

This Is the Sample Template for American Society for Microbiology (ASM) Journal Articles

First Author,^a Second Author,^a Third Author,^b Fourth Author,^{a,b,*}

University Name, Faculty Group, Department, City, Country^a; Company Name, City, Country^b

ABSTRACT Research Articles have structured abstracts consisting of two sections with their own headings: “Abstract” and “Importance.” Because the structured abstract will be published separately by abstracting services, it must be complete and understandable without reference to the text. The Abstract section should be no more than 250 words and should concisely summarize the basic content of the paper without presenting extensive experimental details.

IMPORTANCE The Importance section should be no more than 150 words and should provide a nontechnical explanation of the significance of the study to the field. Avoid abbreviations and references, and indicate the specific organism under study. When it is essential to include a reference, use the format shown under “References” below.

KEYWORDS: keyword 1, keyword 2, keyword 3.

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INTRODUCTION

The introduction should supply sufficient background information to allow the reader to understand and evaluate the results of the present study without referring to previous publications on the topic. The introduction should also provide the hypothesis that was addressed or the rationale for the present study. Choose references carefully to provide the most salient background rather than an exhaustive review of the topic.

Sectioning commands. Use `\section` to get a first-level heading. You can use `\subsection` or just `\textbf` to get a sub-heading. Further sectioning levels, such as `\subsubsection`, etc., are ignored.

Citations and References. This template uses BibTeX and natbib, so `\cite` such as Aivazian et al. (1) can be used as usual to produce the correct citation style, and the reference list is generated automatically. In the reference list, references are numbered in the order in which they are cited in the article (citation-sequence reference system). In the text, references are cited parenthetically by number in sequential order. Data that are not published or not peer reviewed are simply cited parenthetically in the text.

Since 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.

- (M. J. Fraser, G. E. Smith, and M. D. Summers, *J Virol* 47:287–300, 1983)
- (J. Scholefield, R. Manson, R. J. Johnston, R. Scott, and M. Spinell, p. 179–183, *in* R. C. Tilton, ed., *Rapid Methods and Automation in Microbiology*, 1981)

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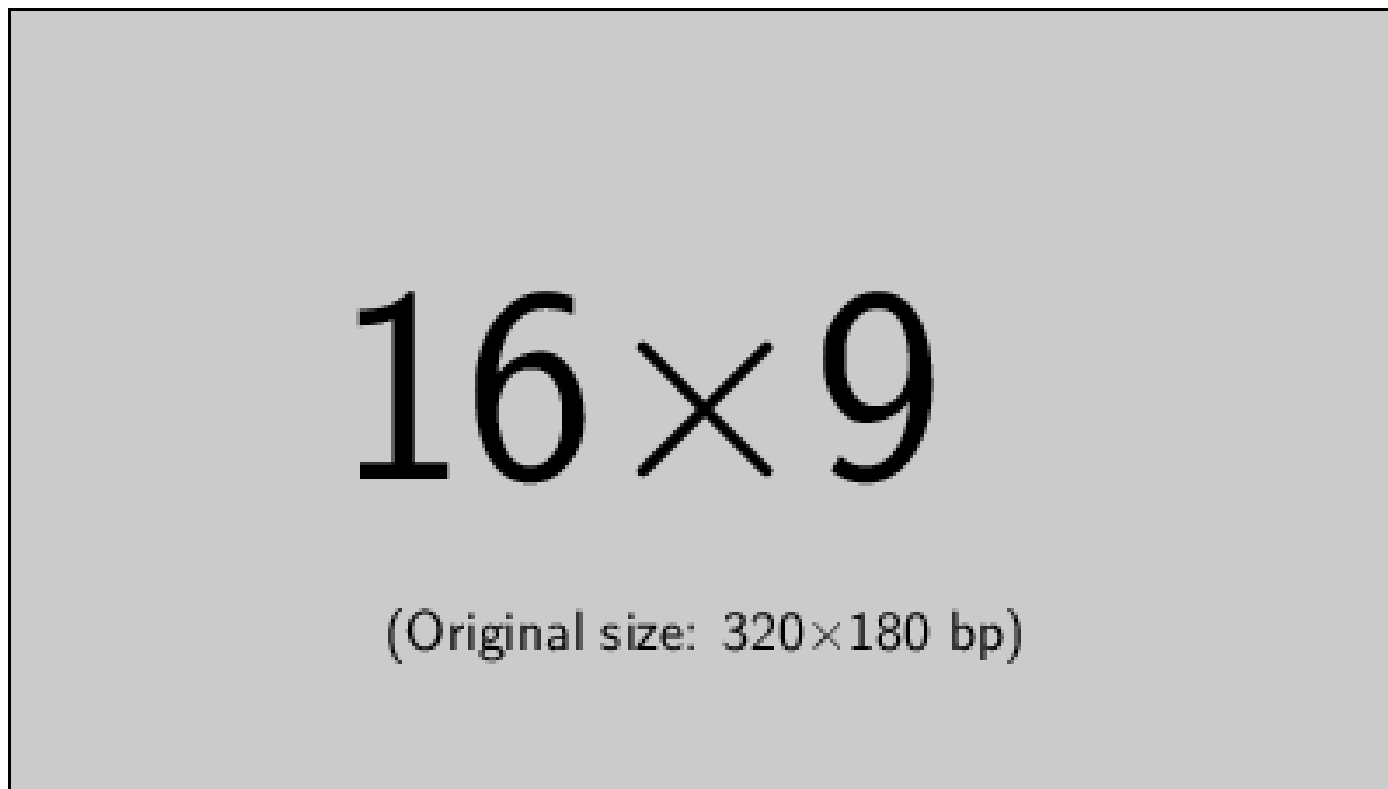


