

INSTRUCTIONS TO AUTHORS

SCOPE

Microbiology Resource Announcements (MRA) is an online-only, fully open access journal that publishes articles announcing the availability of any microbiological resource deposited in a repository available to the community. In addition to genome sequences of prokaryotic and eukaryotic microbes and viruses in public databases, MRA will consider metagenomics sequences, amplicon sequence collections, metabolomics data, proteome data, culture collections, mutant libraries, plasmids and other genetic constructs, and publicly available databases and software. Manuscripts submitted to MRA will be peer reviewed for appropriate content and handled by a board of senior editors who will accept manuscripts at their discretion.

MRA will consider manuscripts that announce the resources listed below, for which we have provided instruction. Manuscripts providing an in-depth or comparative analysis of these resources will not be considered by MRA. Such manuscripts are more appropriate for other ASM journals, such as *Applied and Environmental Microbiology*[®], *mSphere*[®], *Journal of Bacteriology*[®], or *Journal of Virology*[®].

Genome sequences. MRA will consider papers that announce either a complete, closed genome sequence(s) or a draft whole-genome sequence(s). The manuscript should provide the provenance for the organism sequenced and a brief rationale for sequencing the particular organism, with an emphasis on the detailed methodologies and protocols used in the assembly and annotation of the genome sequence. Accession numbers associated with publicly available data, for both raw reads and assemblies, should be provided with the submission. **Announcements of genome sequences will not be considered for publication until public availability of the sequence(s) in GenBank/ENA/DDBJ has been verified.**

Metagenomics and metatranscriptomic data sets. MRA will consider papers that announce metagenomics or metatranscriptomic data sets. The manuscript should provide the source of the material and a brief rationale for the sequencing performed, with an emphasis on the detailed methodologies and protocols used in the generation of libraries, the assembly of the metagenomics or metatranscriptomic data set, and its annotation. Accession numbers associated with publicly available data, for both raw reads and assemblies, should be provided with the submission. **Announcements of metagenomics or metatranscriptomic data sets will not be considered for publication until public availability of the data sets in an appropriate database has been verified.**

Amplicon sequence collections. MRA will consider papers that announce amplicon data sets—that is, sequences derived from the amplification of genetic material targeting a specific locus. The collection description should provide the source of the material and should include the protocols used to generate the libraries, from extraction to amplification to sequencing. Accession numbers associated with publicly available data

should be provided with the submission. **Announcements of amplicon sequence collections will not be considered for publication until public availability of the data sets in an appropriate database has been verified.**

Metabolomics data sets. MRA will consider papers that announce metabolomics data sets. The manuscript should describe the rationale and study design, including experimental factors, the type of analytical chemistry used to identify metabolites, and a detailed description of protocols (from sample collection and extraction to analysis and metabolite identification). Authors are encouraged to deposit their data set in a public repository such as [MetaboLights](#), the [NIH Metabolomics Workbench](#), or [Dryad](#). The [Metabolomics Association of North America](#) includes these repositories along with a list of useful resources. Accession numbers associated with publicly available data should be provided with the submission. **Announcements of metabolomics data sets will not be considered for publication until public availability of the data sets in an appropriate database has been verified.**

Proteome data sets. MRA will consider papers that announce proteome data sets. The manuscript should describe the rationale and study design, including how samples were digested and processed, the type of chromatography used to identify proteins, and a detailed description of protocols (from sample collection and extraction to analysis and peptide identification). Authors are encouraged to deposit their data set in a public repository such as the [PRIDE archive](#) or [Dryad](#). A helpful list of proteomics resources and repositories is available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2908408/table/T1/>. Accession numbers associated with publicly available data should be provided with the submission. **Announcements of proteome data sets will not be considered for publication until public availability of the data sets in an appropriate database has been verified.**

Culture collections, mutant libraries, plasmids, and other genetic resources. MRA will consider papers that announce culture collections, mutant libraries, plasmids, and other genetic resources. The manuscript should describe the motivation for the resource and describe, in detail, how the resource was collected or generated. By publishing a resource in MRA, authors agree, within reason, to make their materials available to the community, barring security restrictions. Authors are encouraged to submit their culture collections and strains to a public repository such as [Addgene](#).

Databases and software. MRA will consider papers that announce novel databases and software. The manuscript must de-

scribe the implementation of the software and its utility. For a full 10 years following publication, the authors must make the software available to the community (via a Web link or Github repository).

Publication of an announcement does not preclude a later publication (e.g., a full comparative analysis) on the same resource in an ASM journal.

EDITORIAL POLICY AND ETHICAL GUIDELINES

As a member of the [Committee on Publication Ethics \(COPE\)](#), ASM adheres to COPE's Best Practice Guidelines and expects authors to observe the high standards of publication ethics set out by COPE. ASM requirements for submitted manuscripts are consistent with the [Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals](#), as last updated by the International Committee of Medical Journal Editors in December 2014.

Authors are expected to adhere to the highest ethical standards. The following sections of these Instructions include detailed information about ASM's ethical standards. Failure to comply with the policies described in these Instructions may result in a letter of reprimand, a suspension of publishing privileges in ASM journals, and/or notification of the authors' institutions. Authors employed by companies whose policies do not permit them to comply with ASM policies may be sanctioned as individuals and/or ASM may refuse to consider manuscripts having authors from such companies.

Use of Microbiological Information

The Council on Microbial Sciences (COMS) of the American Society for Microbiology affirms the long-standing position of the Society that microbiologists will work for the proper and beneficent application of science and will call to the attention of the public or the appropriate authorities misuses of microbiology or of information derived from microbiology. ASM members are obligated to discourage any use of microbiology contrary to the welfare of humankind, including the use of microbes as biological weapons. Bioterrorism violates the fundamental principles expressed in the Code of Ethics of the Society and is abhorrent to ASM and its members.

ASM recognizes that there are valid concerns regarding the publication of information in scientific journals that could be put to inappropriate use as described in the COMS resolution mentioned above. Members of the ASM Journals Committee will evaluate the rare manuscript that might raise such issues during the evaluation process. However, as indicated elsewhere in these Instructions, articles must contain sufficient detail, and material/information must be made available, to permit the work to be repeated by others. Supply of materials should be in accordance with laws and regulations governing the shipment, transfer, possession, and use of biological materials and must be for legitimate, bona fide research needs. We ask that authors pay particular attention to the [NSAR Select Agents and Toxins List](#) on the CDC website and the [U.S. Government Policy](#)

[for Oversight of Life Sciences Dual Use Research of Concern](#) (March 2012).

Use of Human Subjects or Animals in Research

Authors of manuscripts describing research involving human subjects or animal experimentation must obtain review and approval (or review and waiver) from their Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC), as appropriate, prior to manuscript submission. Authors of manuscripts that describe multisite research must obtain approval from each institution's IRB or IACUC, as appropriate. Documentation of IRB or IACUC status must be made available upon request. In the event that institutional review boards or committees do not exist, the authors must ensure that their research is carried out in accordance with the [Declaration of Helsinki](#), as revised in 2013, and/or the "[International Guiding Principles for Biomedical Research Involving Animals](#)," as revised by the International Council for Laboratory Animal Science (ICLAS) and the Councils for International Organizations of Medical Sciences (CIOMS) in 2012. A statement of IRB or IACUC approval or waiver (and reason for waiver) or a statement of adherence to the Declaration of Helsinki and/or Guiding Principles must be included in the text. The sex of research subjects and animals, and of materials derived directly from them (e.g., primary cell lines and clinical samples), should be included if these data are available.

