

1 **L^AT_EX** template for research and review papers

2 **in ASM journals**

3 **ABSTRACT**

4 Different article types have different formatting requirements and not all variations are
5 captured in this template. Refer to the [specific instructions for individual journals](#),
6 especially the pages on the Submission and Review Process and Article Types, to
7 understand the relevant formatting elements.

8 The Abstract (called Summary in CMR and MMBR reviews) should concisely
9 summarize the basic content of the paper without presenting extensive experimental
10 details. Because it will be published separately by abstracting services, it must be
11 complete and understandable without reference to the text. Avoid abbreviations and
12 references; if it is essential to include a reference, use the format shown under
13 [“Citations in abstracts” here](#). Limit of 250 words for full-length texts and research articles,
14 resource reports, methods and protocols, observations, reviews, and minireviews; 150
15 words for opinion/hypothesis papers; and 75 words for JVI gems and AAC short forms;
16 new-data letters do not have abstracts.

17 **IMPORTANCE**

18 Some article types require an Importance section, which provides a nontechnical
19 explanation of the significance of the study to the field. These types are full-length texts in
20 AEM, IAI, and JVI, research articles, resource reports, methods and protocols, and
21 observations. The limit is ≤ 150 words, except for full-length texts in IAI, where it should
22 be ≤ 120 words.

23 INTRODUCTION

24 The introductory portion should supply sufficient background information to allow
25 the reader to grasp the focus or rationale of your paper, understand the hypothesis you
26 address, and evaluate the results of the study without referring to previous publications
27 on the topic.

28 L^AT_EX files

29 Files from a project may be transferred directly to a selected ASM journal once for
30 initial manuscript submission. A compiled PDF alone is acceptable for initial submission
31 of a manuscript prepared in L^AT_EX; refer to the [Initial Submission Checklist](#) for more
32 details. At the revision stage, ASM requires all L^AT_EX files from a project to be uploaded.
33 On the journal submission site, the .tex file should be classified as a Manuscript Text File.
34 Other supporting files that appear in the package (i.e., .bib, .bst, .cls, .ldf, and .sty files)
35 should all be included and classified as L^AT_EX Support Files. Figures should be classified
36 as Figure files; see the [guidance for figures](#) for formatting requirements. At the revision
37 stage, when the manuscript record already exists, any files requiring modification must be
38 replaced. Contact [journal staff](#) with questions related to file conversion in the manuscript
39 record.

40 Sectioning commands

41 Use \section to get a first-level heading. You can use \subsection or just \textbf to get
42 a subheading. Further sectioning levels, such as \subsubsection, are ignored. First-level
43 heads (boldface, all caps) for the Materials and Methods, Results, and Discussion sections
44 are required only in full-length texts, research articles, resource reports, and methods and
45 protocols.

46 **Reviews, minireviews, and Gems**

47 Reviews, minireviews, and Gems may have specific length limits and, for some
48 journals, may be submitted by invitation only. Refer to the
49 [specific instructions for individual journals](#), especially the pages on the Submission and
50 Review Process and Article Types, for details. Instead of Materials and Methods, Results,
51 and Discussion, these papers typically have first-level heads (boldface, all caps)
52 delineating the desired major sections, as well as subsection heads as needed. Brief
53 biographies of the authors and author photos may be included at the end of the
54 manuscript (see the end of this template for more information).

55 **Citations and references**

56 This template uses BibTeX and natbib, so `\citep` and `\citel` such as
57 `\citep{caserta:etal:2012}`, `\citel{johnson:robinson:2016}` can be used as usual to produce
58 the correct citation style, and the reference list is generated automatically. In the
59 References list, references are numbered in the order in which they are cited in the article
60 (citation-sequence reference system). In the text, references are cited parenthetically by
61 number in sequential order. Data that are not published or not peer reviewed are simply
62 cited parenthetically in the text. For additional guidelines and examples, see [this page](#).

63 **MATERIALS AND METHODS**

64 The materials and methods section in primary-research papers should include
65 sufficient technical information to allow the experiments to be repeated.

66 **Math and equations**

67 Equations can be presented either inline in the text or as centered display equations,
68 with or without numbering:

69 `\begin{equation}`

```

70 \frac{\partial^2 \Phi}{\partial x^2} + \frac{\partial^2 \Phi}{\partial y^2} +
71 \frac{\partial^2 \Phi}{\partial z^2} =
72 \frac{1}{c^2} \frac{\partial^2 \Phi}{\partial t^2}
73 \end{equation}

```

74 Please note that display equations in the template may be rendered with a slightly
75 different presentation in the final published ASM journal article.

```

76 \begin{equation}
77 \int_0^\infty e^{-\alpha x^2} \mathrm{d}x =
78 \frac{1}{2} \sqrt{\int_{-\infty}^\infty e^{-\alpha x^2}}
79 \mathrm{d}x \int_{-\infty}^\infty e^{-\alpha y^2} \mathrm{d}y =
80 \frac{1}{2} \sqrt{\frac{\pi}{\alpha}}
81 \end{equation}

```

82 **RESULTS**

83 In the Results section, include the rationale or design of the experiments as well as the
84 results; reserve extensive interpretation of the results for the Discussion section. For
85 shorter research papers, these two sections can be combined under a single "RESULTS
86 AND DISCUSSION" first-level head.

