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[ABOUT THE JOURNAL](#)

[Aims and Scope](#)

The *ISME Journal* seeks to promote diverse and integrated areas of microbial ecology spanning the breadth of microbial life, including bacteria, archaea, microbial eukaryotes, and viruses. Contributions of broad ecological interest and impact are especially encouraged. Topics of particular interest within the journal's scope include those listed below:

Microbial population and community ecology

- Theoretical advances in microbial population and community ecology, including novel theoretical development relevant to the diversity and structure of microbial populations and communities, advances in modelling and comparisons of microbial ecological principles with those in macroecology
- Biogeography of microbial populations
- Environmental factors defining the distribution and abundance of microbial populations
- Integrated advances in microbial ecophysiology
- Phage genetics and ecology and environmental virology, including studies of interactions between viruses and the environment, vectors of viral transmission, epidemiology, and diversity
- Community level research of microbial assemblages, with emphasis on the contribution of individuals and populations
- Microbial survival and persistence mechanisms: Development and selection for resistance (e.g., heavy metals, antibiotics)

Microbe-microbe and microbe-host interactions

- Microbial communication and signalling, and advances that allow study on scales relevant to microbial interactions
- Plant-microbe interactions, including feedback and response pathways, underlying mechanisms, environmental cues, unique traits, evolution, adaptation and fitness
- Threat of emerging diseases (e.g., pathogenicity, epidemiology, ecology of reservoirs, vectors and host)
- Symbioses and syntrophic relationships
- Microbial contributions to medical biotechnology and microbial therapy
- Commensal microbial ecology (e.g., intestinal, skin, oral)

Evolutionary genetics

- Ecological aspects of experimental evolution
- Insights into genome evolution and adaptation
- Genetics and ecology of the horizontal gene pool
- Advances in mathematical and evolutionary genetics

Integrated genomics and post-genomics approaches in microbial ecology

- Studies of *in situ* function, gene regulation, and expression
- Metagenomic approaches to understanding and assessing the functional potential of microbial communities
- Novel microbial ecology approaches involving proteomics and metabolomics
- Theoretical and practical advances in bioinformatics, including improved linkages between ecological parameters and molecular data, as well as advances in curation and annotation practices
- Studies of microbial activities and potential at the single-cell level

Microbial engineering

- Environmental biotechnology, including ecological interactions key to wastewater treatment, water management, biofilters, and energy production
- Mechanisms of microbial biocatalysts
- Bioremediation and biodegradation
- Microbial contributions and potential in biofuel technologies
- Microbial process modelling and its application

Geomicrobiology and microbial contributions to geochemical cycles

- Integrated advances in biogeochemistry
- Microbial contributions to geochemical cycles
- Importance and mechanisms of microbe-mineral interactions

Microbial ecology and functional diversity of natural habitats

- Terrestrial and subsurface microbial ecology
- Aquatic and sediment microbial ecology
- Linking phylogeny and function in diverse ecosystems
- Biofilm structure and function
- Aeromicrobiology (e.g., distribution, source impact), including issues of climate and dispersal
- Microbial processes and interactions in extreme or unusual environments

Microbial ecosystem impacts

- Impacts of microbial processes on climate change, and impacts of climate change on microbial communities and processes
- Food web structure, nutrient flow, and biological transformations from micro to macro scales
- Systems microbiology and integration of microbial ecology into systems ecology

Journal Details

Editors-in-Chief: Josh Neufeld, University of Waterloo, Canada
Lisa Stein, University of Alberta, Canada
Jillian Petersen, University of Vienna, Austria

Reviews Editor: Andrew Holmes, University of Sydney, Australia

Editorial office: Springer Nature, The Campus, 4 Crinan Street, London UK jsmei@nature.com

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Current Contents/ Life Sciences
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ARTICLE TYPE SPECIFICATIONS