Patient Identification

Informed consent is not needed if the patient cannot be identified from any material in a manuscript. In the absence of informed consent, identifying details, such as patient initials, specific dates, specific geographic exposures, or other identifying features, should be omitted, but this must not alter the scientific meaning. Important information that is relevant to the scientific meaning should be stated so that the patient cannot be identified, e.g., by stating a season instead of a date or a region instead of a city. If a patient can be identified from the material in a manuscript, all efforts should be made to obtain informed consent to publish from patients or parents/legal guardians of minors. Informed consent requires that the patient have the opportunity to see the manuscript prior to submission. The written consent must state either that the patient has seen the complete manuscript or that the patient declines to do so. Patient consent should be archived with the authors and be available upon request. A statement attesting the receipt and archiving of written patient consent should be included in the published article.

Publishing Ethics

Authorship. ASM journals follow the criteria for authorship as outlined in the International Committee of Medical Journal Editors (ICMJE) Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals ("[Defining the Role of Authors and Contributors](#)"). Briefly, an author is one who makes a substantial contribution to the design, execution, and/or analysis and inter-

pretation of experiments in addition to drafting, revising, and/or approving the initial submission and any subsequent versions of the article. All authors of a manuscript must have agreed to its submission and are responsible for appropriate portions of its content. Submission of a paper before all coauthors have read and approved it is considered an ethical violation.

Author contribution statements. As explained in the ICMJE recommendations, all persons designated as authors should qualify for authorship, and all those who qualify should be listed. ASM encourages transparency in authorship by publishing author contribution statements. Authors are strongly encouraged to include such statements in the Acknowledgments section.

Corresponding author. The corresponding author takes primary responsibility for communicating with the journal and coauthors throughout the submission, peer review, and publication processes. The corresponding author is responsible for ensuring that all coauthors have read and approved submissions, including appropriate citations, acknowledgments, and byline order. Additionally, the corresponding author and the study's primary investigator(s), if different, are required to have examined the raw data represented in the manuscript, affirm that such representations accurately reflect the original data, and ensure that the original data are preserved and retrievable.

Consortium authorship. A study group, surveillance team, working group, consortium, or the like (e.g., the Active Bacterial Core Surveillance Team) may be listed as a coauthor in the byline if its contributing members satisfy the requirements for authorship and accountability as described in these Instructions. The names (and institutional affiliations, if desired) of the contributing members only may be given as a separate paragraph in the Acknowledgments section. If the contributing members of the group associated with the work do not fulfill the criteria of substantial contribution to and responsibility for the paper, the group may not be listed in the author byline. Instead, it and the names of its contributing members may be listed in the Acknowledgments section.

Professional writers. “Ghost authorship” is not permitted by ASM. Professional writers should be mentioned in the Acknowledgments section rather than be included in the byline. To avoid perceived conflicts of interest, writer affiliations and specific contributions (for example, writing assistance, technical editing, language editing, or proofreading) must be disclosed.

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Byline order and changes. All authors must agree to the order in which their names are listed in the byline. Statements regarding equal contributions by two or more authors (e.g., “C.J. and Y.S. contributed equally to . . .”) are permitted as footnotes to bylines and must be agreed to by all of the authors. A change in authorship (order of listing, addition or deletion of a name, or corresponding author designation) after submission of the manuscript will be implemented only after receipt of signed statements of agreement from all parties involved.

Authorship disputes. Disputes about authorship may delay or prevent review and/or publication of the manuscript. Should the individuals involved be unable to reach an accord, review and/or publication of the manuscript can proceed only after the matter is investigated and resolved by the authors' institution(s) and an official report provided to ASM. ASM does not itself investigate or attempt to resolve authorship disputes but will follow institutional recommendations, as appropriate.

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Plagiarism. Misappropriating another person's intellectual property constitutes plagiarism. This includes copying sentences or paragraphs verbatim (or almost verbatim) from someone else's work, even if the original work is cited in the references. The NIH Office of Research Integrity publication “[Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices: a Guide to Ethical Writing](#)” can help authors identify questionable writing practices.

Plagiarism is not limited to the text; it can involve any part of the manuscript in which material is copied from another publication without permission and attribution. An author may not reuse his or her own previously published work without attribution; this is considered text recycling (also known as self-plagiarism).

ASM has incorporated plagiarism detection software into its online submission and peer review system in order to help editors verify the originality of submitted manuscripts. Selected manuscripts are scanned and compared with databases. If plagiarism is detected, [COPE guidelines on plagiarism](#) will be followed.

Image manipulation. Submitted figures must reflect original data. Please refer to the “[Image manipulation](#)” section in “Illustrations” for an overview of permissible manipulations, unacceptable adjustments, and required information to disclose in the figure legends of images.

ASM applies forensic imaging tools to screen selected manuscripts for inappropriate manipulation of figures. If unacknowledged and/or inappropriate image manipulations are

detected, the matter will be referred to the journal's ethics panel for consideration.

Fabrication, manipulation, and falsification of data. As a member of the Committee on Publication Ethics (COPE), ASM encourages authors to consult COPE's "[Code of Conduct and Best Practice Guidelines for Journal Editors](#)." Fabrication, manipulation, and falsification of data constitute misconduct. As defined by the U.S. Department of Health and Human Services, fabrication is "making up data or results and recording or reporting them," and falsification is "manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record" (42 Code of Federal Regulations, §93.103). All sources and methods used to obtain and analyze data, including any electronic preprocessing, should be fully disclosed; detailed explanations should be provided for any exclusions.

Primary publication. Manuscripts submitted to the journal must represent reports of original research, and the original data must be available for review by the editor if necessary. Publication of an announcement does not preclude a later publication (e.g., a full comparative analysis) on the same organism in an ASM journal. By submitting a manuscript to the journal, **the authors guarantee that they have the authority to publish the work and that the manuscript, or one with substantially the same content, was not published previously, is not being considered or published elsewhere, and was not rejected on scientific grounds by another ASM journal.** It is incumbent upon the author to acknowledge any prior publication, including his/her own articles, of the data contained in a manuscript submitted to an ASM journal. A copy of the relevant work should be submitted with the paper as a related manuscript file. Whether the material constitutes the substance of a paper and therefore renders the manuscript unacceptable for publication is an editorial decision.

