Faridabad, India

**Abhijit Bal**, University Hospital Crosshouse, Kilmarnock, United Kingdom

**Matteo Bassetti**, University Hospital Santa Maria della Misericordia, Udine, Italy

**Rafael Cantón**, Ramón y Cajal Institute for Health Research, Madrid, Spain

**Doo Ryeon Chung**, Samsung Medical Center, Gangnam-gu, Korea, Republic of

**Laurent Dortet**, Bicêtre Hospital Bacteriology Hygiene, LE KREMLIN-BICETRE, France

**Silvano Esposito**, University of Salerno Department of Medicine and Surgery, Salerno, Italy

**Hajo Grundmann**, Academic Medical Centre Groningen Department of Medical Microbiology, Haren, Netherlands

**Li Yang Hsu**, National University Singapore Yong Loo Lin School of Medicine, Singapore, Singapore

**Keith Klugman**, Bill and Melinda Gates Foundation, Pneumonia program, Seattle, Washington, United States

**S Kohno**, Nagasaki University, Nagasaki, Japan

**Kyungwon Lee**, Yonsei University Department of Laboratory Medicine, Seodaemun-gu, Korea, Republic of

**Victor KE Lim**, International Medical University School of Medicine, Kuala Lumpur, Malaysia

**Jodi A Lindsay**, Saint George's University of London Division of Clinical Sciences, London, United Kingdom

**David Chien Lye**, Tan Tock Seng Hospital Institute of Infectious Diseases and Epidemiology, Singapore, Singapore

**Francesco Menichetti**, Cisanello Hospital, Pisa, Italy

**Graeme Nimmo**, Pathology Queensland Laboratory of Royal Brisbane and Womens Hospital, Brisbane, Queensland, Australia

**Laura Pagani**, University of Pavia Department of Internal Medicine and Therapeutics, Pavia, Italy

**Annalisa Pantosti**, Department of Infectious Diseases Parasitology and Immunology, Roma, Italy

**Gunturu Revathi**, Aga Khan University Hospital, Nairobi, Kenya

**Gianmaria Rossolini**, Siena University Hospital, Siena, Italy

**Raphael Saginur**, Ottawa Hospital Civic Campus, Ottawa, Ontario, Canada

**Robert Skov**, State Serum Institute, København, Denmark

**Kazuhiro Tateda**, Toho University Omori Medical Center Department of Infectious Diseases, Ota-Ku, Japan

**Fred C Tenover**, Cepheid, Sunnyvale, California, United States

**Pietro Varaldo**, Polytechnic University of Marche Department of Biomedical Sciences and Public Health, Ancona, Italy  
**Claudio Viscoli**, University of Genoa Department of Internal Medicine and Medical Specialties, Genova, Italy  
**Erika Vlieghe**, Institute of Tropical Medicine, Antwerpen, Belgium  
**Hui Wang**, Peking University People's Hospital Department of Clinical Laboratories, Beijing, China  
**Gerry Wright**, McMaster University, Institute for Infectious Disease Research, West Hamilton, Ontario, Canada  
**Jiunn-Jong Wu**, National Cheng Kung University Department of Medical Laboratory Science and Biotechnology, Tainan, Taiwan

## GUIDE FOR AUTHORS

---

### **Announcement**

From January 2020, Journal of Global Antimicrobial Resistance (JGAR) is an open access journal. Authors who publish in JGAR will be able make their work immediately, permanently, and freely accessible. JGAR authors will pay an article publishing charge (APC), have a choice of license options, and retain copyright to their published work.

JGAR continues with the same aims and scope, editorial team, submission system and rigorous peer review.

The APC will be requested after peer review and acceptance and will be required for all accepted articles submitted after 6 January 2020. The APC for JGAR is GBP 1500 (excluding taxes) for Original Research Articles and Review Articles and GBP 500 (excluding taxes) for Short Format Articles.

Please note: Authors who have submitted papers before 6 January 2020 will have their accepted paper published in JGAR at no charge. Authors submitting papers after this date will be requested to pay the APC.

These guidelines generally follow the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals". The complete document appears at <http://www.icmje.org>.

### **Types of paper**

The following types of manuscripts are routinely accepted (please note that word count is from abstract to references but excluding references):

**Original Articles:** The form of these articles is discussed fully below; an abstract is required. They should be no longer than 4000 words and 40 references (as above, please note that word count also excludes tables, figures and legends). JGAR will be happy to consider papers of veterinary origin as long as there is some linkage of the scientific work back to human antibiotic use.

