

# INSTRUCTIONS FOR THE PREPARATION OF MANUSCRIPTS

For the Annual Reviews of:

<i>Anthropology</i>	<i>Law and Social Science</i>
<i>Astronomy and Astrophysics</i>	<i>Linguistics</i>
<i>Cancer Biology</i>	<i>Marine Science</i>
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Revised February 2020

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## MANUSCRIPT SUBMISSION CHECKLIST

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- Tables: either all at end of article, following Literature Cited, or submitted together in a separate editable file
- Literature Cited: see correspondence from your Production Editor for the maximum number of references permitted; references should be formatted per journal specifications (see sections of this handbook, below, for details)
- PDF file of final manuscript, including all figures, tables, references, and optional elements (listed below), in addition to the editable files

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- Future Issues list: note where research may be headed (as many as 8), in complete sentences; insert above Acknowledgments and/or Literature Cited section
- Reference Annotations: brief (15 words maximum) explanation of citations' importance (as many as 10); insert below Literature Cited section
- Related Resources list: up to 10 references, not listed in Literature Cited, to materials (websites, books, videos) that may be of interest to readers; insert below Literature Cited section
- Sidebar (50 words minimum, 200 words maximum) briefly discussing a fascinating adjacent topic; insert below Literature Cited section, but be sure to call out the sidebar in text; it will be typeset near the section containing the callout

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Each manuscript must be originally written for publication in an Annual Reviews journal.

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**ITALICS** Indicate italics using an italic type style. Avoid the use of underlining.

Use italics for

- Scientific names of bacteria and protozoa
- Genera, species, and subspecific taxa

- In chemical names, *p*, *o*, *m*, *n*, *cis*, *sec*, *sic*, *trans*, *syn*
- Genes, genotypes, loci, markers, mutants, alleles, operons
- Mathematical variables

Do not use italics for

- Emphasis
- Common foreign words such as *ad hoc*, *a priori*, *in vivo*, *in vitro*
- Abbreviations such as *sp.*, *spp.*, *var.*
- Names of taxa of rank higher than genus
- Generic names used as adjectives
- Names of microorganisms used colloquially (e.g., *actinomycetes*)
- Strain designations
- Names of cells, phages, hosts, phenotypes
- Abbreviations for subatomic particles
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Number all pages consecutively and arrange in this order: title page, text, literature cited, article components (see p. 9), figure captions, tables, and figures.

Place the title page on a separate sheet and include

- title of article
- name(s), affiliation(s), and email address(es) for all authors
- shortened running title (40 characters max)
- Corresponding Author contact information

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Detailed instructions for citing sources and preparing your Literature Cited section are included below. Here we describe some general guidelines for paraphrasing or quoting from others' work:

- When describing the findings or theories of others, always cite source publications in close proximity to your discussion.
- Omnibus citations at the beginning of an article are sometimes appropriate, but they should not be used as substitutes for explicit citations in the relevant sentences or paragraphs of text.
- The original sources of novel technical terminology, or uniquely apposite words or

phrases recently introduced into the literature, should be cited, unless these terms already have become established in the common vocabulary of the field.

- If you wish to use a sentence, or an essential part thereof, from another article, always set it off in quotation marks and cite its source, preferably including the page number from which the quotation was taken. However, one should keep the number of direct quotations to a minimum.
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- Abstract: 150 words maximum, except for *Astronomy and Astrophysics*, which allows 225 words inclusive of 3–5 bullet points describing findings)
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- Future Issues list: note where research may be headed (as many as 8), in complete sentences; insert above the Acknowledgments and/or Literature Cited section
- Reference Annotations: brief (15 words maximum) explanation of citations' importance (as many as 10); insert below the Literature Cited section
- Related Resources list: up to 10 references, not listed in Literature Cited, to materials (websites, articles, animations) that may be of interest to readers; insert below the Literature Cited section
- Sidebar (50 words minimum, 200 words maximum) briefly discussing a fascinating adjacent topic. Please give the sidebar a title and insert it below the Literature Cited section, but be sure to call out the sidebar in text; it will be typeset near the section containing the callout. The sidebar cannot contain figures or tables.

Examples on the next pages show how these components will be laid out in your article.

ARTICLE COMPONENTS

Sidebar: highlight a related topic (text only; up to 200 words)

EXCIMERS, EXCIPLEXES, AND EXCITONS

As discussed elsewhere (3, 115), it is sometimes mistakenly assumed that an electronically excited nucleobase encounters a second nucleobase. An excimer state with strong charge transfer character (70) independent of how it is formed in aromatic crystals and photopolymers (70) in which diffusion is not observed. Excimers in this case can be formed from different initial DNA exciplexes can also be called interbase charge transfer states (65), keeping configuration interaction with the excitonic state formed by the interaction between bases.

that pico- and nanosecond timescale emission is seen in resolved emission experiments could not determine whether major or a minor decay channel. Crespo-Hernández et al. show that most excited states in single-stranded DNA are This established that most relaxation occurs faster than emission experiments (69) and slower than the femtosecond monomers (Section 2.1).