A paper is not acceptable for submission to an ASM journal if it, or its substance, has been made publicly available in the following:

- A serial, periodical, or book
- A conference report or symposium proceedings
- A technical bulletin or company white paper
- A public website (see "[Preprint policy](#)")
- Any other retrievable source

The following do not preclude submission to, or publication by, an ASM journal:

- Posting of a method/protocol on a public website
- Posting of a limited amount of original data on a personal/university/corporate website or websites of small collaborative groups working on a problem
- Deposition of unpublished sequence data in a public database
- Preliminary disclosures of research findings as meeting posters, webcast as meeting presentations, or published in abstract form as adjuncts to a meeting, e.g., part of a program
- Posting of theses and dissertations on a personal/university-hosted website

Preprint policy. ASM Journals will consider for publication manuscripts that have been posted in a recognized not-for-profit preprint archive provided that upon acceptance of the manuscript for publication, the author is still able to agree to the terms of an Open Access license and pay the associated fee. It is the responsibility of authors to inform the journal at the time of submission if and where their article has been previously posted, and if the manuscript is accepted for publication in an ASM journal, authors are required to update the preprint with a citation to the final published article that includes the URL along with a link.

Conflict of Interest

All authors are expected to disclose, in the manuscript submittal letter, any commercial affiliations as well as consultancies, stock or equity interests, and patent-licensing arrangements that could be considered to pose a conflict of interest regarding the submitted manuscript. (Inclusion of a company name in the author address lines of the manuscript does not constitute disclosure.) Details of the disclosure to the editor will remain confidential. However, it is the responsibility of authors to provide, in the Acknowledgments section, a general statement disclosing conflicting interests relevant to the study. Examples of potentially conflicting interests include relationships, financial or otherwise, that might detract from an author's objectivity in presentation of study results, and interests whose value would be enhanced by the results presented. All funding sources for the project, institutional and corporate, should be credited in the Funding Sources section of the submission form (see "[Acknowledgments](#)" below). In addition, if a manuscript concerns a commercial product, the manufacturer's name must be indicated in the text in an obvious manner.

Data and Materials

Availability of data and materials. By publishing in MRA, the authors agree that, subject to requirements or limitations imposed by local and/or U.S. Government laws and regulations, any materials and data that are reasonably requested by others are available from a publicly accessible collection or will be made available in a timely fashion, at reasonable cost, and in limited quantities to members of the scientific community for noncommercial purposes. Similarly, the authors agree to make available computer programs and/or code, originating in the authors' laboratory, reported in the article but that is not available commercially. The program(s) and suitable documentation regarding its (their) use may be provided by any of the following means: (i) as a program transmitted via the Internet, (ii) as an Internet server-based tool, or (iii) as a compiled form on a suitable medium. The authors guarantee that they have the authority to comply with this policy either directly or by means of material transfer agreements through the owner. ASM asks authors to assert this in a "Data availability" paragraph at the end of the text of their submitted manuscript. Therefore, a condition of publication in MRA is that authors make data fully available and without restriction, except in rare circumstances. Data availability will be confirmed at submission. See our [Data Policy](#).

Authors should provide the following in a "Data availabil-

ity” paragraph at the end of the text of their submitted manuscript: data description, name(s) of the repositories, and digital object identifiers (DOIs) or accession numbers.

Data citation. To promote reproducibility, ASM expects researchers to identify and cite data sets and/or code used in their experiments and studies. These may be large or complex data sets that can include, but are not limited to, data from microarray, genomic, structural, proteomic, or video imaging analyses. **Authors should cite both the data set repository and the published article in which the data set and/or code was originally described.** Citations of data should be included in the reference list with persistent unique identifiers (e.g., active URLs, accession numbers, etc.). If computer code or software was created to generate results or interpret data, then a statement to that effect should be included in a separate paragraph, which should appear at the end of the main text of their submitted manuscript. For cases in which the software is publicly available (e.g., [FigTree](#) to generate phylogenetic trees), the URL of the software informational page should be provided. **It is preferred that authors use established, publicly available data type-specific repositories.** If there is no appropriate repository available, general publicly available repositories should be used (e.g., [Dryad](#), [figshare](#), etc.). Examples of proper data citation are included in the “References” section of these Instructions to Authors.

Culture deposition. MRA expects authors, where possible, to deposit important strains in publicly accessible culture collections and to refer to the collections and strain numbers in the text. Since the authenticity of subcultures of culture collection specimens that are distributed by individuals cannot be ensured, authors should indicate laboratory strain designations and donor sources as well as original culture collection identification numbers.

Nucleotide sequences and databases. Newly determined nucleotide sequence data must be deposited in one of the following publicly available databases: [DNA Data Bank of Japan \(DDBJ\)](#); [European Nucleotide Archive \(ENA\)](#); or [GenBank](#), National Center for Biotechnology Information. GenBank/ENA/DDBJ accession numbers must be included in the announcement at the time of submission. It is expected that the sequence data will be released to the public at the time of submission. **Communication from the relevant database confirming public data availability must be included with the initial submission as a Data Release Email file. Announcements will not be considered for publication until the availability of the data or of the sequence(s) in GenBank/ENA/DDBJ has been verified.** The accession number(s) should be included in a separate paragraph at the end of the announcement.

It is expected that, when previously published sequence accession numbers are cited in a manuscript, the original published article(s), as well as a citation of the database where the accession number is deposited, will be included in the References section.

Proper use of locus tags as systematic identifiers for genes. To comply with recommendations from the International Nucleotide Sequence Database (INSD) Collaborators and to

avoid conflicts in gene identification, researchers should implement the following two fundamental guidelines as standards for utilization of locus tags in genome analysis, annotation, submission, reporting, and publication. (i) Locus tag prefixes are systematic gene identifiers for all of the replicons of a genome and as such should be associated with a single genome project submission. (ii) New genome projects must be registered with the INSD, and new locus tag prefixes must be assigned in cooperation with the INSD to ensure that they conform to the agreed-upon criteria.

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SUBMISSION, REVIEW, AND PUBLICATION PROCESSES

Submission Process

All submissions to MRA must be made electronically via the eJournalPress (eJP) [online submission and peer review system](#). (E-mailed submissions will not be accepted.) First-time users must create an Author account.

Review Process

All manuscripts are peer reviewed and considered to be confidential. Impersonation of another individual during the review process is considered serious misconduct.

To facilitate the review, communication from the relevant

database confirming public data availability must be included with the initial submission as a Data Release Email file. Copies of in-press and submitted manuscripts that are important for judgment of the present manuscript should be included as related manuscript files.

When a manuscript is submitted to the journal, it is given a control number (e.g., MRA00123-18) and assigned to one of the editors. (Always refer to this control number in communications with the editor and the Journals Department.) From there it is assigned to at least one independent expert for peer review. A single-blind review, where authors' identities are known to reviewers, is applied. It is the responsibility of the corresponding author to inform the coauthors of the manuscript's status throughout the submission, review, and publication processes. The reviewers operate under strict guidelines set forth in "[Guidelines for Reviewers](#)" and are expected to complete their reviews expeditiously.

The corresponding author is notified, generally within 6 to 8 weeks after submission, of the editor's decision to accept, reject, or require modification. When modification is requested, the corresponding author must either submit the modified version within 2 months or withdraw the manuscript. A point-by-point response to the reviews must be uploaded as a separate Revision Response file, and a compare copy of the manuscript should be included as a Related Manuscript File if the editor requested one.