FIG 1 This is an example figure with caption. Use the fullwidth environment to make it span the entire width of the page. Lorem ipsum dolor sit amet, consectetur adipiscing elit.

40 “. . . the recent report of A. K. Datta and J. S. Pagano (Antimicrob Agents
41 Chemother 24:10–14, 1983). . .”

42 **File types and formats.** Illustrations may be continuous-tone images, line draw-
43 ings, or composites. On initial submission, illustrations may be supplied as PDF files,
44 with the legend on the same page, to assist review. At the modification stage, produc-
45 tion quality digital files must be provided, along with text files for the legends. The
46 legends are copyedited and typeset for final publication, not included as part of the
47 figure itself.

48 All graphics submitted with modified manuscripts should be grayscale or in the
49 RGB color mode. Minimum resolution is 300 dpi for all file types. All images imported
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51 instance, placing a 72-dpi image in a 300-dpi EPS file will not result in the placed image
52 meeting the minimum requirements for file resolution.) Note that publication quality
53 will not be improved by using a resolution higher than the minimum.

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

- 60 • Maximum figure width: 6.875 inches (ca. 17.4 cm)
- 61 • Maximum figure height: 9.0625 inches (23.0 cm)

62 **Author Warranty.** If accepted for publication, the Work will be made freely avail-

TABLE 1 Automobile land speed records (GR 5-10)^a

| Speed (mph) | Driver | Car | Engine | Date | Extra comments |
|-------------|-----------------|----------------------------|-----------|----------|---|
| 407.447 | Craig Breedlove | Spirit of America | GE J47 | 8/5/63 | (Just to demo a full-width table with auto-wrapping long lines) |
| 413.199 | Tom Green | Wingfoot Express | WE J46 | 10/2/64 | |
| 434.22 | Art Arfons | Green Monster | GE J79 | 10/5/64 | |
| 468.719 | Craig Breedlove | Spirit of America | GE J79 | 10/13/64 | |
| 526.277 | Craig Breedlove | Spirit of America | GE J79 | 10/15/65 | |
| 536.712 | Art Arfons | Green Monster | GE J79 | 10/27/65 | |
| 555.127 | Craig Breedlove | Spirit of America, Sonic 1 | GE J79 | 11/2/65 | |
| 576.553 | Art Arfons | Green Monster | GE J79 | 11/7/65 | |
| 600.601 | Craig Breedlove | Spirit of America, Sonic 1 | GE J79 | 11/15/65 | |
| 622.407 | Gary Gabelich | Blue Flame | Rocket | 10/23/70 | |
| 633.468 | Richard Noble | Thrust 2 | RR RG 146 | 10/4/83 | |
| 763.035 | Andy Green | Thrust SSC | RR Spey | 10/15/97 | |

^aSource is from this website: https://www.sedl.org/afterschool/toolkits/science/pdf/ast_sci_data_tables_sample.pdf

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RESULTS

In the Results section, include the rationale or design of the experiments as well as the results; reserve extensive interpretation of the results for the Discussion section. Present the results as concisely as possible in one or more of the following: text, table(s), or figure(s). Data in tables (e.g., cpm of radioactivity) should not contain more significant figures than the precision of the measurement allows. Illustrations (particularly photomicrographs and electron micrographs) should be limited to those that are absolutely necessary to show the experimental findings. Number figures and tables in the order in which they are cited in the text, and be sure to cite all figures and tables.