Crespo-Hernández et al. (60) assigned the long-lived oligonucleotides to intratranded excimers in which excitations (see the sidebar). This conclusion is supported by the excellent between the long-time transient absorption signals for site resolved emission signals measured by Plessov et al. (69) for emission spectra from the 15-mer (69) clearly show the best a hallmark of excimer/exciple states (70). In fact, excimer/ in DNA photophysics, having been observed in DNA di- in the 1960s (71).

Transient absorption experiments in other laboratories lived excited states in DNA oligomers (61, 62). Kwok et al. (dA)<sub>20</sub> by femtosecond transient absorption and the femtosecond. On the basis of red-shifted emission signals that absorption signals, these authors also assigned the long-lived they proposed that two distinct excimers are formed with lifetime is in reasonable agreement with the (dA)<sub>n</sub> lifetime (60). Kwok et al. (61) assign the long-lived component to a that it involves more than two bases as opposed to the localized on just two bases. Experimental evidence that spans more than two bases was never presented. Kwok's localized excitation progressively delocalizes with time is a dichromophoric system. Experiments by Takaya et al. (65) the long-lived states in adenine tracts are localized on just

Excimer/exciple: an excited electronic state with substantial charge transfer character involving two identical (excimer) or different (exciple) molecules

3.3. Base Pairing Does Not Quench the Long-Lived Excited States in DNA Strands

Base pairing in solvated DNA is usually accompanied by a gate excited states in DNA strands joined by hydrogen bonds

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Terms and Definitions: highlight major terms and abbreviations used in text (as many as 20, 20 words each)

1. INTRODUCTION

Electronic excitation of DNA by solar ultraviolet (UV) light can produce harmful photoproducts such as the thymine dimer. Excitation is efficient because of the substantial UV-absorption cross sections of the DNA nucleobases: adenine, guanine, cytosine, and thymine (Figure 1). The vast majority of excitations do not initiate photochemical reactions as evidenced by the quantum yields of photolysis formation, which are generally much less than 1%. The altered structures and base-pairing properties of photoproducts can interfere with the work of polymerases and disrupt normal cellular processing of DNA. This interference can lead to mutations, genomic instability, and carcinogenesis (1). In organisms exposed to solar UV light, DNA constantly accrues photochemical damage that must be continually repaired. Disruption of the equilibrium between damage and

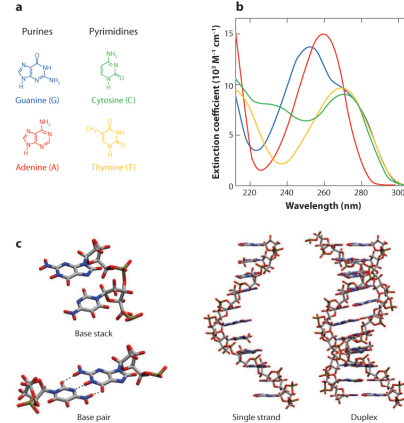


Figure 1 (a) Chemical structures and (b) UV absorption spectra of the DNA bases. (c) Basic assemblies of nucleobases. Structures were drawn using the VMD software (116).

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First-level heading (unnumbered or numbered)

Figure (see Author Graphics Guide for instructions)

Second-level heading (unnumbered or numbered)

3.3. Stellar Sources of Presolar Grains and Astrophysical Constraints from Presolar Grains

Every presolar stardust grain is a solid piece of stellar matter that condensed at time in a specific star. Because the actual parent stars have been dead for eons, measured isotopic compositions with astronomical observations and prediction models are required to identify the type of stellar source (or class of isotopically similar grains). Analysis and interpretation of presolar iterative approach; once a stellar source for a grain is identified on the basis of one ratio, additional isotopic data can be used to refine models and improve understanding within that type of star, or alternatively in some cases, these data indicate that assignment of source was incorrect. The origin of some types of presolar grain of SiC grains with <sup>13</sup>C/<sup>12</sup>C ratios lower than 10 is still unresolved, largely on the theoretical understanding of potential sources. The classification and source presolar O-rich grains and SiC grains are illustrated in Figures 4b and 5, respectively of isotopic compositions for materials that formed in the Solar System are indicative of the radically anomalous nature of the presolar grains. These plots are analogous to the Hertzsprung-Russell diagram used to classify stars and identify associated with different physical properties and stages of evolution. Examples of provide new astrophysical information about their sources are discussed below.