ARTICLE DESCRIPTION	SPECIFICATION
<p>Article An Article is a substantial, in-depth, novel research study of interest to the readership of the journal. The structure an Article should follow is detailed below. *Please note - although <i>ISME J</i> emphasizes discovery-based research, we are willing to consider breakthrough method papers that represent major advances for the field of microbial ecology. We recommend our partner journal, <i>ISME Communications</i>, for most methods-oriented manuscripts*</p>	<p>Unstructured abstract, max 200 words Main body of text (excluding abstract, tables/figures, and references) not to exceed 5,000 words Max 8 tables or figures; Max 100 references</p>
<p>Review Article Reviews are comprehensive analyses of specific topics that are typically solicited by the Reviews Editor (Andrew Holmes) however, we also welcome independent proposals.</p>	<p>Unstructured abstract, max 200 words Main body of text (excluding abstract, tables/figures, and references) not to exceed 3,000 words Use of figures and tables is encouraged; Max 100 references</p>
<p>Winogradsky Review (only by invitation of the editor) Comprehensive analysis of specific topics in microbial ecology that are solicited by the Reviews Editor. Proposals for a Winogradsky Review may be submitted; however, in this case authors should only send an outline of the proposed paper for initial consideration.</p>	<p>Unstructured abstract, max 200 words Main body of text (excluding abstract, tables/figures, and references) not to exceed 5,000 words Max 6 tables or figures; Max 100 references Structured abstract, max 300 words</p>
<p>Brief Communication These are studies that fall short of the criteria for full research papers (e.g., exciting new results with a relatively simple experimental design and without confirmatory follow-up work expected for an Article).</p>	<p>Unstructured abstract, one paragraph, max 150 words Main body of text (excluding abstract, tables/figures, and references) not to exceed 1,000 words Max 2 tables or figures; Max 20 references</p>
<p>Comment Comments discuss issues of particular importance for the field of microbial ecology. Comments may include highlights of significant papers, in the current issue or elsewhere, or comprise poignant opinions, responses to previously published items, or other timely information or comment. Comments may be either solicited by the Reviews Editor or offered as an unsolicited submission. If you wish to offer an unsolicited contribution, we ask you to first contact the Reviews Editor with your request, including a short description of the content and implications of your comment.</p>	<p>No abstract required Main body of text (excluding abstract, tables/figures, and references) not to exceed 1,500 words Max 3 tables or figures; Max 10 references</p>
<p>Perspective Hybrid between a commentary and a review, providing an opinion-driven perspective on a particular research topic or field of interest to the <i>ISMEJ</i> readership. Authors should present a (provocative) view that can be supported by data and literature with the goal of sparking debate and stimulating future research directions. Perspective articles are by invitation by the Reviews Editor only, but authors wishing to contribute a perspective article are free to submit an unsolicited request to the Reviews Editor with an outline of the intended article. If the subject and content are deemed of interest, an invitation letter will then be extended by the editorial office.</p>	<p>No abstract required Main body of text (excluding abstract, tables/figures, and references) not to exceed 3,000 words Max 3 tables or figures; Max 20 references</p>

PREPARATION OF ARTICLES

House Style: Authors should adhere to the following formatting guidelines

- Text should be double spaced with a wide margin.
- All pages and lines should be numbered.
- Do not make lines thinner than 1pt (0.36mm).
- Use a solid colour for graphs rather than patterns.
- Colour should be distinct when being used as an identifying tool.
- Spaces, not commas should be used to separate thousands.
- At first mention of a manufacturer, the town (and state if USA) and country should be provided.
- Statistical methods: For normally distributed data, mean (SD) is the preferred summary statistic. Relative risks should be expressed as odds ratios with 95% confidence interval. To compare two methods for measuring a variable the method of Bland & Altman (1986, *Lancet* 1, 307–310) should be used; for this, calculation of a *p* value only is not appropriate.
- Units: Use metric units (SI units) as fully as possible. Preferably give measurements of energy in kilojoules or megajoules with kilocalories in parentheses (1 kcal = 4.186kJ). Use % throughout.
- Abbreviations: On first using an abbreviation place it in parentheses after the full item. Very common abbreviations such as PCR, RNA, need not be defined. Note these abbreviations: gram g; litre l; milligram mg; kilogram kg; kilojoule kJ; megajoule MJ; weight wt; seconds s; minutes min; hours h. Do not add 's' for plural units. Terms used less than four times should not be abbreviated.

