

# 1 **L<sup>A</sup>T<sub>E</sub>X** template for research and review papers 2 **in ASM journals**

3 **First Author,<sup>1</sup> Second Author,<sup>2</sup> Third Author,<sup>3</sup> Fourth Author<sup>1,2\*</sup>**

4 <sup>1</sup>Division, Department, University Name, City, State or Province, Country

5 <sup>2</sup>Company Name, City, State or Province, Country

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9 First Author and Second Author contributed equally to this work. Author order was  
10 determined by XXXX.

11 Third Author and Fourth Author are co-senior authors.

## 12 **ABSTRACT**

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

17 The Abstract (called Summary in CMR and MMBR reviews) should concisely  
18 summarize the basic content of the paper without presenting extensive experimental  
19 details. Because it will be published separately by abstracting services, it must be  
20 complete and understandable without reference to the text. Avoid abbreviations and  
21 references; if it is essential to include a reference, use the format shown under  
22 [“Citations in abstracts” here](#). Limit of 250 words for full-length texts and research articles,

23 resource reports, methods and protocols, observations, reviews, and minireviews; 150  
24 words for opinion/hypothesis papers; and 75 words for JVI gems and AAC short forms;  
25 new-data letters do not have abstracts.

## 26 **IMPORTANCE**

27 Some article types require an Importance section, which provides a nontechnical  
28 explanation of the significance of the study to the field. These types are full-length texts in  
29 AEM, IAI, and JVI, research articles, resource reports, methods and protocols, and  
30 observations. The limit is  $\leq 150$  words, except for full-length texts in IAI, where it should  
31 be  $\leq 120$  words.

## 32 **INTRODUCTION**

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

## 37 **L<sup>A</sup>T<sub>E</sub>X files**

38 Files from a project may be transferred directly to a selected ASM journal once for  
39 initial manuscript submission. A compiled PDF alone is acceptable for initial submission  
40 of a manuscript prepared in L<sup>A</sup>T<sub>E</sub>X; refer to the [Initial Submission Checklist](#) for more  
41 details. At the revision stage, ASM requires all L<sup>A</sup>T<sub>E</sub>X files from a project to be uploaded.  
42 On the journal submission site, the .tex file should be classified as a Manuscript Text File.  
43 Other supporting files that appear in the package (i.e., .bib, .bst, .cls, .ldf, and .sty files)  
44 should all be included and classified as L<sup>A</sup>T<sub>E</sub>X Support Files. Figures should be classified  
45 as Figure files; see the [guidance for figures](#) for formatting requirements. At the revision  
46 stage, when the manuscript record already exists, any files requiring modification must be

47 replaced. Contact [journal staff](#) with questions related to file conversion in the manuscript  
48 record.

## 49 **Sectioning commands**

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

## 55 **Reviews, minireviews, and Gems**

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

## 64 **Citations and references**

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

## 72 MATERIALS AND METHODS

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

### 75 Math and equations

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

```
78 \begin{equation}
79 \frac{\partial^2 \Phi}{\partial x^2} + \frac{\partial^2 \Phi}{\partial y^2} +
80 \frac{\partial^2 \Phi}{\partial z^2} =
81 \frac{1}{c^2} \frac{\partial^2 \Phi}{\partial t^2}
82 \end{equation}
```

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

```
85 \begin{equation}
86 \int_0^\infty e^{-\alpha x^2} \mathrm{d}x =
87 \frac{1}{2} \sqrt{\int_{-\infty}^\infty e^{-\alpha x^2}}
88 \mathrm{d}x \int_{-\infty}^\infty e^{-\alpha y^2} \mathrm{d}y =
89 \frac{1}{2} \sqrt{\frac{\pi}{\alpha}}
90 \end{equation}
```

## 91 RESULTS

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

## 96 **Figures**

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



99

**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.

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

## 105 **Tables**

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

**TABLE 1** Automobile land speed records (GR 5-10)<sup>a</sup>

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	

114 <sup>a</sup>Table adapted from [https://www.sedl.org/afterschool/toolkits/science/pdf/ast\\_sci\\_data\\_tables\\_sample.pdf](https://www.sedl.org/afterschool/toolkits/science/pdf/ast_sci_data_tables_sample.pdf) with permission.  
 115

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 118 adapting, or modifying copyrighted material from other sources and uploading these

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120 them to ASM Journals staff. Proper attribution for any such material must be provided in  
121 the manuscript.

## 122 **DISCUSSION**

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

## 127 **ACKNOWLEDGMENTS**

128 Statements regarding sources of direct financial support (e.g., grants, fellowships,  
129 scholarships, etc.), personal assistance, or contributor roles appear in this section.

130 Use `\begin{acknowledgments}...\end{acknowledgments}` environment to place your  
131 acknowledgments section, commands to do this: output will not come in the pdf for  
132 double blind mode.

## 133 **DATA AVAILABILITY STATEMENT**

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

140 **CLINICAL TRIALS**

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

142 **ETHICS APPROVAL**

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

144 **FUNDING**

145 Add funding info here: funder name, grant number, and name of recipient author.

146 Use `\begin{funding}... \end{funding}` environment to place your funding section,  
147 commands to do this: output will not come in the pdf for double blind mode.

148 **CONFLICTS OF INTEREST**

149 State all conflicts of interest here or say, “The authors declare no conflict of interest.”

150 Use `\begin{conflictsinterest}... \end{conflictsinterest}` environment to place your  
151 conflicts of interest section, commands to do this: output will not come in the pdf for  
152 double blind mode.

153 **Supplemental material**

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



161 **REFERENCES**

162 asm-sample.bib goes here.

163 @article{caserta:etal:2012,

164 author = {Caserta, E. and Haemig, H. A. H. and Manias, D. A. and Tomsic, J. and Grundy,

165 F. J. and Henkin, T. M. and Dunny, G.M.},

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

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

168 journal = {Journal of Bacteriology},

169 year = {2012},

170 volume = {194},

171 pages = {3386--3394},

172 }

173 @article{johnson:robinson:2016,

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

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

176 journal = {mSystems},

177 year = {2016},

178 volume = {1},

179 pages = {e00001-15},

180 }

181 @article{winnick:etal:2005,

182 title={How do you improve compliance?},

183 author={Winnick, Sheldon and Lucas, David O and Hartman, Adam L and Toll, David},

184 journal={Pediatrics},

185 volume={115},

186 pages={e718--e724},

187 year={2005},

188 }

## 189 **AUTHOR BIOGRAPHIES**

190 Author biographies ( $\leq 150$  words each) and photos (black and white, passport size)  
191 can be inserted here. They are required for reviews in CMR and MMBR but optional for  
192 minireviews in other journals and Gems in JVI. Do not include them for primary-research  
193 articles. See the specific instructions for individual journals for more information.

194 Use `\begin{authorbios}...\end{authorbios}` environment to place your author  
195 biographies section, commands to do this: output will not come in the pdf for double  
196 blind mode.