3.3.1. Asymptotic giant branch stardust. As seen in Figures 4b and 5, a major and C-rich presolar grains in extraterrestrial materials (excluding the ambiguous are believed to have originated in asymptotic giant branch (AGB) stars, low- to mid- (1–8 M<sub>⊙</sub>) stars in very late stages of evolution. The AGB phase follows the main star star is fueled by core hydrogen (H) burning, the Red Giant phase when the envelope is modified by the first dredge-up, mixing of deep material that experienced p and the brief phase of core He burning. AGB stars are powered by alternating and He shells that overlay an electron-degenerate core of C and O, which will a white dwarf remnant. These stars have large convective envelopes and strong driven by condensation of dust in the cooling outer portions. Periodic mixing dredge-up from the deep burning shells changes the envelope composition, synthesized material, including <sup>13</sup>C and heavy elements made by the s-process capture (Käppeler et al. 1990). Thus, although most or all stars start out with rich, the third dredge-up gradually increases the C/O ratio until it exceeds unit has a profound effect on dust chemistry: When C/O < 1, diagnostic infrared indicate O-rich phases such as silicates and oxides are present, whereas in AGB-1, observations indicate the presence of phases such as SiC and elemental C.

Because AGB stars are the primary producers of C and s-process elements in also prodigious producers of dust to the interstellar medium (ISM) (Kemper et al. are of great astrophysical importance, and presolar grain studies provide important on a range of relevant astrophysical issues. For example, whereas most presolar

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Third-level heading (unnumbered or numbered)

Table 1 Summary of retail price changes

Definition of restructured	Status	Average retail price (USD)			Percent change	
		1997	2007	2012	1997–2007	2007–2012
Power in the Public Interest definition	Not restructured	5.89	7.44	8.72	0.21	0.15
	Restructured	8.96	12.53	12.35	0.29	–0.01
At least 40% independent power producers in 2012	Not restructured	5.67	7.23	8.57	0.22	0.16
	Restructured	8.83	11.99	11.95	0.26	0.00

Retail price data are from US Energy Information Administration (EIA) form 861, which reports sales and revenues by utility.

Table (see page 12 for instructions)

first measure is the one used in a study by Showalter (2007) for Power in the Public Interest that is cited in the *New York Times* article (Johnston 2007). This definition excludes from the restructured category states such as Illinois and Pennsylvania, which by 2012 have almost all of their energy provided from nonutility sources. As an alternative measure, we assign states to the restructured category if they had more than 40% of their energy provided by nonutility sources in 2012.<sup>16</sup>

From Table 1, one can see that at this level of analysis, the definition of restructured makes only a small difference. The time period examined, however, makes an enormous difference as rates in restructured states increased at a pace nearly 50% higher than those in nonrestructured states between 1997 and 2007 but have actually declined slightly since 2007. Average rates in states that did not restructure have continued to increase since 2007, although at a slightly lower pace than between 1998 and 2007. Overall, there is almost no difference in the change in average rates for the two groups over the full sample from 1998 to 2012.

Figure 6 illustrates the annual levels of rates in restructured and nonrestructured states using our generation-based definition, along with the national average citygate natural gas price. Restructured states experienced higher rates during the 1990s, a major factor in their election to adopt restructuring. The gap between traditionally regulated and restructured states narrows around 1998, reflecting the impact of legislation that required immediate rate reductions to accompany restructuring in several states. Since that time, rates in restructured states more closely follow the trajectory of gas prices up during the early 2000s and back down since then.

To further test this relationship among natural gas prices, restructuring, and electricity rates, we estimate the following regression on state-level annual changes in electricity prices and citygate natural gas prices:

$$\Delta \text{Elec}_{i,t} = \alpha + \beta_1 \text{FractionPP}_{i,t} + \beta_2 \Delta \text{NG}_{i,t} + \beta_3 \text{FractionPP}_{i,t} \times \Delta \text{NG}_{i,t} \quad 1.$$

where  $\Delta \text{Elec}_{i,t} = \ln(\text{Rate}_{i,t}) - \ln(\text{Rate}_{i,t-1})$  and  $\Delta \text{NG}_{i,t} = \ln(\text{NG}_{i,t}) - \ln(\text{NG}_{i,t-1})$  are the annual changes in log state average electricity rates and log state average

Equation (numbered when referred to in text)

<sup>16</sup>The *New York Times* article lists the restructured states as California, Connecticut, Delaware, Maine, Maryland, Massachusetts, Michigan, Montana, New Hampshire, New Jersey, New York, Rhode Island, and Texas and the District of Columbia (Johnston 2007). Our generation-based definition puts California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Montana, New Hampshire, New Jersey, New York, Ohio, and Pennsylvania into the restructured category.