Manuscripts that have been rejected with the option to resubmit, or withdrawn after being returned for modification, may be resubmitted to the same ASM journal if the major criticisms have been addressed. Manuscripts rejected with the option to resubmit may be resubmitted only once unless permission has been obtained from the original editor or from the editor in chief.

The cover letter of every resubmitted manuscript must state that the manuscript is a resubmission, and the former manuscript control number must be provided. A point-by-point response to the review(s) must be uploaded as a Revision Response file, and a copy of the revised manuscript tracking the changes must be included as a Related Manuscript File. Manuscripts resubmitted to the same journal are normally handled by the original editor.

Notification of Acceptance

When an editor has decided that a manuscript is acceptable for publication, the author and the Journals Department are notified. The text files undergo an automated preediting, cleanup, and tagging process specific to the particular article type. If all files have been prepared according to the criteria set forth in these Instructions and those in the eJP online manuscript submission system, the acceptance procedure will be completed successfully. If there are problems that would cause extensive corrections to be made at the copyediting stage or if the files are not acceptable for production, ASM Journals staff will contact the corresponding author. Once all the material intended for publication has been determined to be adequate, the manuscript is copyedited and prepared for publication.

Publication Schedule

Announcements are published in weekly issues (50 issues per year). The articles from issues published in the preceding weeks are moved into the MRA archive.

Page Proofs

The corresponding author will be provided access to the page proofs for corrections. All author queries must be answered, and any changes related to the queries, as well as any additional changes, must also be marked on the proofs. Note that the copy editor does not query at every instance where a change has been made. Queries are written only to request necessary information or clarification of an unclear passage or to draw attention to edits that may have altered the sense. It is the author's responsibility to read the entire text, not just items queried. Corrections must be made within two business days after notification of availability.

The proof stage is not the time to make extensive corrections, additions, or deletions.

Important new information that has become available between acceptance of the manuscript and receipt of the proofs may be inserted as an addendum in proof with the permission of the editor. If references to unpublished data or personal communications are added, it is expected that written assurance granting permission for the citation will be included. Limit changes to correction of spelling errors, incorrect data, and grammatical errors and updated information for references to articles that have been submitted or are in press. If URLs have been provided in the article, recheck the sites to ensure that the addresses are still accurate and the material that you expect the reader to find is indeed there.

Questions about proofs should be directed to Cenveo (Mary O'Brien, e-mail: Mary.OBrien@cenveo.com; telephone: 410-694-4170).

Funding Agency Repositories

ASM allows MRA authors whose work was supported by the National Institutes of Health (NIH) and other funding agencies that have public access requirements (e.g., the Wellcome Trust) to post their accepted manuscripts in publicly accessible electronic repositories maintained by those funding agencies. If a funding agency does not itself maintain such a site, then ASM allows the author to fulfill that requirement by depositing the article in an appropriate institutional or subject-based open repository established by a government or noncommercial entity. ASM requests that when submitting an accepted manuscript to PMC or a similar public access site, the author specify that the **posting release date for the manuscript be no earlier than the date of publication on the MRA website and that a link to the published paper on the journal website be provided.**

Publication Fees

Accepted announcements are subject to a nonwaivable publication fee. The 2018 publication fee is \$800 (subject to change without notice); corresponding authors who are active mem-

bers of ASM at any level except the Supporting member level are entitled to a discounted fee of \$525 (subject to change without notice). Nonmember corresponding authors may [join ASM](#) to obtain discounts on publication fees. Former members who wish to renew their membership at the same level may do so [online](#). However, to change your membership level, please contact customer service at Service@asmusa.org.

ORGANIZATION AND FORMAT

Editorial Style

The editor and the Journals Department reserve the privilege of editing manuscripts to conform with the stylistic conventions followed by ASM journals and outlined in these Instructions.

Type the manuscript double-spaced, and number all pages in sequence, including the abstract.

Manuscripts may be editorially rejected on the basis of poor English or lack of conformity to the standards set forth in these Instructions.

Authors who are unsure of proper English usage should have their manuscripts checked by someone proficient in the English language or engage a professional language editing service for help.

Announcement Format

An announcement is a brief report (limit of 500 words exclusive of the abstract and acknowledgments) describing the resource and providing a citable record of the corresponding public repository accession number or stating the availability to the scientific community of other microbiological resources. Announcements must include an abstract and accession number(s) or a statement describing how the community can access the software, culture collection, or other resource; no text headings should be used except for “Acknowledgments” and “References.” Sequences and other resources must be made publicly available before an announcement will be considered for publication. An accession number(s) and/or a statement of public availability must be provided in a separate paragraph at the end of the text [see “[Public availability and accession number\(s\)](#),” below]. **Communication from the relevant database confirming public data availability must be included with the initial submission as a Data Release Email file.** Announcements may include one figure or table to help summarize the data set or provide a context for the resource, but supplemental material is not permitted. Detailed results or comparative analyses are not appropriate. However, multiple related sequences and their accompanying accession numbers and URL may be presented in tabular form.

Announcements should include the following elements.

Title, running title, byline, affiliation line(s), and corresponding author. On the title page, include the title, the running title (not to exceed 54 characters and spaces), the name of each author, all authors’ affiliations at the time the work was performed, the name(s) and e-mail address(es) of the corre-

sponding author(s), and a footnote indicating the present address of any author no longer at the institution where the work was performed. Place a number sign (#) in the byline after the affiliation letter(s) of the author to whom inquiries regarding the paper should be directed (see “[Correspondent footnote](#),” below). Indicate each author’s affiliation with a superscript lowercase letter placed after the author’s surname in the byline (separate multiple affiliation letters with commas but no space). Each affiliation should have its own line and its own superscript affiliation letter preceding it. Do not consolidate different departments at one institution into one address with a single affiliation letter, even if all affected authors belong to all of those departments. [Please review this sample title page for guidance.](#) Note that articles with significantly similar titles and bylines published in the same journal may result in indexing difficulties for programs such as Google Scholar. Go to <http://journals.asm.org/search> to search published MRA articles.

For Chinese and Korean authors, you may include Unicode Chinese or Korean characters in parentheses after each author’s name in the submitted manuscript. If you choose this option, please provide the native expression for the original written form of the transliterated name; do not include any associated degree, rank, or title information in the native format. ASM hopes to expand this option for other languages in the future.

Study group in byline. A study group, surveillance team, working group, consortium, or the like (e.g., the Active Bacterial Core Surveillance Team) may be listed as a coauthor in the byline if its contributing members satisfy the requirements for authorship and accountability as described in these Instructions. The names (and institutional affiliations if desired) of the contributing members may be given as a separate paragraph in Acknowledgments.

If the contributing members of the group associated with the work do not fulfill the criteria of substantial contribution to and responsibility for the paper, the group may not be listed in the author byline. Instead, it and the names of its contributing members may be listed in the Acknowledgments section.

Correspondent footnote. The e-mail address for the corresponding author should be included on the title page of the manuscript. This information will be published in the article as a footnote to facilitate communication and will be used to notify the corresponding author of the availability of proofs and, later, of the PDF file of the published article. No more than two authors may be designated corresponding authors.

