Scope of the Journal

The *Journal of Natural Products* invites and publishes papers that make substantial and scholarly contributions to the area of natural products research. Contributions may relate to the chemistry and/or biochemistry of naturally occurring compounds or the biology of living systems from which they are obtained. Specifically, they may be articles that describe secondary metabolites of microorganisms, including antibiotics and mycotoxins; physiologically active compounds from terrestrial and marine plants and animals; biochemical studies, including biosynthesis and microbiological transformations; fermentation and plant tissue culture; the isolation, structure elucidation, and chemical synthesis and semi-synthesis of novel compounds from nature; and the pharmacology of compounds of natural origin. When new compounds are reported, manuscripts describing their biological activity are much preferred. Manuscripts that focus on biological properties of chemically complex extracts, mixtures, or essential oils are outside of the scope of the journal.

Manuscript Types

Manuscripts may be submitted as Articles, Notes, Reviews, or Perspectives. Authors should indicate in a cover letter accompanying the manuscript which category they intend for their submission.

All manuscripts will be submitted to a review process. Manuscripts will be considered for publication on the understanding that they have not been published or submitted for publication elsewhere.

**Articles.** Articles are comprehensive, critical accounts of work in the areas outlined above.

**Notes.** Notes are abbreviated papers presented in the same general style as Articles. Generally, studies that are narrower in scope than published in Articles are reported as Notes. When only one or two new compounds are reported in a manuscript, these substances must be of significant structural, biogenetic, and/or biological interest. The publication of known compounds will be considered only if they have been demonstrated to possess potentially important bioactivity. Manuscripts solely reporting NMR assignments or X-ray crystallographic data of known compounds will not be considered. For known compounds, authors should submit full experimental details of the isolation and identification data for consideration by the referees but not for publication. Full details of the isolation and identification procedures for known compounds may be made available to the reader as Supporting Information. (See the subsequent section on Supporting Information.)

Authors investigating the chemistry of a single species should aim to publish their results in a single manuscript rather than in a series of manuscripts describing each new compound as it is found. Manuscripts that report fragmentary parts of a larger study will be returned to the authors at the Editors’ discretion.

**Reviews.** Comprehensive reviews of topics within the scope of the journal and supported by significant literature should be submitted as reviews. Short reviews of recent literature that update
a topic are also considered. The information in Reviews should be presented objectively, not limited to the contributions of the authors, and written with the intent of familiarizing the general reader with the broad current state of knowledge of a topic of active interest. The length of reviews should be commensurate with the information available; there are no formal limitations on length. Reviews are considered upon invitation, or after approval of presubmission inquiries outlining a synopsis of the manuscript sent to eic@jnp.acs.org.

**Perspectives.** Perspectives are personal reviews of subject or a topic in natural products, which should be focused rather than comprehensive. Perspective authors should assess the current status of the selected subject or topic, with an emphasis toward identifying important advances being made or those advances that are needed. Perspective reviews should present a forward-thinking approach in discussing the selected topic to be covered. The Journal of Natural Products Perspective should address the recent literature, including key contributors, aiming primarily to inspire and provide new insights to direct future research efforts. Perspectives authors will be invited by the Editor, or presubmission inquiries outlining a synopsis of the manuscript can be sent to eic@jnp.acs.org. Perspectives should be no more than 9,000 words, including the abstract, main text, and figure captions.

**ACS Publishing Center**

While this document will provide basic information on how to prepare and submit the manuscript as well as other critical information about publishing, we also encourage authors to visit the ACS Publishing Center for additional information on everything that is needed to prepare (and review) manuscripts for ACS journals and partner journals, such as

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- Resources on [how to prepare and submit a manuscript](https://pubs.acs.org/content/acspublications/acs-author-center/articles/submitting-manuscripts) to ACS Paragon Plus, ACS Publications’ manuscript submission and peer review environment, including details on selecting the applicable [Journal Publishing Agreement](https://pubs.acs.org/content/acspublications/acs-author-center/articles/submitting-manuscripts).
- **Sharing your research** with the public through the ACS Publications open access program.
- **ACS Reviewer Lab**, a free online course covering best practices for peer review and related ethical considerations.
- **ACS Author Lab**, a free online course that empowers authors to prepare and submit strong manuscripts, avoiding errors that could lead to delays in the publication process.
- **ACS Inclusivity Style Guide**, a guide that helps researchers communicate in ways that recognize and respect diversity in all its forms.

**Manuscript Preparation**

**Submit with Fast Format**

All ACS journals and partner journals have simplified their formatting requirements in favor of a streamlined and standardized format for an initial manuscript submission. Read more about the requirements and the benefits these serves authors and reviewers [here](https://pubs.acs.org/content/acspublications/acs-author-center/articles/submitting-manuscripts).