Footnote

## ARTICLE COMPONENTS (CONTINUED)

Summary Points list: highlight the central points of your review (as many as 8); items should be in complete sentences

Future Issues list: note where research may be headed (as many as 8); items should be in complete sentences or questions

## SUMMARY POINTS

1. DNA- and RNA-associated autoantigens activate autoreactive B cells in vitro through a mechanism that depends on the BCR and TLR9 and TLR7, respectively. The response to RNA autoantigens is enhanced by type I IFN, presumably through upregulation of TLR7.
2. DNA- and RNA-containing ICs activate DCs through a mechanism that depends on uptake through FcγRs and TLR9 and/or TLR7. IC-activated pDCs produce high levels of IFN-α that can promote the activity of many of the effector mechanisms associated with SLE and other systemic autoimmune diseases.
3. TLR9 deficiency in vivo leads to decreased anti-dsDNA antibody production, but effects on end organ disease and survival are variable. TLR9<sup>-/-</sup> 56R FcγRII<sup>-/-</sup> mice do not make pathogenic IgG2a and IgG2b anti-DNA autoantibodies; TLR9<sup>-/-</sup> lpr and Al5 mice develop increased autoantibody titers for RNA-associated autoantigens and develop more severe clinical features of SLE.
4. TLR7 deficiency in vivo leads to decreased titers of RNA-reactive autoantibodies. TLR7<sup>-/-</sup> lpr mice develop clinical features of SLE that are slightly less severe than the TLR7<sup>+/+</sup> control group.
5. The Yaa mutation results from duplication of a 4 Kb segment of the X chromosome that includes TLR7. FcγR<sup>-/-</sup> Yaa mice and Sle1.Yaa mice make elevated titers of IgG autoantibodies reactive with RNA autoantigens and develop more severe features of SLE than their non-Yaa littermates.

## FUTURE ISSUES

1. How will the combined effects of TLR7 and TLR9 deficiency influence disease manifestations in both lpr and non-lpr models of SLE and what will be the effect of TLR7/9 blockade on human disease?
2. Do gene products other than TLR7 contribute to the Yaa phenotypes?
3. How do DNA-/RNA-containing ICs affect FcγR<sup>+</sup> TLR7<sup>+</sup> and/or TLR9<sup>+</sup> cell populations other than pDCs? Will RNA-containing ICs activate FcγR/TLR8-expressing cells and what will be the consequences of this activation?
4. What other PRRs are used by autoantigens to elicit immune system activation?

## DISCLOSURE STATEMENT

U.S. patent application 10/487,885 entitled Method and Composition for Treating Immune Complex-Associated Disorders and corresponding foreign applications have been licensed and provide royalty income.

## ACKNOWLEDGMENTS

We apologize in advance to all the investigators whose research could not be appropriately cited owing to space limitations. We extend a special thanks to our many collaborators for thoughtful

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Reference style and reference annotations: explain the special importance of selected references from Literature Cited (as many as 10)

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Reveals that PARP inhibition causes synthetic lethality in BRCA2-deficient tumors (also see Bryan et al. 2005).

Provides a report of the Phase II trial that led to US FDA approval of pembrolizumab treatment for estrogen receptor-positive breast cancer.

Establishes that by blocking mitotic exit by targeting the APC subunit, CDC20 bypasses mitotic slippage and triggers apoptosis.

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## RELATED RESOURCES

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**Table 1 Values of muscle-fiber length and muscle physiological cross-section area reported in the literature**

Muscle	Muscle-fiber length (cm)				Muscle PCSA <sup>c</sup> (cm <sup>2</sup> )			
	Wickiewicz <sup>a</sup>	Friederich <sup>a</sup>	Ward <sup>a</sup>	Tate <sup>b</sup>	Wickiewicz <sup>a</sup>	Friederich <sup>a</sup>	Ward <sup>a</sup>	Tate <sup>d</sup>
Gluteus maximus (superior)	NA <sup>e</sup>	10.8	NA	NA	NA	17.4	NA	NA
Gluteus maximus (middle)	NA	13.0	NA	NA	NA	14.6	NA	NA
Gluteus maximus (inferior)	NA	13.9	NA	NA	NA	14.1	NA	NA
Gluteus medius (anterior)	NA	4.7	NA	NA	NA	19.0	NA	NA
Gluteus medius (middle)	NA	6.8	NA	NA	NA	13.3	NA	NA
Gluteus medius (posterior)	NA	6.0	NA	NA	NA	15.4	NA	NA
Vastus medialis	7.0	7.8	9.7	NA	21.1	41.2	20.6	46.1
Vastus intermedius	6.8	7.6	9.9	NA	22.3	49.6	16.7	54.3
Vastus lateralis	6.6	8.0	9.9	NA	30.6	40.4	35.1	69.9
Soleus	2.0	3.0	4.4	NA	58.0	122.2	51.8	NA
Gastrocnemius (lateral)	5.1	6.1	5.9	NA	NA	11.5	9.7	23.9
Gastrocnemius (medial)	3.5	3.9	5.1	NA	32.4	33.8	21.1	43.7

<sup>a</sup>Data reported by Wickiewicz (51), Friederich (49), and Ward (50) were obtained by dissection of cadaver specimens.

<sup>b</sup>Data reported by Tate (59) were obtained from magnetic resonance imaging performed on living subjects. Muscle-fiber lengths were not measured by Tate (59).

<sup>c</sup>Abbreviation: PCSA, physiological cross-sectional area.

<sup>d</sup>Muscle PCSA was calculated using muscle-fiber lengths reported by Ward (50).

<sup>e</sup>Abbreviation: NA, not applicable.

Include additional information in footnotes keyed to the title, heading, or entry of the table as appropriate, a, b, c, etc.