Abstract. Limit the abstract to 50 words or fewer and concisely summarize the basic content of the paper without presenting extensive experimental details. Avoid abbreviations and references, and do not include diagrams. When it is essential to include a reference, use the format shown under “References” below (see the “[Citations in abstracts](#)” section). Because the abstract will be published separately by abstracting services, it must be complete and understandable without reference to the text.

Public availability and accession number(s). The description of how the community can access the announced resource should be provided in a separate paragraph at the end of the text, with the paragraph lead-in “Data availability.” This

should include accession numbers for public repositories and Web links for software and databases. For culture collections that cannot be housed within a public repository, authors must provide contact information and a protocol for procuring the described strains. The resource(s) must be made publicly available before the submission will be considered for publication. Authors are encouraged to comply with community metadata standards, such as the “Minimum Information about any (X) Sequence” (MIXS) checklist, when submitting to GenBank, ENA, or DDBJ. For example, for genome sequence submissions, the accession number(s) should be reported in the following format: “**Data availability.** This Whole Genome Shotgun project has been deposited in DDBJ/ENA/GenBank under the accession no. [XXXX]00000000. The version described in this paper is the first version, [XXXX]01000000.” Please also provide references (with URLs) for the accession numbers.

Acknowledgments. Statements regarding sources of direct financial support (e.g., grants, fellowships, and scholarships, etc.) should appear in the Acknowledgments. A funding statement indicating what role, if any, the funding agency had in your study (for example, “The funders had no role in study design, data collection and interpretation, or the decision to submit the work for publication.”) may be included. Funding agencies may have specific wording requirements, and compliance with such requirements is the responsibility of the author. In cases in which research is not funded by any specific project grant, funders need not be listed, and the following statement may be used: “This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.” Statements regarding indirect financial support (e.g., commercial affiliations, consultancies, stock or equity interests, and patent-licensing arrangements) are also allowed. It is the responsibility of authors to provide a general statement disclosing financial or other relationships that are relevant to the study. (See the “**Conflict of Interest**” section above.)

Recognition of personal assistance should be given in the Acknowledgments section, as should any statements disclaiming endorsement or approval of the views reflected in the paper or of a product mentioned therein.

In addition to acknowledging sources of financial support in the manuscript, authors should list any sources of funding in response to the Funding Sources question on the online submission form, providing relevant grant numbers where possible, and the authors associated with the specific funding sources. In the event that your submission is accepted, the funding source information provided in the submission form may be published, so please ensure that all information is entered accurately and completely. (It will be assumed that the absence of any information in the Funding Sources fields is a statement by the authors that no support was received.)

References. In the reference list, references are numbered in the order in which they are cited in the article. In the text, references are cited parenthetically by number in sequential order. Data that are not published are simply cited parenthetically in the text (see section ii below).

(i) References listed in the References section. The following types of references must be listed in the References section:

- Journal articles (both print and online)
- Books (both print and online)
- Book chapters (publication title is required)
- Patents
- Theses and dissertations
- Published conference proceedings
- Meeting abstracts (from published abstract books or journal supplements)
- Letters (to the editor)
- Company publications
- In-press journal articles, books, and book chapters
- Data sets
- Code

Provide the names of all the authors and/or editors for each reference; long bylines should not be abbreviated with “et al.” All listed references must be cited in the text. Abbreviate journal names according to the [PubMed Journals Database](#) (National Library of Medicine, National Institutes of Health), the primary source for ASM style (do not use periods with abbreviated words). The EndNote output style for ASM Journals’ current reference style can be found at http://journals.asm.org/site/misc/ASM_Journals.ens; click “Open” and then “Download and Install” to save it to your EndNote Styles folder (it should replace any earlier output styles for ASM journals [all ASM journals use the same reference style]). Note that DOIs are not needed for most references. ASM copy editors will automatically insert DOIs on all references in the CrossRef and PubMed databases during copyediting. URLs for government reports and other references not indexed in these databases should be provided if desired; URLs for citations of database accession numbers and code/software should be provided by you.

Follow the styles shown in the examples below.

1. Caserta E, Haemig HAH, Manias DA, Tomsic J, Grundy FJ, Henkin TM, Dunny GM. 2012. *In vivo* and *in vitro* analyses of regulation of the pheromone-responsive *prgQ* promoter by the PrgX pheromone receptor protein. *J Bacteriol* 194:3386–3394.
2. Bina XR, Taylor DL, Vikram A, Ante VM, Bina JE. 2013. *Vibrio cholerae* ToxR downregulates virulence factor production in response to cyclo(Phe-Pro). *mBio* 4:e00366-13.
3. Winnick S, Lucas DO, Hartman AL, Toll D. 2005. How do you improve compliance? *Pediatrics* 115:e718–e724.
4. Falagas ME, Kasiakou SK. 2006. Use of international units when dosing colistin will help decrease confusion related to various formulations of the drug around the world. *Antimicrob Agents Chemother* 50:2274–2275. (Letter.) {“Letter” or “Letter to the editor” is allowed but not required at the end of such an entry.}
5. Cox CS, Brown BR, Smith JC. *J Gen Genet*, in press.* {Article title is optional; journal title is mandatory.}
6. Forman MS, Valsamakis A. 2011. Specimen collection, transport, and processing: virology, p 1276–1288. *In* Versalovic J, Carroll KC, Jorgensen JH, Funke G, Landry ML,