87 **Figures**

88 On initial submission, figures and legends should be embedded in the text near where
89 they are cited, to assist review. Here is an example of a figure citation (Fig. 1).



FIG 1 This is an example figure with caption. Include each figure and its legend within the manuscript near where it is cited in the text.

At the modification stage, separate production quality digital files must be provided for figures, and legends should appear after the References section in the main text. See the [guidance for figures](#) for formatting requirements. All graphics submitted with modified manuscripts should be grayscale or in the RGB color mode and should be at their intended publication size.

Tables

The tabularx, booktabs, and siunitx packages are loaded by asm-article.cls; see `\autoref{tab:example}` for an example table. Use `\verb| \begin{fullwidth}... \end{fullwidth} |` in your table for the table to span the entire width of the page. Shading in the field of tables is allowed, to demonstrate relationships among data. You can use the `\verb| \columncolor |`, `\verb| \rowcolor |`, or `\verb| \cellcolor |` commands to do this: allowed color values are `\verb| black!20 |` and `\verb| black!30 |`. Here is an example (Table 1).

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 | |
| 526.277 | Craig Breedlove | Spirit of America | GE J79 | 10/15/64 | |
| 536.712 | Art Arfons | Green Monster | GE J79 | 10/27/65 | |
| 622.407 | Gary Gabelich | Blue Flame | Rocket | 10/23/70 | |
| 633.468 | Richard Noble | Thrust 2 | RR RG 146 | 10/4/83 | |
| 763.468 | Andy Green | Thrust SSc | RR Spey | 10/15/97 | |

^aTable adapted from https://www.sedl.org/afterschool/toolkits/science/pdf/ast_sci_data_tables_sample.pdf with permission.

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Authors are responsible for acquiring all necessary permissions related to reusing, adapting, or modifying copyrighted material from other sources and uploading these

110 permissions as additional files during manuscript submission or otherwise forwarding
111 them to ASM Journals staff. Proper attribution for any such material must be provided in
112 the manuscript.

113 **DISCUSSION**

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

118 **DATA AVAILABILITY STATEMENT**

119 Per ASM's [open data policy](#), a condition of publication in ASM journals is that authors
120 make data fully available and without restriction, except in rare circumstances. Data
121 availability will be confirmed prior to publication and must be provided during the
122 modification stage, if not before. Upon request, data must also be made available for peer
123 review. Include a data availability statement that contains a description of the data, name
124 of the repository, and digital object identifiers (DOIs) or accession numbers.

125 **CLINICAL TRIALS**

126 Add clinical trial registry name and number here, if applicable.

127 **ETHICS APPROVAL**

128 Provide an ethics approval statement for your study here, if applicable.

129 **Supplemental material**

130 If you have [supplemental material](#) intended for posting by ASM, cite it in the
131 manuscript but do NOT include the file(s) or legends in this template. Instead, in the
132 journal submission portal, upload supplemental material separate from the main
133 manuscript file(s) as either a single PDF (preferred) or individual files, with legends
134 included in said file(s). References related only to the supplemental material should be
135 included within the supplemental file(s) rather than in the References section of the main
136 paper.

137 **REFERENCES**

138 asm-sample.bib goes here.

139 @article{caserta:etal:2012,

140 author = {Caserta, E. and Haemig, H. A. H. and Manias, D. A. and Tomsic, J. and Grundy,
141 F. J. and Henkin, T. M. and Dunny, G.M.},

142 title = {\emph{In vivo} and \emph{in vitro} analyses of regulation of the

143 pheromone-responsive \emph{prgQ} promoter by the PrgX pheromone receptor protein},

144 journal = {Journal of Bacteriology},

145 year = {2012},

146 volume = {194},

147 pages = {3386--3394},

148 }

149 @article{johnson:robinson:2016,

150 author = {Johnson, J. and Robinson, V.R.},

151 title = {Cleavage of JPS-1 in cells infected with human rhinovirus},

152 journal = {mSystems},

153 year = {2016},

154 volume = {1},

155 pages = {e00001-15},

156 }


```
157 @article{winnick:etal:2005,  
158   title={How do you improve compliance?},  
159   author={Winnick, Sheldon and Lucas, David O and Hartman, Adam L and Toll, David},  
160   journal={Pediatrics},  
161   volume={115},  
162   pages={e718--e724},  
163   year={2005},  
164 }
```