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US Food Drug Admin. 2004. *Innovation or stagnation: challenge and opportunity on the critical path to new medical products*. White Pap., US Food Drug Admin., Washington, DC.  
<http://www.fda.gov/oc/initiatives/criticalpath/whitepaper.html>

Specific webpages should cite, at a minimum, the author or organization, year, page title, website (in italics), and URL. If no specific year of posting or last update is included, use the current year.

Calif. Energy Comm. 2016.  
*Hydroelectric power in California*.  
*California Energy Commission*.

<http://www.energy.ca.gov/hydroelectric>

Taussig M. 2015. *Seeds of time*.  
*Flatbread Society*.  
<http://www.flatbreadsociety.net/stories/30/seeds-of-time>

#### SPECIFIC VERSUS GENERAL SOURCES ON WEBSITES

If you wish to cite a specific source that is housed on a website or that is a pamphlet or report that is downloadable only, these sources should be cited in the Literature Cited section according to the instructions described above. For example:

Kennedy E, Dodd C, Clinton HR. 2005.  
*Letter to US Dep. Labor*, Apr. 12.  
<http://www.nationalpartnership.org/site/DocServer/FMLASenateLettertoDOL.pdf?docID=963>

In contrast, to reference a general website that might be a good source of information for your reader, include it in text only, not in the Literature Cited section. For example:

A valuable clearinghouse of information on the passage of the Family and Medical Leave Act is the online library at the National Partnership for Women & Family website (<http://www.nationalpartnership.org>).

Because webpages and online documents often disappear or move to new URLs, we encourage you to refer only to URLs that you expect to be stable and accessible to readers of your article for many years to come, and to provide enough information in each reference that readers can locate the cited material even if the URL stops working.

You may wish to host material on unstable websites as Supplemental Material (see p. 15). Also, URLs can be included in the Related Resources section of your review (see p. 9).

## NOMENCLATURE

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### GENERAL NOMENCLATURE

The primary nomenclature manual for Annual Reviews is *Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers* (8th edition). Other authoritative references are listed below.

**BACTERIOLOGICAL NAMES** Use the *List of Bacterial Names with Standing in Nomenclature* (<http://www.bacterio.cict.fr>) and the *Approved Lists of Bacterial Names* as guides for validly published scientific names of bacteria and archaea. Use *Bergey's Manual of Determinative Bacteriology* and *Index Bergeyana* as guides for names of unknown bacteria.

**INORGANIC, ORGANIC, AND BIOCHEMICAL NOMENCLATURE** We accept all abbreviations, symbols, and trivial names in the rules of the IUPAC-IUB.

**DRUGS** Use nonproprietary (generic) names for drugs. When the name is relatively unfamiliar, follow its first use with the trade name. *Entomology, Medicine, Nutrition, Pathology: Mechanisms of Disease, and Pharmacology and Toxicology* require the use of ® as a superscript on first use of a trade name.

**EXCEPTION:** In *Psychology*, the terms adrenaline and noradrenaline (not capitalized) are permissible in place of epinephrine and norepinephrine.

**GENETICS** The 8th edition of *Scientific Style and Format* covers all organisms for which they have been able to obtain rules and guidelines (<http://www.councilscienceeditors.org/publications/resources.cfm>). Also see the section on italics in this handbook.

**GENUS-SPECIES SCIENTIFIC NAMES** Spell out the full generic and specific names on first use: e.g., *Escherichia coli*. Thereafter, the genus name should be abbreviated to the first letter (*E. coli*). If the name appears frequently and may be confused with another genus whose first letter is

the same, spell both names out every four or five pages.

**INSECTS** Use common and scientific names approved by the Entomological Society of America (<http://www.entsoc.org/common-names>) whenever possible. Authors from non-North American countries may use common names current in their countries. In general, do not capitalize the first letter of a common name unless a proper name is included.

### ABBREVIATIONS AND SYMBOLS

Use abbreviations and symbols sparingly and only if terms are repeated frequently. Define all but the obvious standard symbols and abbreviations when they first appear in text (a list of standard abbreviations and units is provided in Appendix B on p. 26). Avoid using nonstandard abbreviations in titles and headings.

Chemical and graphic formulas may be used (see next section) and are set in roman type. Use U<sup>3+</sup> rather than U<sup>+++</sup>. Atomic weights of isotopes are to be indicated by superscripts preceding the element symbol: <sup>14</sup>C, [<sup>14</sup>C]urea.

Use abbreviations of units of measure only when preceded by a numeral: 38 mm (but, a few millimeters).

Use the same abbreviations for units of measure when singular and plural, without periods or apostrophes except in special cases noted in Appendix B. Verbs must agree in number with the quantity: 1 mm is, 3 mm are.... Use a space between the numeral and the unit of measure, except with degree, percent, and Svedberg (5°C, 10%, 6S).