Structure: Please note that original articles must contain the following components. Please see below for further details.

- Title page (excluding acknowledgements)
- Abstract
- Introduction
- Materials (or Subjects) and Methods
- Results
- Discussion
- Acknowledgements
- Conflict of Interest
- References
- Figure legends
- Tables
- Figures

Authors are at liberty to submit manuscripts with a single combined results and discussion section. However, if reviewers consider that the clarity of the work would be improved by separating the results and discussion sections, authors may be requested to do this when preparing a revised manuscript.

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Authors should provide a cover letter that includes the affiliation and contact information for the corresponding author. Authors should briefly discuss the importance of the work and explain why it is considered appropriate for the diverse readership of the journal. The cover letter should confirm the material is original research, has not been previously published and has not been submitted for publication elsewhere while under consideration. If the manuscript has been previously considered for publication in another journal, please include the previous reviewer comments, to help expedite the decision by the Editorial team.

Title Page

The title page should contain:

- Title of the paper - brief, informative, of 150 characters or less. Good titles should state the main discovery of the research without overly emphasizing methodology.
- Full names of all the authors and their affiliations, together with the name, full postal address, telephone number and e-mail address of the corresponding author. If authors regard it as essential to indicate that two or more co-authors are equal in status, they may be identified by an asterisk symbol with the caption 'These authors contributed equally to this work' immediately under the address list.
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- Competing Interests statement (see [Editorial Policy](#) section). Authors should disclose the sources of any support for the work received in the form of grants and/or equipment and drugs

Abstract

Abstracts must be prepared as an unstructured paragraph designed to summarise the essential features of the paper in a logical and concise sequence.

Graphical Abstracts (optional)

A graphical abstract, which summarizes the manuscript in a visual way, is designed to attract the attention of readers in the table of contents of the journal. Files should be uploaded as a 'Figure' and be labelled 'Graphical abstract'. A standard file format (.tiff, .eps, .jpg, .bmp, .doc, or .pdf.) should be used, and the graphic should be 9 cm wide x 5 cm high when printed at full scale and a minimum of 300 dpi. All graphical abstracts should be submitted with a white background and imagery should fill the available width, whenever possible. Colour graphical abstracts are encouraged and will be published at no additional charge. Textual statements should be kept to a minimum.

Introduction

The Introduction should assume that the reader is knowledgeable in the field and should therefore be as brief as possible but can include a short historical review where desirable.

Materials (or Subjects) and Methods

This section should contain sufficient detail, so that all experimental procedures can be reproduced and include references. Methods that have been published elsewhere should not be described in detail - please do not copy/paste method text from other publications, even if your own work. Authors should provide the name of the manufacturer and their location for any specifically named medical equipment and instruments, and all drugs should be identified by their pharmaceutical names, and by their trade name if relevant.

Results

The Results section should briefly present the experimental data in text, tables or figures. Tables and figures should not be described extensively in the text, either.

Discussion

The Discussion should focus on the interpretation and the significance of the findings with concise objective comments that describe their relation to other

work in the area. It should not repeat information found in the results. The final paragraph should highlight the main conclusion, and describe the direction that future research should take.

Acknowledgements

These should be brief, and should include sources of support including sponsorship (e.g. university, charity, commercial organisation) and sources of material (e.g. novel drugs) not available commercially.

Competing Interests

Authors must declare whether or not there are any competing financial interests in relation to the work described. This information must be included at this stage and will be published as part of the paper, but should also be noted on the title page. Please see the Competing Interests definition in the [Editorial Policy](#) section for detailed information.