**Letters:** Headings should not be used in a letter; no abstract or keywords are required. The text should be no more than 800 words; there should be a maximum of 5 references and one table or figure may be included.

**Reviews:** An abstract and keywords are required. The text should be divided into sections by suitable headings. Tables and figures may be used as appropriate for the text. They should be no longer than 5000 words.

**Short Communications:** These should be no more than 2,500 words, with up to 20 references and a maximum of 3 figures or tables.

**Hot topics:** These tend to be invited papers but unsolicited Hot topics are welcome. There are no abstract, keywords or section headings.

**Genome note:** Should be no more than 800 words (excluding the abstract); there should be a maximum of 5 references and one table or figure may be included. An abstract and keywords are required. This Genome note should not be only a sequencing report but must state why the genome is of general interest by underlining the biological, genomic, epidemiological or phylogenetic novelty arising from its analysis and if possible present the genome's MLST and/or an alternative molecular unambiguous typing method.

### **Contact details for submission**

If you have any problems submitting your paper through this system, please contact the Editorial Office on: e-mail: [jgar@elsevier.com](mailto:jgar@elsevier.com); tel: +44 (0)1865 843270; fax: +44 (0)1865 843992.

#### *Submission checklist*

You can 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.

#### **Ensure that the following items are present:**

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address

All necessary files have been uploaded:

*Manuscript:*

- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided  
*Graphical Abstracts / Highlights files* (where applicable)  
*Supplemental files* (where applicable)

Further considerations

- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- Relevant declarations of interest have been made
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our [Support Center](#).

## **BEFORE YOU BEGIN**

### ***Ethics in publishing***

Please see our information pages on [Ethics in publishing](#) and [Ethical guidelines for journal publication](#).

### ***Studies in humans and animals***

If the work involves the use of human subjects, the author should ensure that the work described has been carried out in accordance with [The Code of Ethics of the World Medical Association](#) (Declaration of Helsinki) for experiments involving humans. The manuscript should be in line with the [Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals](#) and aim for the inclusion of representative human populations (sex, age and ethnicity) as per those recommendations. The terms [sex and gender](#) should be used correctly.

Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

All animal experiments should comply with the [ARRIVE guidelines](#) and should be carried out in accordance with the U.K. Animals (Scientific Procedures) Act, 1986 and associated guidelines, [EU Directive 2010/63/EU for animal experiments](#), or the National Institutes of Health guide for the care and use of Laboratory animals (NIH Publications No. 8023, revised 1978) and the authors should clearly indicate in the manuscript that such guidelines have been followed. The sex of animals must be indicated, and where appropriate, the influence (or association) of sex on the results of the study.

### ***Conflict 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 conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Please complete and upload this form ([pdf version](#) or [word version](#)) to declare funding, conflict of interest and to indicate whether ethical approval was sought. This information must also be inserted into your manuscript under the acknowledgements section with the headings below. If you have no declaration to make please insert the following statements into your manuscript:

Funding: None

Competing interests: None declared

Ethical approval: Not required

### **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 originality, your article may be checked by the originality detection service [Crossref Similarity Check](#).

### **Use of inclusive language**

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').

### **Contributors**

Each author is required to declare his or her individual contribution to the article: all authors must have materially participated in the research and/or article preparation, so roles for all authors should be described. The statement that all authors have approved the final article should be true and included in the disclosure.

### **Authorship**

All authors should have made substantial contributions to all of the following: (1) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content, (3) final approval of the version to be submitted.

### **Changes to authorship**

Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

### **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.

#### *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 is part of our Article Transfer Service. This means that if the Editor feels your article is more suitable in one of our other participating journals, then you may be asked to consider transferring the article to one of those. If you agree, your article will be transferred automatically on your behalf with no need to reformat. Please note that your article will be reviewed again by the new journal. [More information](#).

### **Copyright**

Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' (see [more information](#) on this). Permitted third party reuse of 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 then this should be stated.

### **Open access**

Please visit our Open Access page from the Journal Homepage 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.

### **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.

## 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.

### *Submit your article*

Please submit your article via <http://ees.elsevier.com/jgar/default.asp>.