Spell out genus names upon first usage: The name may be abbreviated to its first letter afterward when used in combination with the species name. Never abbreviate generic names when used alone; also, do not abbreviate the species name when a subspecies is designated. For example, use *B. thuringiensis israelensis*, not *B. t. israelensis*.

## EQUATIONS AND FORMULAS

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### SOFTWARE

If preparing your manuscript in Microsoft Word, you may use either MathType or the Word Equation Editor to create your equations. Word equations will be converted to MathType as part of the manuscript formatting and copyediting step.

### LAYOUT

Equations and formulas should be in complete sentence form; include punctuation after displayed equations/formulas.

Set out long equations/formulas on a separate line or lines.

Number displayed equations/formulas if referred to later in the text. Use a single sequence of Arabic numerals, placed to the right of the equation/formula.

Complicated chemical formulas that cannot be typeset on one or two lines must be submitted as graphics (see section on figures); assemble these at the end of the text, preferably grouped together on one page.

Avoid the vertical placing of side chains. Use the following format, indented from the left margin:

CH-C(:CH<sub>2</sub>)-CH<sub>2</sub>-CH(CH<sub>3</sub>)CH<sub>2</sub>-CH:CH-COOH

### REFERRING TO EQUATIONS

Refer to all numbered equations as Equation 1, Equation 2, etc.; do not use parentheses around the number or designators other than “Equation” (such as “System 3” or “Problem 1”).

### SPECIAL CHARACTERS

Use the multiplication ex (×) in numerical and vector products only. In all other cases, use the multiplication (centered) dot.

Use the slash to mean “per”; write km/s, not km s<sup>-1</sup>. In arrays, use brackets to indicate a determinant and vertical lines for a matrix.

Observe the following order for brackets: {[()]}; do not use parentheses within parentheses.

Use boldface roman rather than arrows for vectors. Use italics for variables, but subscript labels that are not themselves variables should be in roman. Numerals, symbols for chemical elements, and functions such as ln, exp, and cos should not be italicized.

Define uncommon symbols on first use for the nonspecialist.

Distinguish superscripts to superscripts and subscripts to subscripts from double superscripts and double subscripts (e.g., e<sup>a<sup>2</sup></sup> versus e<sup>a<sup>2</sup></sup>, n<sub>H<sub>3</sub></sub> versus n<sub>H<sub>3</sub></sub>).

Align subscripts with superscripts when appropriate to do so.

## SUBMITTING YOUR MANUSCRIPT FILES

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### ***ONLINE SUBMISSION INSTRUCTIONS***

We encourage invited authors to submit their manuscripts online. Your Production Editor will send you the URL in advance of your manuscript due date.

### **HELPFUL NOTES FOR ONLINE SUBMISSION**

- If possible, please compress each file using, for example, WinZip, Stuffit, or GZip software. Then upload.
- Whenever uploading more than five files, compress all contents into a single folder and then upload.
- Always include a PDF file of your final manuscript, including figures and tables, in addition to separate, editable files.
- If uploading revisions, please again include a PDF file of revised text, figures, and/or tables.

### ***EMAIL AND FTP SUBMISSION OPTIONS***

- Files may be attached to an email message and sent directly to your Production Editor.
- Manuscript files must be compatible with Microsoft Word's ".doc(x)" or ".rtf" format. Mathematically complex articles may be submitted in LaTeX.
- A PDF of the final submitted version, including all figures and tables, must accompany all submissions (but does not take the place of editable text and figure files).
- An FTP upload is also an option. Please contact your Production Editor for more information.

## APPENDIX A: LITERATURE CITED EXAMPLES

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References appear as follows (note patterns of abbreviation, capitalization, spacing, and punctuation):

### ABSTRACT

Josen LA, Tollis TM, Anthony A. 1993. Finding solutions to sequences. *Fed. Proc.* 32(3):855 (Abstr.)

### ARTICLE IN A JOURNAL WITH TITLE OF ARTICLE

Roberts DF. 2001. A demographic study of a Dinka village. *Hum. Biol.* 28:323-49  
 Wilmington SR, Matouschek A. 2016. An inducible system for rapid degradation of specific cellular proteins using proteasome adaptors. *PLOS ONE* 11:e0152679

### ARTICLE IN A JOURNAL WITHOUT TITLE OF ARTICLE

Berson SA, Balow RS. 1999. *Am. J. Med.* 50:623-29

[use only for *Astronomy and Astrophysics*, *Condensed Matter Physics*, and *Nuclear and Particle Science*]

### ARTICLE IN A JOURNAL IN PRESS

Park IJK, Wang L, Williams DR, Alegría M. 2017. Coping with racism: moderators of the discrimination-adjustment link among Mexican-origin adolescents. *Child Dev.* In press. <https://doi.org/10.1111/cdev.12856>

Brown MS, Radhakrishnan A, Goldstein JL. 2018. Retrospective on cholesterol homeostasis: the central role of Scap. *Annu. Rev. Biochem.* 87:In press. <https://doi.org/10.1146/annurev-biochem-062917-011852>

### ARTICLE IN A JOURNAL WITH AN ERRATUM

Wilson P. 2001. Title of article. *J. Mol. Biol.* 229:1175-83. Erratum. 2001. *J. Mol. Biol.* 238:639

### BOOK REFERENCE: WHOLE BOOK CITED

Seaver W. 1995. *Luck's Lady: The Theory of Probability*. Garden City, NY: Doubleday

Bronson D, Gerber RA, eds. 2003. *Handbook of Biochemistry*, Vols. 1, 2. San Francisco: Freeman. 2nd ed.