References

Only papers directly related to the article should be cited. Exhaustive lists should be avoided. References should follow the Vancouver format. In the text they should appear as numbers starting at one and at the end of the paper they should be listed (double-spaced) in numerical order corresponding to the order of citation in the text. Where a reference is to appear next to a number in the text, for example following an equation, chemical formula or biological acronym, citations should be written as (ref. X) and not as superscript.

Example “detectable levels of endogenous Bcl-2 (ref. 3), as confirmed by western blot”

All authors should be listed for papers with up to six authors; for papers with more than six authors, the first six only should be listed, followed by *et al.* Abbreviations for titles of medical periodicals should conform to those used in the latest edition of Index Medicus. The first and last page numbers for each reference should be provided. Abstracts and letters must be identified as such. Papers in press may be included in the list of references. Personal communications must be allocated a number and included in the list of references in the usual way or simply referred to in the text; the authors may choose which method to use. In either case authors must obtain permission from the individual concerned to quote his/her unpublished work.

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Chapter in book: Coccia PF. Hematopoietic cell transplantation for osteopetrosis. In: Blume KG, Forman SJ, Appelbaum FR (eds). *Thomas' Hematopoietic Cell Transplantation.* 3rd ed. Blackwell Publishing Ltd, Malden, 2004. pp 1443–1454.

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Website: Kassambara A. rstatix: pipe-friendly framework for basic statistical tests. 2020. <https://rpkgs.datanovia.com/rstatix/>.

Online Document: Doe J. Title of subordinate document. In: *The dictionary of substances and their effects.* Royal Society of Chemistry. 1999. http://www.rsc.org/dose/title_of_subordinate_document. Accessed 15 Jan 1999.

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These should be brief, specific and appear on a separate manuscript page after the References section.

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Please save the files with extensions .xls /.xlsx /.ods /or .doc or .docx. Please ensure that you provide a 'flat' file, with single values in each cell with no macros or links to other workbooks or worksheets and no calculations or functions.

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Detailed guidelines for submitting artwork can be found by downloading our [Artwork Guidelines](#). Using the guidelines, please submit production quality artwork with your initial online submission. If you have followed the guidelines, we will not require the artwork to be resubmitted following the peer-review process, if your paper is accepted for publication.

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There is a charge if authors choose to publish their figures in colour in print publication (**which includes the online PDF**). VAT or local taxes will be added where applicable:

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Graphs, Histograms and Statistics:

- Plotting individual data points is preferred to just showing means, especially where $N < 10$
- If error bars are shown, they must be described in the figure legend
- Axes on graphs should extend to zero, except for log axes
- Statistical analyses (including error bars and p values) should only be shown for independently repeated experiments, and must not be shown for replicates of a single experiment
- The number of times an experiment was repeated (N) must be stated in the legend

Supplementary Information

Supplementary information is material directly relevant to the conclusion of an article that cannot be included in the printed version owing to space or format constraints. The article must be complete and self-explanatory without the Supplementary Information, which is posted on the journal's website and linked to the article. Supplementary Information may consist of data files, graphics, movies or extensive tables.

Please submit supplementary figures, small tables and text as a single combined PDF document. Tables longer than one page should be provided as an Excel or similar file type. Please refer to the journal's Data Policies, outlined in the Editorial Policies section of these guidelines for additional options for such files, and which provides guidance on alternatives to supplementary files for data deposition, linking, preservation, and storage.

For optimal quality video files, please use H.264 encoding, the standard aspect ratio of 16:9 (4:3 is second best) and do not compress the video. Important: Supplementary information is not copyedited, so please ensure that it is clearly and succinctly presented, that the style and terminology conform to the rest of the manuscript, and that any tracked-changes or review mark-ups are removed.