Manuscripts submitted for initial consideration must adhere to these standards:

- Submissions must be complete with clearly identified standard sections used to report original
research, free of annotations or highlights, and include all numbered and labeled components.

- Figures, charts, tables, schemes, and equations should be embedded in the text at the point of relevance. Separate graphics can be supplied later at revision, if necessary.
- When required by a journal's structure or length limitations, manuscript templates should be used.
- References can be provided in any style, but they must be complete, including titles. For information about the required components of different reference types, please refer to the ACS Style Quick Guide.
- Supporting Information must be submitted as a separate file(s).

**Document Templates and Format**

The templates facilitate the peer review process by allowing authors to place artwork and tables close to the point where they are discussed within the text. Learn more about document templates here.

General information on the preparation of manuscripts may also be found in the ACS Guide to Scholarly Communication.

**Acceptable Software, File Designations, and TeX/LaTeX**

See the list of Acceptable Software and appropriate File Designations to be sure your file types are compatible with ACS Paragon Plus. Information for manuscripts generated from TeX/LaTeX is also available.

**Cover Letter**

A cover letter must accompany every manuscript submission. During the submission process, you may type it or paste it into the submission system, or you may attach it as a file.

A statement should be included in the cover letter by the corresponding author that all persons named as co-authors have seen and approved the manuscript prior to submission. Deletion of an author after the manuscript has been submitted requires a confirming letter to the Editor-in-Chief from the author whose name is being deleted. For more information on ethical responsibilities of authors, see the Ethical Guidelines to Publication of Chemical Research.

**Manuscript Text Components**

To assist with the subsequent editorial process, it is preferred that manuscripts submitted to the Journal of Natural Products be prepared in single columns per page, double-spaced, with font size 12. The template is available for on the Information for Authors page. Use of a template is encouraged but not mandatory. The template facilitates the peer review process by allowing authors to place artwork and tables close to the point where they are discussed within the text.

**Title Page**

Manuscripts may be submitted as Articles, Notes, Reviews (by invitation of presubmission inquiry), Perspectives (by invitation or presubmission inquiry), and Editorials (by invitation) (see “Scope and Editorial Policy” document). The manuscript title should appear on a separate page and should be
followed by the author names and the institution name and address. The title, author name(s), and affiliations should all appear on their own respective line of text. Place an asterisk after the name of the author to whom enquiries regarding the paper should be directed and include that author’s telephone and fax numbers and e-mail address. Author affiliations should be footnoted using sequential lower-case letters, numbers, or symbols. Subdivisions (e.g., departments) of an institution should be grouped on the same line or lines. In article titles, the words “new” or “novel” (with the latter referring specifically to a compound based on an unprecedented carbon skeleton) should not be included, and the number of new substances obtained should not be specified. The title page and the rest of the manuscript should be typed in font size 12.

Abstract

The abstract, detailing, in a single paragraph, the problem, experimental approach, major findings, and conclusions, should appear on the second page. It should be double spaced and should not exceed 200 words for Articles and Reviews or 100 words for Notes and Perspectives. Compounds mentioned in the abstract, and given as specific Arabic numerals that are bolded in the manuscript text, should also be accompanied in the abstract by the same bolded numerals. The abstract should be on a separate page and should be provided with the bolded and capitalized heading “ABSTRACT”.

Introduction

The manuscript should include an untitled introductory section stating the purpose of the investigation and relating the manuscript to similar research.

Results and Discussion

The “Results and Discussion” should be presented as a coherent whole section, in which the results are presented concisely. The discussion should interpret the results and relate them to existing knowledge in the field in as clear and brief a fashion as possible. Tables and figures should be designed to maximize the presentation and comprehension of the experimental data. Authors submitting a manuscript as a Note should omit the heading “Results and Discussion.” For Articles of unusual length, subheadings may be included within the “Results and Discussion” section. The major heading “Results and Discussion” should be bolded and capitalized, with the text starting on the line following. Subheadings are indented, followed by a period, and are a mix of uppercase and lowercase letters. The text follows on the same line as the subheading.