Lerner RM, ed. 2003. *Handbook of Child Psychology*, Vol. 1: *Theoretical Models of Human Development*. New York: Wiley

### BOOK REFERENCE: INDIVIDUAL CHAPTER CITED

Bornstein L. 2002. Recombination in bacteria. In *Human Genetics*, Vol. 1, ed. R Johnston, E Smith, pp. 65-73. London/New York: Macmillan

New MI, Schram P. 2000. Congenital adrenal hyperplasia. In *Current Diagnosis*, ed. RB Conn, WZ Borer, JW Snyder, pp. 50-75. Philadelphia: Saunders

### BULLETIN

Price GK, Lin W, Falck-Zepeda J. 2003. *Distribution of market benefits from adopting biotech crops*. Tech. Bull. 1906, US Dep. Agric., Washington, DC

## DATABASE

Natl. Cancer Inst. 2012. *Adult primary liver cancer treatment*. PDQ: NCI's Comprehensive Cancer Database, Bethesda, MD, updated Feb. 23.  
<http://cancer.gov/cancertopics/pdq/treatment/adult-primary-liver/HealthProfessional>

World Bank. 2012. *Little Green Data Book*. Washington, DC: World Bank.  
<https://openknowledge.worldbank.org/handle/10986/12266>

## MAGAZINE/NEWSPAPER/RADIO ARTICLE

Jones A. 2004. Title of article. *New York Times*, Jan. 15, p. A6

Ledge J. 1999. Spanish Signs. Atlanta, GA, *WABE Radio Broadcast*, Mar. 15

[do not repeat year if year is the same]

## NO AUTHOR ASCERTAINABLE

Begin reference with name of editor, compiler, or sponsoring body, if known. Otherwise begin with title of article, chapter, journal, or book, followed by year. Do not use "anonymous."

## PAGE SPAN WITH LETTERS

11:W50-55

11:125S-28S

## PAPER PRESENTED AT A MEETING OR CONFERENCE

Andrade RG. 1990. *Culture shared and unique*. Paper presented at the 69th Annual Meeting of the American Anthropological Association, San Diego, Nov. 3-6

## PATENT

Crane P, Lackmeyer G, Longyear J, Melconian A, Steward D. 2006. *Electronically scanning direction finding antenna system*. US Patent 6,987,489

## PREPRINT AND WORKING PAPER

Chiang E, Laughlin G. 2012. The minimum-mass extrasolar nebula. arXiv:1211.1673 [astro-ph.EP]

Pasaniuc B, Price AL. 2016. Dissecting the genetics of complex traits using summary association statistics. bioRxiv 072934.  
<https://doi.org/10.1101/072934>

Chase-Dunn C. 2016. *Social movements and collective behavior in premodern polities*. Work. Pap. 110, Inst. Res. World Syst., Univ. Calif., Riverside.  
<http://irows.ucr.edu/papers/irows110/irows110.htm>



## PROCEEDINGS

- Diftler MA, Mehling JS, Abdallah ME, Radford NA, Bridgwater LB, et al. 2011. Robonaut 2—the first humanoid robot in space. In *2011 IEEE International Conference on Robotics and Automation*, pp. 2178–83. Piscataway, NJ: IEEE
- Holder J. 2009. Galactic binary systems. In *Proceedings of the 2009 Fermi Symposium, Washington, DC, Nov. 2–5*. eConf Proceedings C091122.  
<http://www.slac.stanford.edu/econf/C0911022>

## REPORT

- New RL, Oldur S. 2001. *Propulsion jet streams*. NASA Tech. Rep. 32-1529, Jet Propuls. Lab., Pasadena, CA

## SUPPLEMENT

If suppl. is part of journal title:

- Martin RN, Barrett AH. 2001. *Ap. J. Suppl.* 36:1-51

If suppl. is not part of journal title:

- Taylor CA. 1995. *J. Microbiol.* 11(Suppl. 2):5-10

## THESIS OR DISSERTATION

- Cafiso DS. 1997. *Electrical and ion selective properties of photoreceptor membranes*. PhD Thesis, Univ. Calif., Berkeley

[include thesis or dissertation title in journals that do not ask for article titles]

## TRANSLATION

- Aachen BL. 1937. *Basis of Society*. Transl. R Jones, 1958, in *Am. J. Sociol.* 23:18-57 (From German)

## UNPUBLISHED INFORMATION

Refer to such data in the text as personal communication, submitted, unpublished data, etc., listing all researchers by initials and surname (e.g., W.C. Houser, U.M. Bandlier & C.F. Kim, unpublished data). Except for *Economics*, *Financial Economics*, *Physical Chemistry*, and *Resource Economics*, do not list these references in the Literature Cited section. Citations of unpublished works are not permitted in *Entomology*.