## Referees

It is required that Authors provide a list of 4 or 5 potential reviewers (e-mail and phone number) who are knowledgeable in the subject matter, have no conflict of interest, and are likely to agree to review the manuscript. Please ensure that 2 of the potential reviewers are from a different country to the authors.

## Editorial Review

All manuscripts are subject to peer review. If changes are requested, revisions received later than 3 months after this request will be treated as new submissions.

**Authors in Japan please note:** If you would like information about how to have the English of your paper checked, corrected and improved (before submission), please contact our Tokyo office who will inform you of the services provided by language correctors: Elsevier Japan, 9-15 Higashi-Azabu 1-chome, Minato-ku, Tokyo, 106 Japan, Tokyo; Tel: +81-3-5561-5032; Fax: +81-3-5561-5032.

## PREPARATION

### *Peer review*

This journal operates a single blind review process. All contributions will be initially assessed by the Editor-in-chief for suitability for the journal. Papers deemed suitable are then sent to a Section Editor and to a minimum of one independent expert reviewer to assess the scientific quality of the paper. The Section Editor and the Editor-in-chief are responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. [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.

### *Manuscripts*

Please type all pages with double spacing and wide margins on one side of the paper. Title page, abstract, tables, legends to figures and reference list should each be provided on separate pages of the manuscript.

Use a true type font such as Times New Roman or Arial. The text should be in single-column format. Number the pages. In order to help our reviewers please number each line of the manuscript. 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 options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. Do not embed 'graphically designed' equations or tables, but prepare these using the facility in Word or as a separate file in Excel. 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. Do not prepare tables in Powerpoint. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also: <https://www.elsevier.com/authors>). Do not import the figures into the text file but, instead, indicate their approximate locations directly in the electronic text and on the manuscript. See also the section on illustrations.

To avoid unnecessary errors you are strongly advised to use the spellchecker.

The title page should include: the title, the name(s) and affiliation(s) of the author(s), an address for correspondence, and telephone/fax numbers for editorial queries. All articles should include a Structured Abstract, i.e., Objectives, Methods, Results, Conclusions (maximum length 250 words) and 3-6 key words for abstracting and indexing purposes.

Please **do not split** the article into separate files (title page as one file, text as another, etc.). Ensure that the letter 'l' and digit '1' (also letter 'O' and digit '0') have been used properly, and structure your article (tabs, indents, etc.) consistently. Characters not available on your computer (Greek letters, mathematical symbols, etc.) should not be left open but indicated by a unique code (e.g., gralpha, @, #, etc., for the Greek letter). Such codes should be used consistently throughout the entire text. Please make a list of such codes and provide a key. Do not allow your computer to introduce word splits and do not use a 'justified' layout. Please adhere strictly to the general instructions on style/arrangement and, in particular, the reference style of the journal. It is very important that you save your file in the standard format for the program you are using. If your computer features the option to save files 'in flat ASCII', please do not use it.

Please write your text in good English (American or British usage is accepted, but not a mixture of these). Italics are not to be used for expressions of Latin origin, for example, *in vivo*, *et al.*, *per se*. Use decimal points (not commas); use a space for thousands (10 000 and above).

Provide the following data in your submission (in the order given). This is required for all types of paper submitted.

### **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.

### **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 mandatory for this journal as they help 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**

A concise and factual abstract is required (maximum length 250 words). The abstract must have a structured format, i.e., Objectives, Methods, Results, Conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. Do not cite references in the abstract. Non-standard or uncommon abbreviations should be avoided in the abstract, but if essential they must be defined at their first mention in the abstract itself.

#### *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.

Authors can make use of Elsevier's [Illustration Services](#) to ensure the best presentation of their images and in accordance with all technical requirements.

### **Keywords**

Immediately after the abstract, provide a maximum of 6 keywords, using British 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 section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

#### *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, please 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.

#### **DNA sequences and GenBank Accession numbers**

Many Elsevier journals cite 'gene accession numbers' in their running text and footnotes. Gene accession numbers refer to genes or DNA sequences about which further information can be found in the databases at the National Center for Biotechnical Information (NCBI) at the National Library of Medicine. Elsevier authors wishing to enable other scientists to use the accession numbers cited in their papers via links to these sources, should type this information in the following manner:

For each and every accession number cited in an article, authors should type the accession number in **bold, underlined text**. Letters in the accession number should always be capitalised. (See example below.) This combination of letters and format will enable Elsevier's typesetters to recognise the relevant texts as accession numbers and add the required link to GenBank's sequences.