Authors should submit supplementary information files in the FINAL format as they are not edited, typeset or changed, and will appear online exactly as submitted. When submitting Supplementary Information, authors are required to:

- Include a text summary (no more than 50 words) to describe the contents of each file.
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Video summaries

Authors are welcome to include a video summary of their submission in order to support and enhance their scientific research. Files should be uploaded as a 'video' and be labelled 'Video abstract'.

Please take note of the technical requirements listed below.

Technical requirements:

The maximum file size of a video should not exceed 25 GB. An audio track is required, and video and audio streams must be in the correct order (video before audio). To ensure streamed video playback in HD in an acceptable quality, the following minimum requirements are recommended:

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Audio bitrate - 320 Kbit/s, stereo, 44,1 KHz

Sound - AAC

Tips for presentation:

1. The video should introduce the topic of the article, highlight the main results and conclusions, discuss the current status and potential future developments in the field
2. Write your script and practise first – explain any obscure terminology
3. Film in a quiet room against a plain (white if possible) background and ensure there is nothing confidential in view
4. Avoid using background music
5. Include figures, slides, video clips of the experiment, etc. to help explain your methods and results. Please try to include a mixture of you talking to the camera and slides – it is nice for viewers to see your face at times
6. Keep figures simple; don't show raw data and ensure any text is legible. Do not include lots of small text or data that won't be legible in a small video player that's the size of a smartphone screen.
7. Please do not use images, music, or insignia in your video for which you do not own the copyright or have documented permission from the copyright holder.

Files will be viewed by the editorial office for quality; however the onus for creating, uploading and editing the video falls on the author.

Subject Ontology

Upon submission authors will be asked to select a series of subject terms relevant to the topic of their manuscript from our subject ontology. Providing these terms will ensure your article is more discoverable and will appear on appropriate subject specific pages on nature.com, in addition to the journal's own pages. Your article should be indexed with at least one, and up to four unique subject terms that describe the key subjects and concepts in your manuscript. Click [here](#) for help with this.

Language Editing

ISMEJ is read by scientists from diverse backgrounds and many are not native English speakers. In addition, the readership of *ISMEJ* is multidisciplinary; therefore authors need to ensure their findings are clearly communicated. Language and concepts that are well known in one subfield may not be well known in another. Thus, technical jargon should be avoided as far as possible and clearly explained where its use is unavoidable. Abbreviations, particularly those that are not standard, should also be kept to a minimum. The background, rationale and main conclusions of the study should be clearly explained and understandable by all working in the field. Titles and abstracts in particular should be written in language that will be readily understood by all readers.

Authors who are not native speakers of English sometimes receive negative comments from referees or editors about the language and grammar usage in their manuscripts, which can contribute to a paper being rejected. To reduce the possibility of such problems, we strongly encourage such authors to take at least one of the following steps.

- Have your manuscript reviewed for clarity by a colleague whose native language is English.
- Visiting the [English language tutorial](#) which covers the common mistakes when writing in English.
- Using a professional language editing service where editors will improve the English to ensure that your meaning is clear and identify problems that require your review. Two such services are provided by our affiliates [Nature Research Editing Service](#) and [American Journal Experts](#).

Please note that the use of a language editing service is at the author's own expense and does not guarantee that the article will be selected for peer review or accepted.

HOW TO SUBMIT

Pre-submission Enquiries

Please note that, due to the increasing workload, our Editors-in-Chief cannot personally reply to pre-submission queries. Instead, the Editors-in-Chief would like to share the following statement:

When contemplating submission to *The ISME Journal* one should consider:

- Is the research novel and does it represent a major advance for microbial ecology?
- Does the work clearly fit within the scope of our journal?
- Has the research been conducted with state-of-the-art approaches?

If the answer to these questions is yes, the study may well be appropriate for *The ISME Journal*, regardless of the system being studied. In this case, please feel free to submit the full manuscript via the [online submission system](#).