- Warnock DW (ed), *Manual of clinical microbiology*, 10th ed, vol 2. ASM Press, Washington, DC.
7. da Costa MS, Nobre MF, Rainey FA. 2001. Genus I. *Thermus* Brock and Freeze 1969, 295, ^{AL} emend. Nobre, Trüper and da Costa 1996b, 605, p 404–414. In Boone DR, Castenholz RW, Garrity GM (ed), *Bergey's manual of systematic bacteriology*, 2nd ed, vol 1. Springer, New York, NY.
 8. Fitzgerald G, Shaw D. In Waters AE (ed), *Clinical microbiology*, in press. EFH Publishing Co, Boston, MA.* {*Chapter title is optional.*}
 9. Green PN, Hood D, Dow CS. 1984. Taxonomic status of some methylotrophic bacteria, p 251–254. In Crawford RL, Hanson RS (ed), *Microbial growth on C₁ compounds*. Proceedings of the 4th International Symposium. American Society for Microbiology, Washington, DC.
 10. Rotimi VO, Salako NO, Mohaddas EM, Philip LP. 2005. Abstr 45th Intersci Conf Antimicrob Agents Chemother, abstr D-1658. {*Abstract title is optional.*}
 11. Smith D, Johnson C, Maier M, Maurer JJ. 2005. Distribution of fimbrial, phage and plasmid associated virulence genes among poultry *Salmonella enterica* serovars, abstr P-038, p 445. Abstr 105th Gen Meet Am Soc Microbiol. American Society for Microbiology, Washington, DC. {*Abstract title is optional.*}
 12. García CO, Paira S, Burgos R, Molina J, Molina JF, Calvo C, Vega L, Jara LJ, García-Kutzbach A, Cuellar ML, Espinoza LR. 1996. Detection of *Salmonella* DNA in synovial membrane and synovial fluid from Latin American patients using the polymerase chain reaction. *Arthritis Rheum* 39(Suppl 9):S185. {*Meeting abstract published in journal supplement.*}
 13. O'Malley DR. 1998. PhD thesis. University of California, Los Angeles, CA. {*Title is optional.*}
 14. Stratagene. 2006. Yeast DNA isolation system: instruction manual. Stratagene, La Jolla, CA. {*Use the company name as the author if none is provided for a company publication.*}
 15. Odell JC. April 1970. Process for batch culturing. US patent 484,363,770. {*Include the name of the patented item/process if possible; the patent number is mandatory.*}
 16. Harrison F, Roberts AEL, Gabriliska R, Rumbaugh KP, Lee C, Diggle SP. 2015. A 1,000-year-old antimicrobial remedy with antistaphylococcal activity. *mBio* 6:e01129-15. {*Original article that describes how data submitted to a database were generated.*}
 17. Harrison F, Roberts AEL, Gabriliska R, Rumbaugh KP, Lee C, Diggle SP. 2015. Data from “A 1,000-year-old antimicrobial remedy with antistaphylococcal activity.” Dryad Digital Repository <https://doi.org/10.5061/dryad.mn17p>. {*Citation for the database where the data in the previous reference were deposited; the URL is necessary.*}
 18. Wang Y, Rozen D. 2016. Colonization and transmission of the gut microbiota of the burying beetle, *Nicrophorus vespilloides*, through development. bioRxiv <https://doi.org/10.1101/091702>.

*A reference to an in-press ASM publication should state the control number (e.g., MRA00123-18) if it is a journal article or the name of the publication if it is a book.

In some online journal articles, posting or revision dates may serve as the year of publication; a DOI (preferred) or URL is required for articles with nontraditional page numbers or electronic article identifiers.

Magalon A, Mendel RR. 15 June 2015, posting date. Biosynthesis and insertion of the molybdenum cofactor. *EcoSal Plus* 2015 doi:10.1128/ecosalplus.ESP-0006-2013.

Note: a posting or accession date is required for any online reference that is periodically updated or changed.

Citations of ASM Accepts manuscripts should look like the following example.

Wang GG, Pasillas MP, Kamps MP. 15 May 2006. Persistent transactivation by Meis1 replaces Hox function in myeloid leukemogenesis models: evidence for co-occupancy of Meis1-Pbx and Hox-Pbx complexes on promoters of leukemia-associated genes. *Mol Cell Biol* doi:10.1128/MCB.00586-06.

Other journals may use different styles for their publish-ahead-of-print manuscripts, but citation entries must include the following information: author name(s), posting date, title, journal title, and volume and page numbers and/or DOI. The following is an example:

Zhou FX, Merianos HJ, Brunger AT, Engelman DM. 13 February 2001. Polar residues drive association of poly-leucine transmembrane helices. *Proc Natl Acad Sci U S A* doi:10.1073/pnas.041593698.

To encourage data sharing and reuse, ASM recommends reporting data sets and/or code both in a dedicated “Data availability” paragraph and in References. The components of a complete data citation include the following:

- Responsible party (senior author, collector, agency),
- Publication year,
- Complete name of a data set, including the name of the database or repository and its URL, **or** the name of the analysis software (if appropriate), including the version and project,
- Publisher (if appropriate), and
- Persistent unique identifier(s) (e.g., URL[s] or accession number[s]).

The following templates may be helpful.

Author. Year. Description of study topic. Retrieved from Database URL (accession no. ●●●●●●). {*Unpublished raw data.*}

Author. Year. Description or title of software (version). Repository URL. Retrieved day month year. {*Software or code.*}

Examples follow.

Christian SL, McDonough J, Liu C-Y, Shaikh S, Vlamakis V, Badner JA, Chakravarti A, Gershon ES. 2002. Data

from “An evaluation of the assembly of an approximately 15-Mb region on human chromosome 13q32–q33 linked to bipolar disorder and schizophrenia.” GenBank <https://www.ncbi.nlm.nih.gov/nucleotide/AF339794> (accession no. AF339794). {*Accession number.*}

Sun Z. 2013. Reprocessed: in-depth membrane proteomic study of breast cancer tissues. ProteomeXchange <http://proteomecentral.proteomexchange.org/cgi/GetDataset?ID=RPXD000665> (accession number requested). {*Unsigned accession number.*}

Hogle S. 2015. Supplemental material for Hogle et al. 2015 mBio. figshare <https://doi.org/10.6084/m9.figshare.1533034.v1>. Retrieved 16 March 2017. {*Code and/or software.*}

Nesbitt HK, Moore JW. 2016. Data from “Species and population diversity in Pacific salmon fisheries underpin indigenous food security.” Dryad Digital Repository <https://doi.org/10.5061/dryad.ng8pf>. {*Data set in repository.*}

Manuscript submissions that have appeared in preprint archives should cite the preprint in References, and the fact that a paper has appeared online before should be mentioned parenthetically at the end of the introductory section: (This article was submitted to an online preprint archive [1].) The reference should take the form noted above in reference 18.

(ii) References cited in the text. References that should be cited in the text include the following:

- Unpublished data
- Manuscripts submitted for publication
- Unpublished conference presentations (e.g., a report or poster that has not appeared in published conference proceedings)
- Personal communications
- Patent applications and patents pending
- Websites

These references should be made parenthetically in the text as follows:

... similar results (R. B. Layton and C. C. Weathers, unpublished data).
 ... system was used (J. L. McInerney, A. F. Holden, and P. N. Brighton, submitted for publication).
 ... as described previously (M. G. Gordon and F. L. Rattner, presented at the Fourth Symposium on Food Microbiology, Overton, IL, 13 to 15 June 1989). {*For nonpublished abstracts and posters, etc.*}
 ... this new process (V. R. Smoll, 20 June 1999, Australian Patent Office). {*For non-U.S. patent applications, give the date of publication of the application.*}
 ... as suggested by the World Health Organization (<http://www.who.int/campaigns/immunization-week/2017/en/>).

URLs for companies that produce any of the products mentioned in your study or for products being sold may not be included in the article. However, company URLs that permit access to scientific data related to the study or to shareware used in the study are permitted.

(iii) Citations in abstracts. Because the abstract must be able to stand apart from the article, references cited in it should be clear without recourse to the References section. Use an abbreviated form of citation, omitting the article title, as follows.

(P. S. Satheshkumar, A. S. Weisberg, and B. Moss, J Virol 87:10700–10709, 2013, doi:10.1128/JVI.01258-13)

(J. H. Coggin, Jr., p. 93–114, in D. O. Fleming and D. L. Hunt, ed., *Biological Safety. Principles and Practices*, 4th ed., 2006)

“... in a recent report by D. A. Hopwood (mBio 4:e00612-13, 2013, doi:10.1128/mBio00612-13) ...”

This style should also be used for Addenda in Proof.