The tabularx, booktabs and siunitx packages are loaded by asm-article.cls; see [Table 1](#) for an example table. Use `\begin{fullwidth}... \end{fullwidth}` in your table for the table to span the entire width of the page.

DISCUSSION

The Discussion section should provide an interpretation of the results in relation to previously published work and to the experimental system at hand and should not contain extensive repetition of the Results section or reiteration of the introduction. In short papers, the Results and Discussion sections may be combined.

$$\frac{\partial^2 \Phi}{\partial x^2} + \frac{\partial^2 \Phi}{\partial y^2} + \frac{\partial^2 \Phi}{\partial z^2} = \frac{1}{c^2} \frac{\partial^2 \Phi}{\partial t^2} \quad (1)$$

Please note that display equations in the Overleaf template may be rendered with a slightly different presentation in the final published (*mSystems*) article.

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 94 Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit
 95 anim id est laborum.

$$\int_0^{\infty} e^{-\alpha x^2} dx = \frac{1}{2} \sqrt{\int_{-\infty}^{\infty} e^{-\alpha x^2} dx} \int_{-\infty}^{\infty} e^{-\alpha y^2} dy = \frac{1}{2} \sqrt{\frac{\pi}{\alpha}} \quad (2)$$

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100 MATERIALS AND METHODS

101 The Materials and Methods section should include sufficient technical information to
 102 allow the experiments to be repeated. When centrifugation conditions are critical, give
 103 enough information to enable another investigator to repeat the procedure: make of
 104 centrifuge, model of rotor, temperature, time at maximum speed, and centrifugal force
 105 ($\times g$ rather than revolutions per minute). For commonly used materials and methods
 106 (e.g., media and protein concentration determinations), a simple reference is sufficient.
 107 If several alternative methods are commonly used, it is helpful to identify the method
 108 briefly as well as to cite the reference. For example, it is preferable to state “cells
 109 were broken by ultrasonic treatment as previously described (9)” rather than to state
 110 “cells were broken as previously described (9).” This allows the reader to assess the
 111 method without constant reference to previous publications. Describe new methods
 112 completely and give sources of unusual chemicals, equipment, or microbial strains.
 113 When large numbers of microbial strains or mutants are used in a study, include tables
 114 identifying the immediate sources (i.e., sources from whom the strains were obtained)
 115 and properties of the strains, mutants, bacteriophages, and plasmids, etc.

116 A method or strain, etc., used in only one of several experiments reported in the
 117 paper may be described in the Results section or very briefly (one or two sentences)
 118 in a table footnote or figure legend. It is expected that the sources from whom the
 119 strains were obtained will be identified.

120 **Data Availability.** Authors should provide the following in a Data Availability para-
 121 graph at the end of the Materials and Methods section of their submitted manuscript:
 122 data description, name(s) of the repositories, and digital object identifiers (DOIs) or
 123 accession numbers. For some public repositories, the DOIs or accession numbers are
 124 not provided until the manuscript has been accepted; this should be noted in the cover
 125 letter. In these cases, authors are responsible for providing the DOIs or accession
 126 numbers at the proof stage.

127 **Accession number(s).** A paragraph dedicated to new accession numbers for
 128 nucleotide and amino acid sequences, microarray data, protein structures, gene ex-
 129 pression data, and MycoBank data should appear at the end of Materials and Methods
 130 with the paragraph lead-in “Accession number(s).”

131 ACKNOWLEDGMENTS

132 Statements regarding sources of direct financial support (e.g., grants, fellowships, and
 133 scholarships, etc.) should appear in the Acknowledgments. A funding statement in-
 134 dicating what role, if any, the funding agency had in your study (for example, “The
 135 funders had no role in study design, data collection and interpretation, or the deci-
 136 sion to submit the work for publication.”) may be included. Funding agencies may

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140 “This research received no specific grant from any funding agency in the public, com-
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149 **tails.**

150 REFERENCES

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