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

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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.

Sections **must** be ordered as follows:

- Abstract
- Importance
- Keywords
- Introduction
- Results
- Discussion
- Materials and Methods
- Supplemental Material file list (where applicable)
- Acknowledgments
- References

Citations and References. This template uses BibTeX and natbib, so `\citep` and `\citert` such as (1), Avizian et al. (2) can be used as usual to produce the correct citation

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This is a draft manuscript, pre-submission

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F.A., S.A. and F.F.A. contributed equally to this work.



16 × 9
(Original size: 320 × 180 bp)

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.

41 style, and the reference list is generated automatically. In the reference list, references
42 are numbered in the order in which they are cited in the article (citation-sequence
43 reference system). In the text, references are cited parenthetically by number in
44 sequential order. Data that are not published or not peer reviewed are simply cited
45 parenthetically in the text.

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

52 “. . . the recent report of A. K. Datta and J. S. Pagano (*Antimicrob Agents*
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95 RESULTS

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

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

108 DISCUSSION

109 The Discussion section should provide an interpretation of the results in relation to
110 previously published work and to the experimental system at hand and should not
111 contain extensive repetition of the Results section or reiteration of the introduction. In

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

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

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MATERIALS AND METHODS

The Materials and Methods section should include sufficient technical information to allow the experiments to be repeated. When centrifugation conditions are critical, give enough information to enable another investigator to repeat the procedure: make of centrifuge, model of rotor, temperature, time at maximum speed, and centrifugal force ($\times g$ rather than revolutions per minute). For commonly used materials and methods (e.g., media and protein concentration determinations), a simple reference is sufficient. If several alternative methods are commonly used, it is helpful to identify the method briefly as well as to cite the reference. For example, it is preferable to state “cells were broken by ultrasonic treatment as previously described (9)” rather than to state “cells were broken as previously described (9).” This allows the reader to assess the method without constant reference to previous publications. Describe new methods completely and give sources of unusual chemicals, equipment, or microbial strains.

139 When large numbers of microbial strains or mutants are used in a study, include tables
140 identifying the immediate sources (i.e., sources from whom the strains were obtained)
141 and properties of the strains, mutants, bacteriophages, and plasmids, etc.

142 A method or strain, etc., used in only one of several experiments reported in the
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175 **TABLE S1**, XLSX file, 0.1 MB.

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177 **ACKNOWLEDGMENTS**

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196 REFERENCES

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