Commentaries

Commentaries are short invited articles (limit of 500 words) that discuss MRA articles of special interest. These are solicited by the editor from experts in the field.

Authors should provide an abstract of 50 words or fewer. The body of a Commentary may have section headings or paragraph lead-ins.

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Letters to the Editor are intended for comments on articles published in the journal and must cite published references to support the writer’s argument. They should contain significant and substantive comments. Comments on technical issues should use the online comment format.

Letters may be no more than 500 words long and must be typed double-spaced.

All Letters to the Editor must be submitted electronically. The cover letter should refer to the article in question by its title and the last name of the first author. In addition, the volume and issue and/or DOI should be indicated. Letters to the Editor do not have abstracts. The Letter must have a distinct title, which must appear on the manuscript and on the submission form.

The Letter will be considered by the editor, and if the editor believes that publication is warranted, he/she will solicit a reply from the corresponding author of the article. Final approval for publication rests with the editor.

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Errata provide a means of correcting errors that occurred during the writing, typing, editing, or publication (e.g., a misspelling or a dropped word or line) of a published article. Submit Errata via the eJP online manuscript submission system (see “[Submission and Publication Processes](#)”). Select Erratum as the manuscript type. Upload the text of your Erratum as a Microsoft Word file. Please see a recent issue for correct formatting.

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Retractions are reserved for major errors or breaches of ethics that, for example, may call into question the source of the data or the validity of the results and conclusions of an article. Submit Retractions via the eJP online manuscript submission system (see "[Submission and Publication Processes](#)"). Select Retraction as the manuscript type. Upload the text of your Retraction as a Microsoft Word file. Letters of agreement signed by all of the authors must be supplied as related manuscript files (scanned PDF files). The Retraction will be assigned to the editor of the journal, and the chairperson of the ASM Journals Committee will be consulted. If all parties agree to the publication and content of the Retraction, it will be sent to the Journals Department for publication.

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ILLUSTRATIONS

Image manipulation. Digital images submitted for publication may be inspected by ASM production specialists for any manipulations or electronic enhancements that may be considered to be the result of scientific misconduct based on the guidelines provided below. Any images/data found to contain manipulations of concern will be referred to the editor in chief,

and authors may then be requested to provide their primary data for comparison with the submitted image file. Investigation of the concerns may delay publication and may result in revocation of acceptance and/or additional action by ASM.

Linear adjustments to contrast, brightness, and/or color are generally acceptable, as long as the measures taken are necessary to view elements that are already present in the data and the adjustments are applied to the entire image and not just specific areas. Unacceptable adjustments to images include, but are not limited to, the removal or deletion, concealment, duplication (copying and pasting), addition, selective enhancement, or repositioning of elements within the image.

Nonlinear adjustments made to images, such as changes to gamma settings, should be fully disclosed in the figure legends at the time of submission. In addition, images created by compiling multiple files, including noncontiguous portions of the same image, should clearly convey that these multiple files are not a single image. This can be done by "[tooling](#)," or inserting thin lines, between the individual images.

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Instructions for converting PowerPoint files may be found at http://art.cadmus.com/da/howto/creating_ai_eps_excell.jsp. General instructions for creating acceptable EPS and TIFF files may be found at <http://art.cadmus.com/da/index.jsp>.

We strongly recommend that before submitting their initial manuscripts, authors check the acceptability of their digital images for production by running their files through Rapid Inspector, an easy-to-use, Web-based application that identifies file characteristics that may render the image unusable for production.

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Size. All graphics **should be submitted at their intended publication size**; that is, the image uploaded should be 100% of its print dimensions so that no reduction or enlargement is necessary. Resolution must be at the required level at the submitted size. Include only the significant portion of an illustration. White space must be cropped from the image, and excess space between panel labels and the image must be eliminated.

- Maximum figure width: 6.875 inches (ca. 17.4 cm)
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Contrast. Illustrations should contain sufficient contrast to be viewed easily on a monitor or on the printed page (for reprints).

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Fonts. To avoid font problems, set all type in one of the following fonts: Arial, Helvetica, Times Roman, European PI, Mathematical PI, or Symbol. Courier may be used but should be limited to nucleotide or amino acid sequences in which a nonproportional (monospace) font is required. All fonts other than these must be converted to paths (or outlines) in the application with which they were created.

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Color illustrations should be supplied in the RGB color mode, as either (i) RGB TIFF images with a resolution of at least 300 pixels per inch (raster files, consisting of pixels) or (ii) Illustrator-compatible EPS files with RGB color elements (vector files, consisting of lines, fonts, fills, and images). For reprints, ASM's print provider will automatically create CMYK versions of color illustrations from the supplied RGB versions. Color in the reprints may not exactly match that in the online journal of record because of the smaller range of colors capable of being reproduced by CMYK inks on a printing press.

Drawings. Submit graphs, charts, complicated chemical or mathematical formulas, diagrams, and other drawings as finished products not requiring additional artwork or typesetting. All elements, including letters, numbers, and symbols, must be easily readable, and both axes of a graph must be labeled. When creating line art, please use the following guidelines:

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(ii) **Avoid using screens (i.e., shading) in line art.** It can be difficult and time-consuming to reproduce these images without moiré patterns. Various pattern backgrounds are preferable to screens as long as the patterns are not imported from another application. If you must use images containing screens,

(a) Generate the image at line screens of 85 lines per inch or less.

(b) When applying multiple shades of gray, differentiate the gray levels by at least 20%.

(iii) Use thick, solid lines that are no finer than 1 point in thickness.

(iv) Use type that is no smaller than 6 points at the final publication size.

(v) Avoid layering type directly over shaded or textured areas.

(vi) Avoid the use of reversed type (white lettering on a black background).

(vii) Avoid heavy letters, which tend to close up, and unusual symbols, which the printer may not be able to reproduce in the legend.

(viii) If colors are used, avoid using similar shades of the same color and avoid very light colors.

Figure Legends

The figure legend should be placed at the end of the text file. The legend should provide enough information so that the figure is understandable without frequent reference to the text. Define all symbols used in the figure and define all abbreviations that are not used in the text.

NOMENCLATURE

Chemical and Biochemical Nomenclature

The recognized authority for the names of chemical compounds is *Chemical Abstracts* (CAS) and its indexes. *The Merck Index Online* is also an excellent source. For guidelines to the use of biochemical terminology, consult *Biochemical Nomenclature and Related Documents* (Portland Press, London, United Kingdom, 1992) and the Instructions to Authors of the *Journal of Biological Chemistry* and the *Archives of Biochemistry and Biophysics*.

For enzymes, use the recommended (trivial) name assigned by the Nomenclature Committee of the International Union of Biochemistry (IUB) as described in *Enzyme Nomenclature* (Academic Press, Inc., New York, NY, 1992) and its supplements and at <http://www.sbcs.qmul.ac.uk/iubmb/enzyme/>. If a nonrecommended name is used, place the proper (trivial) name in parentheses at first use in the abstract and text. Use the EC number when one has been assigned. Authors of papers describing enzymological studies should review the standards of the *STRENDIA Commission* for information required for adequate description of experimental conditions and for reporting enzyme activity data.