## WEBSITE

- Taussig M. 2015. Seeds of time. *Flatbread Society*.  
<http://www.flatbreadsociety.net/stories/30/seeds-of-time>

## YEAR, 1ST EDITION

- Castellanos J. 1994 (1589). [No period before parentheses]

## REPEATED REFERENCES

If different sections of the same book, symposium, etc. are cited in separate references, give full information once, with the reference listed under the editor's name. Include title of chapter in each reference.

Domb AJ. 2002. Lipospheres for controlled delivery. See Salkman 2002, pp. 288-92

Salkman B, ed. 2002. *Solid Nanoparticles: Methods and Industrial Applications*.  
Boca Raton, FL: Taylor & Francis

Straub EH. 2001. Hemophilia. See Salkman 2002, pp. 216-49

Do not use "Ibid." Instead, repeat the name of the author each time.

## APPENDIX B: STANDARD ABBREVIATIONS AND UNITS

Symbols and abbreviations on this list, as well as all SI base and derived units and prefixes, may be used in your manuscript without explanation.

acceleration of gravity	g	equilibrium constant	$K$
acquired immune deficiency syndrome	AIDS	equivalent	eq
alternating current	ac	erg	spell out
angstrom	Å	et alii (and others)	et al.
ante meridiem	AM	et cetera	etc.
approximately	~	exempli gratia (for example)	e.g.
approximately equal	≈	exponential	exp.
aqueous	aq	figure	spell out
arbitrary unit	a.u.	foot	ft
astronomical unit	AU	foot candle	fc
atmosphere	atm	gauss	G
atomic mass unit	amu	Gibbs energy change	$\Delta G$ (not $\Delta F$ )
atomic unit	au	giga-	G-
atomic weight	at wt	gram calories	gcal
bar	spell out	gravitational constant	G
barn	b	gravity, centrifugal	g
British thermal unit	Btu	hour	h
calorie (heat calorie)	cal	human immunodeficiency virus	HIV
centimeter-gram-second	cgs	hydrogen ion (concentration)	pH
compare	cf.	id est (that is)	i.e.
cosecant	csc	inch	spell out
cosine	cos	infective dose	ID <sub>50</sub>
cotangent	cot	infrared	IR
counts per minute	cpm	international unit	IU
curie	Ci	kilo-	k-
curl	spell out	kilobase, kilobase pair	kb
cycles per second	Hz	kilocycle	kc
daltons	Da	kilowatt-hour	kWh
day	spell out	lethal dose	LD <sub>50</sub>
decibel	B	levo	L
degree	°	liter	L
degrees Celsius	°C	logarithm	log
degrees Fahrenheit	°F	logarithm, natural	ln
deuteron	d	magnitude	mag
dextro	D	maximum	max
diffusion coefficient	D	mega-	M-
direct current	dc	metric ton (tonne)	t
dyne	dyn	Michaelis constant	$K_m$
electromagnetic unit	emu	micro	μ-
electromotive force	emf	microgram	μg (not λ)
electron	e	micrometer (not micron)	μm
electron spin resonance	ESR	millibar	mbar
electron volt	eV	milliequivalent	meq
electrostatic units	esu	milliliter	mL
enthalpy change	$\Delta H$	millimeters of mercury	mm Hg
entropy change	$\Delta S$	million years ago, mega annum	Mya, Ma
entropy unit	eu		

minute	min	solar mass	$M_{\odot}$
minutes of arc	arcmin	species	sp., spp.
molar (concentration)	M (not $\mu\text{mol/mL}$ )	Specific rotation	$\alpha$
mole	mol (not M)	square centimeter	$\text{cm}^2$
molecular weight	$M_r$ or mol wt	Svedberg ( $10^{-13}$ s)	S
month	spell out	standard deviation	SD
neutron	n	standard error	SE
normal (concentration)	N	tangent	tan
oersted	Oe	tera-	T-
page, pages	p., pp.	tesla	T
parsec	pc	three-dimensional	3D
parts per million	ppm	ton	spell out
percent	%	tonne (metric ton)	t
post meridiem	PM	torr	torr (not Torr)
potential difference	PD	two-dimensional	2D
probable error	pe	ultrahigh frequency	UHF
proton	p	ultraviolet	UV
radiation, ionizing, absorbed dose	rad	universal gravitational constant	$G$
radiofrequency	RF	universal time	UT
retardation factor	$R_F$	variant	r.
revolutions per minute	rpm	versus	spell out
roentgen	r	weight concentration	g/mL (not mg%)
root mean square	rms	weight percent	wt%
second	s	week	spell out
seconds of arc	arcsec	year	spell out
sedimentation coefficient	s		