Bolded structural code numbers should only be used for new compounds and for those known compounds for which new biological data or spectroscopic values are being reported, and should be presented in the main text in ascending numerical order. Authors providing manuscripts focusing on the biological properties of two or fewer known natural products have the option of referring to the compound(s) concerned by name, rather than assigning each a bolded numerical code number. Other known compounds should be referred to in the text by name, wherever necessary. Sugar units in glycosides should not be inferred as D or L based solely on NMR data analysis, but should be determined by supporting experimental work such as measurement of their optical rotations following acid hydrolysis or by the preparation of chiral derivatives and comparison with standards using a chromatographic analytical method. If the aglycone of a glycoside is also a new compound, then it should be isolated and its physical constants and spectroscopic parameters stated. Authors are advised to use correctly the terms “relative and absolute configuration” instead of “relative and absolute stereochemistry”. In, for example, a carbocyclic compound, only a stereogenic carbon or a stereogenic element, such as an axis,
possesses configuration. Substituents such as methyl groups are either alpha or beta oriented and are **not** alpha or beta configured. Care should be taken not to make erroneous configurational conclusions via NMR NOE associations from ring to side-chain protons of, for example, sterols and tetracyclic triterpenoids. The term “spectral” should be avoided in a structure elucidation discussion, when “spectroscopic” or “spectrometric” are meant instead. When describing mass spectrometric details, authors should not refer to the terms “pseudomolecular ion”, “quasimolecular ion”, or “protonated molecular ion” and should refer instead to, e.g., “a sodium adduct ion”, “a protonated molecule”, or a “deprotonated molecule” (see Pure Appl. Chem. 2013, 85, 1515–1609).

In manuscripts that present results of biological studies with tumor cell lines or animal-based tumor models, authors should pay special attention to the U.S. National Cancer Institute (NIH) guidelines for cancer drug discovery studies. Compounds that suppress the growth of, or kill, isolated tumor cell lines grown in culture should be referred to as either “cytostatic” or “cytotoxic”, as appropriate. Only compounds that inhibit the growth of tumors in animal-based models should be called “antitumor”. The term “anticancer” should be reserved for compounds that show specific activity in human-based clinical studies (see Suffness, M.; Douros, J. J. Nat. Prod. 1982, 45, 1–14). Some flexibility in this system is afforded in the description of compounds that show activity in molecular-targeted antitumor assays. Compounds should be compared against a suitable positive control substance and follow accepted guidelines when represented as “active”. For example, a cytotoxic pure substance when tested against a cancer cell line would exhibit an IC$_{50}$ value of <10 M (or 4–5 g/mL).

**Experimental Section**

The presentation of specific details about instruments used, sources of specialized chemicals, and related experimental details should be incorporated into the text of the Experimental Section as a paragraph headed General Experimental Procedures. The general order for inclusion should be as follows: melting points; optical rotations; UV spectra; ECD and/or VCD spectra; IR spectra; NMR spectra; mass spectra; and chromatographic and other techniques.

In a separate paragraph, experimental biological material should be reported as authenticated if cultivated or from a natural habitat, and the herbarium deposit site and voucher number should be recorded. The month and year when the organisms were collected should be stated, and it is recommended that the exact collection location be provided using a GPS navigation tool. All microorganisms used experimentally should bear a strain designation number and the culture collection in which they are deposited. The scientific name (genus, species, authority citation, and family) should be presented when first mentioned in the body of the manuscript. Thereafter, the authority should be eliminated, and the generic name should be reduced (except in tables and figure legends) to the first capital letter of the name (but avoid ambiguity, if two or more generic names have the same first letter). If the biological material has not been identified as to species, the manuscript will not be considered for publication unless a special protocol has been followed. Thus, a voucher specimen of the organism should be deposited with a recognized taxonomist for the particular group of organisms in question. The taxonomist should then assign to the specimen an identifying number unique to the organism so that any additional collections of the same organism would bear this same number. The number will be retained until the organism is completely identified. The taxonomist should write a brief taxonomic description to be included in the manuscript, which should state how the organism in question relates morphologically to known species. Contributors should use DNA sequence analysis to assist with the taxonomic identification of unknown microorganisms, and to deposit these data in GenBank. Photographs of incompletely identified organisms may be included as Supporting Information. Authors should be aware of the fact that the large-scale collection of marine or terrestrial organisms may have
negative ecological effects. Therefore, authors describing an investigation derived from large-scale collections should thus include a statement in their manuscript (in the “Biological Material” paragraph of the Experimental Section) explaining why the collection had no significant adverse ecological effect or justifying such effect in terms of the benefit from the resulting work. When organisms are collected from a foreign country, the corresponding author must state in the cover letter with the submitted manuscript that formal collection permission was obtained. Authors who purchase dried “herbal remedies” or other materials from companies must make provision for their proper deposit in a herbarium or other permanent repository, for access by future workers. When a commercially available extract is obtained, the extraction procedure from the organism of origin must be specified. The identification of the extract should be supported by an HPLC trace of known secondary metabolite constituents of the organism, which should be included with the manuscript as Supporting Information.