Nomenclature of Prokaryotes, Eukaryotes, and Viruses

When the announcement describes the genome of a recognized bacterial species, binary names, consisting of a generic name and a specific epithet (e.g., *Saccharomyces cerevisiae*), must be used. For resources describing genome data from a species that is unculturable and cannot be maintained in a culture collection, the nomenclature "*Candidatus*" preceding the genus name is recommended. Names of categories at or above the genus level may be used alone, but specific and sub-specific epithets may not. A specific epithet must be preceded by a generic name, written out in full the first time it is used in a paper. Thereafter, the generic name should be abbreviated to the initial capital letter (e.g., *S. cerevisiae*), provided there can be no confusion with other genera used in the paper. Names of all bacterial taxa (kingdoms, phyla, classes, orders, families,

genera, species, and subspecies) are printed in italics and should be italicized in the manuscript; strain designations and numbers are not. The spelling of bacterial names should follow the *Approved Lists of Bacterial Names (Amended) & Index of the Bacterial and Yeast Nomenclatural Changes* (V. B. D. Skerman et al., ed., American Society for Microbiology, Washington, DC, 1989) and the validation lists and notification lists published in the *International Journal of Systematic and Evolutionary Microbiology* (formerly the *International Journal of Systematic Bacteriology*) since January 1989. In addition, two sites on the World Wide Web list current approved bacterial names: [Prokaryotic Nomenclature Up-to-Date](#) and [List of Prokaryotic Names with Standing in Nomenclature](#).

Since the classification of fungi is far from complete, it is the responsibility of the author to determine the accepted binomial for a given organism. Sources for these names include *The Yeasts: a Taxonomic Study*, 5th ed. (C. P. Kurtzman, J. W. Fell, and T. Boekhout, ed., Elsevier Science, Amsterdam, Netherlands, 2011), and *Dictionary of the Fungi*, 10th ed. (P. M. Kirk, P. F. Cannon, D. W. Minter, and J. A. Stalpers, ed., CABI International, Wallingford, Oxfordshire, United Kingdom, 2008); see also <http://www.speciesfungorum.org/Names/Fundic.asp>. Names used for viruses should be those approved by the International Committee on Taxonomy of Viruses (ICTV) and reported on the ICTV Virus Taxonomy website (<https://talk.ictvonline.org/>). In addition, the recommendations of the ICTV regarding the use of species names should generally be followed: when the entire species is discussed as a taxonomic entity, the species name, as with other taxa, is italic and has the first letter and any proper nouns capitalized (e.g., *Tobacco mosaic virus*,

Murray Valley encephalitis virus). When the behavior or manipulation of individual viruses is discussed, the vernacular (e.g., tobacco mosaic virus, Murray Valley encephalitis virus) should be used. If desired, synonyms may be added parenthetically when the name is first mentioned. Approved generic (or group) and family names may also be used.

Microbial strains, viruses, and plasmids should be given individual designations consisting of letters and serial numbers.

It is generally advisable to include a worker's initials or a descriptive symbol of locale or laboratory, etc., in the designation. Each new strain, mutant, isolate, or derivative should be given a new (serial) designation. This designation should be distinct from those of the genotype and phenotype, and genotypic and phenotypic symbols should not be included.

Genetic Nomenclature

Genetic nomenclature should essentially follow the recommendations of Demerec et al. (*Genetics* 54:61–76, 1966) and those given in the Instructions to Authors of the *Journal of Bacteriology*[®] (for prokaryotes), *Molecular and Cellular Biology*[®] (for eukaryotes), and the *Journal of Virology*[®] (for viruses). To facilitate accurate communication, **it is important that standard genetic nomenclature be used whenever possible and that deviations or proposals for new naming systems be endorsed by an appropriate authoritative body**. Publication of submitted manuscripts that contain new or nonstandard nomenclature may be delayed by the editor or the Journals Department so that they may be reviewed.

Author Checklist

Genome sequences. Manuscripts should provide:

- A rationale or significance for the sequencing.
- The provenance for the organism sequenced.
- Taxonomic identification down to genus for prokaryotic isolates.
- A description of how the organism was isolated and growth conditions for cultivation. For single-cell amplified genomes, authors should instead supply information about how the cell was identified and isolated.
- Detailed methods for DNA isolation, library preparation, and sequencing (including the technology and chemistry used).
- A description of how the reads were quality controlled.
- Details on how the genome was assembled and, if applicable, annotated.
- A citation and version number for every piece of software used.
- Relevant statistics for the sequencing run (e.g., read length and number of reads in total).
- Relevant statistics for the assembly (e.g., number of contigs and N_{50} values).
- Genome GC content and total size.
- Accession numbers for both the assembly and raw reads that link to publicly available data.

Metagenomics and metatranscriptomic data sets. Manuscripts should provide:

- A rationale or significance for the sequencing.
- The provenance for the sample sequenced and information about the environment.
- Detailed methods for DNA or RNA isolation, library preparation, and sequencing (including the technology and chemistry used).
- A description of how the reads were quality controlled.
- Details on how the metagenome or metatranscriptome was assembled and, if applicable, annotated.
- A citation and version number for every piece of software used.
- Relevant statistics for the sequencing run (e.g., read length and number of reads in total).
- Relevant statistics for the assembly (e.g., number of contigs and N_{50} values).
- Details on how the reads or contigs were binned.
- Accession numbers for both the assembly and raw reads that link to publicly available data.

Amplicon sequence collections. Manuscripts should provide:

- A rationale or significance for the sequencing.
- The provenance for the sample sequenced and information about the environment.
- Detailed methods for DNA or RNA isolation, library preparation, and sequencing (including the technology and chemistry used).
- Relevant statistics for the sequencing run (e.g., read length and number of reads in total).
- A citation and version number for every piece of software used.
- An accession number for the raw reads that links to publicly available data.

Metabolomics data sets. Manuscripts should provide:

- A rationale or significance for the sampling, including experimental factors and study design.
- Details as to how the samples were collected and extracted.
- Details as to the chemistry used to identify metabolites.
- A citation and version number for every piece of software used.
- An accession number that leads to a full data set in a public repository and links to publicly available data.

Proteome data sets. Manuscripts should provide:

- A rationale or significance for the sampling, including experimental factors and study design.
- Details on how the samples were collected, digested, and processed.
- Details as to the peptide identification process.
- A citation and version number for every piece of software used.
- An accession number that leads to a full data set in a public repository and links to publicly available data.

Culture collections, mutant libraries, plasmids, and other genetic resources. Manuscripts should provide:

- A rationale or motivation for the resource and its significance to the research community.
- Details on how the resource was generated.
- A statement on how the resource can be accessed. It is ideal if the resource is placed in a public repository, but if not, the authors must make the resource available to the community.

Databases and software. Manuscripts should provide:

- A description of software implementation and its utility.
- A link to the software as an executable file or a repository.
- A statement on how the resource can be accessed. It is ideal if the resource is placed in a public repository, but if not, the authors must state that they will make the resource available to the community for 10 years after publication.