**Example:** GenBank accession nos. **AI631510** , **AI631511** , **AI632198** , and **BF223228** ), a B-cell tumour from a chronic lymphatic leukaemia (GenBank accession no. **BE675048** ), and a T-cell lymphoma (GenBank accession no. **AA361117**).

Authors are encouraged to check accession numbers used very carefully. **An error in a letter or number can result in a dead link**. In the final version of the **printed article**, the accession number text will not appear bold or underlined. In the final version of the **electronic copy**, the accession number text will be linked to the appropriate source in the NCBI databases enabling readers to go directly to that source from the article.

#### *Math formulae*

Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

#### *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**

Photographs should be presented as high quality jpg (jpeg) or tiff files with high contrast. Magnification should be indicated by a line representing the actual scale of reproduction (0.1 mm, 1mm or 10 mm); the use of magnification factors is to be avoided where possible. Illustrations will not be redrawn by the Publisher: line figures should be suitable for direct reproduction. They should be prepared with black on white background, or be black-and-white images; they should be completely and consistently lettered, the size of the lettering being appropriate to that of the illustration, taking into account the necessary reduction in size.

Illustrations should be designed to fit either a single column (84 mm wide) or the full text width (175mm). However, if specifically requested by the author(s), plates may be reproduced larger than the typeset area; all originals for these should have the same proportions to achieve uniformity in their presentation. N.B. When plates are required to fill the entire page, the originals should have the dimensions 215 x 285 mm and contain no essential information or labelling near the edges. Further information can be found on the [artwork instructions page](#).

#### *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.

#### *Color artwork*

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF) or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites). [Further information on the preparation of electronic artwork](#).

#### *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.

##### *Reference links*

Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, CrossRef and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged.

A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. *Journal of Geophysical Research*, <https://doi.org/10.1029/2001JB000884>. Please note the format of such citations should be in the same style as all other references in the paper.

#### *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.

#### *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](#).

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:

<http://open.mendeley.com/use-citation-style/journal-of-global-antimicrobial-resistance>

When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

#### *Reference style*

References should be numbered consecutively (with parentheses) as they appear in the text. Type the reference list with double spacing on a separate sheet. References should accord with the system used in Uniform requirements for manuscripts submitted to biomedical journals (N Engl J Med 1991;324:424-428).

#### Examples:

- 1 Taylor DN, Sanchez JL, Candler W et al. Treatment of traveller's diarrhea: ciprofloxacin plus loperamide compared with ciprofloxacin alone. *Ann Intern Med* 1991;114:731-734.
- 2 Mackowiak PA, ed. Fever. Basic Mechanisms and Management. New York: Raven Press, 1991.
- 3 Rubin M, Pizzo PA, Monotherapy in neutropenic cancer patients. In: Peterson PK, Verhoef J, eds. *Antimicrobial Agents Annual 3*. Amsterdam: Elsevier, 1988.
- [dataset] 4 Oguro M, Imahiro S, Saito S, Nakashizuka T. Mortality data for Japanese oak wilt disease and surrounding forest compositions, Mendeley Data, v1; 2015 <http://dx.doi.org/10.17632/xwj98nb39r.1>.

Please note that all authors should be listed when six or less; when seven or more, list only the first six and add 'et al.'. Do not include references to personal communications, unpublished data or manuscripts either 'in preparation' or 'submitted for publication'. If essential, such material may be incorporated into the appropriate place in the text. Recheck references in the text against reference list after your manuscript has been revised.

#### *Journal abbreviations source*

Journal names should be abbreviated according to the [List of Title Word Abbreviations](#).

## Video

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including [ScienceDirect](#). Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our [video instruction pages](#). Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

## 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 experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your 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).

### *Mendeley Data*

This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. Before submitting your article, you can deposit the relevant datasets to *Mendeley Data*. Please include the DOI of the deposited dataset(s) in your main manuscript file. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the [Mendeley Data for journals 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](#).

## **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.

Once a paper has been accepted, the only changes possible are in relation to any queries raised by the Technical Editor or Typesetter.

#### *Share Links*

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. Corresponding authors who have published their article 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](#).

© Copyright 2018 Elsevier | <https://www.elsevier.com>