Online Submission

We only accept manuscript submission via our [online manuscript submission system](#). Before submitting a manuscript, authors are encouraged to consult both our [Editorial Policies](#) and the [Submission Instructions](#) for our online manuscript submission system. If you have not already done so, please [register for an account](#) with our online manuscript system. You will be able to monitor the status of your manuscript online throughout the editorial process.

Summary of the editorial process

- The author submits a manuscript and it receives a tracking number.
- The editorial office performs an initial quality check on the manuscript to ensure that the paper is formatted correctly.
- An Editor in Chief is assigned to the manuscript and decides whether to send the manuscript to a Senior Editor for assessment. If the decision is not to send the manuscript for assessment, the Editor in Chief contacts the author with the decision.
- If the Editor in Chief decides the paper is within the Journal's scope and may be suitable for review, the Editor in Chief will assign the paper to a Senior Editor.
- The Senior Editor then assesses the manuscript for its quality and perceived level of advance and then either recommends a reject decision or assigns peer reviewers. This can take some time depending on the responsiveness and availability of reviewers selected.
- Reviewers are given 18 days from acceptance to submit their reports. Once the required reports are submitted the Senior Editor will make a decision recommendation to the Editor in Chief based on the rankings and comments received.
- The Editor in Chief makes the final decision.

Authors are able to monitor the status of their paper throughout the peer review process.

Peer review

To expedite the review process, only manuscripts that seem likely to meet high reviewer rankings for publication priority, level of advance, and scientific merit are sent for external peer review. Manuscripts judged by the editors to be of insufficient general interest are rejected promptly without external review.

Manuscripts sent out for peer review are evaluated by at least one independent reviewer (usually two or more). Authors are welcome to suggest independent reviewers without conflicts of interest (i.e., no current collaborations or co-authorship in the past 5 years) to evaluate their manuscript. All

recommendations are considered, but it is at the Editor's discretion to choose reviewers. Reviewers are not identified to the authors, except at the specific request of the reviewer.

Once a sufficient number of reviews are received, the Senior Editors then recommend a decision to the Editor in Chief based on the reviewer evaluations:

- *Provisional Acceptance* - The manuscript is provisionally accepted.
- *Minor or major revision* - In cases where the editors determine that the authors should be able to address the referees' concerns in a month or less the editors may request a revised manuscript that addresses concerns. The revised version may be sent back to some or all of the original reviewers for re-review especially if new data are requested. The decision letter will specify a deadline for receipt of the revised manuscript and link via which the author should upload to the online submission system. When submitting a revision authors are asked to upload (1) A rebuttal letter, indicating point-by-point how the comments raised by the reviewers have been addressed. If you disagree with any of the points raised, please provide adequate justification in your letter. (2) A marked-up version of the manuscript that shows changes made in response to the reviewers' comments in order to aid the editors and reviewers. (3) A "clean" (non-tracked) version of the manuscript.
- *Reject with the option to resubmit* - In cases where reviewer concerns are more serious and appear unlikely to be addressed within a month, the editors will normally reject the manuscript. If the editors feel the work is of potential interest to the journal, however, they may express interest in seeing a future resubmission. The resubmitted manuscript may be sent back to the original referees or to new referees, at the Senior Editor's discretion. If the authors decide to resubmit, the updated version of the manuscript must be submitted online as a new manuscript and should be accompanied by a cover letter that includes a point-by-point response to referees' comments and an explanation of how the manuscript has been changed.
- *Reject* - Typically on grounds of specialist interest, lack of novelty, insufficient conceptual advance or major technical and/or interpretational problems. In some cases, where the quality of the work is high but the level of advance does not meet the threshold for *The ISME Journal*, the editors may recommend transfer of the manuscript to our partner journal *ISME Communications*. The transfer would carry all manuscript history and reviewer information to facilitate subsequent consideration by editors of *ISME Communications*.

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The cost for open access publication in *The ISME Journal* is £2,560/ \$3,860/ €3,060 (VAT or local taxes will be added where applicable).

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