When physical and spectroscopic data are presented in the body of the manuscript, the following general style must be used (with the various commonly used techniques presented in this same order):

**Romucosine (1):** colorless needles (CHCl₃); mp 152–153 °C; [α]²⁵_D −110 (c 0.4, CHCl₃); UV (EtOH) max (log ε) 235 (4.23), 275 (4.18), 292 (sh) (3.52), 325 (3.41) nm; IR (Nujol) max 1680, 1040, 920 cm⁻¹; ¹H NMR (CDCl₃, 400 MHz) 8.11 (1H, d, J = 7.6 Hz, H-11), 7.54–7.28 (2H, m, H-9, H-10), 7.27 (1H, s, H-8), 6.59 (1H, s, H-3), 6.10, 5.97 (each 1H, d, J = 1.5 Hz, OCH₂O), 4.86 (1H, dd, J = 13.7, 4.4 Hz, H-6a), 4.44 (1H, m, H-5a), 3.77 (3H, s, NCOOC₂H₅), 3.06 (1H, m, H-7a), 2.99 (1H, m, H-5b), 2.91 (1H, m, H-7b), 2.82 (1H, m, H-4a), 2.61 (1H, m, H-3b); ¹³C NMR (CDCl₃, 100 MHz) 155.8 (C, NCOOC₂H₅), 146.8 (C, C-2), 143.0 (C, C-1), 135.8 (C, C-7a), 130.7 (C, C-11a), 128.7 (CH, C-8), 127.79 (C, C-3a), 127.78 (CH, C-9), 127.2 (CH, C-10), 127.0 (CH, C-11), 125.6 (C, C-3b), 117.3 (C, C-1a), 107.6 (CH, C-3), 100.9 (CH₂, OCH₂O), 52.7 (CH₃, NCOOC₂H₅), 51.7 (CH, C-6a), 39.2 (CH₂, C-5), 34.5 (CH₂, C-7), 30.4 (CH₂, C-4); EIMS m/z 323 [M]+ (98), 308 (28), 292 (5), 262 (20), 248 (21), 236 (81), 235 (100), 206 (17), 178 (27), 88 (17); HREIMS m/z 323.1152 (calcd for C₁₉H₁₇NO₄, 323.1158).

The correct presentation of NMR spectroscopic data is shown in the table below.

<table>
<thead>
<tr>
<th>Table 1. NMR Spectroscopic Data (400 MHz, C6D6) for Aurilides B (1) and C (2)</th>
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<tbody>
<tr>
<td><strong>Romucosine (1):</strong> colorless needles (CHCl₃); mp 152–153 °C; [α]²⁵_D −110 (c 0.4, CHCl₃); UV (EtOH) max (log ε) 235 (4.23), 275 (4.18), 292 (sh) (3.52), 325 (3.41) nm; IR (Nujol) max 1680, 1040, 920 cm⁻¹; ¹H NMR (CDCl₃, 400 MHz) 8.11 (1H, d, J = 7.6 Hz, H-11), 7.54–7.28 (2H, m, H-9, H-10), 7.27 (1H, s, H-8), 6.59 (1H, s, H-3), 6.10, 5.97 (each 1H, d, J = 1.5 Hz, OCH₂O), 4.86 (1H, dd, J = 13.7, 4.4 Hz, H-6a), 4.44 (1H, m, H-5a), 3.77 (3H, s, NCOOC₂H₅), 3.06 (1H, m, H-7a), 2.99 (1H, m, H-5b), 2.91 (1H, m, H-7b), 2.82 (1H, m, H-4a), 2.61 (1H, m, H-3b); ¹³C NMR (CDCl₃, 100 MHz) 155.8 (C, NCOOC₂H₅), 146.8 (C, C-2), 143.0 (C, C-1), 135.8 (C, C-7a), 130.7 (C, C-11a), 128.7 (CH, C-8), 127.79 (C, C-3a), 127.78 (CH, C-9), 127.2 (CH, C-10), 127.0 (CH, C-11), 125.6 (C, C-3b), 117.3 (C, C-1a), 107.6 (CH, C-3), 100.9 (CH₂, OCH₂O), 52.7 (CH₃, NCOOC₂H₅), 51.7 (CH, C-6a), 39.2 (CH₂, C-5), 34.5 (CH₂, C-7), 30.4 (CH₂, C-4); EIMS m/z 323 [M]+ (98), 308 (28), 292 (5), 262 (20), 248 (21), 236 (81), 235 (100), 206 (17), 178 (27), 88 (17); HREIMS m/z 323.1152 (calcd for C₁₉H₁₇NO₄, 323.1158).</td>
</tr>
</tbody>
</table>
The correct format to present elemental analysis data is: anal. C 72.87, H 11.13%, calcd for C_{37}H_{68}O_6, C 73.02, H 11.18%. The structures of compounds are expected to be supported by high-resolution mass spectrometry (error limit 5 ppm or 0.003 m/z units) or elemental analysis. Melting point determinations should not be provided for compounds described as “amorphous solids.” The unit of concentration to be used for optical rotation measurements is grams per 100 mL. UV extinction coefficient data should be provided as log values, to two places of decimals. In reporting ¹H NMR data of diastereotopic methylene protons, the deshielded one should be listed as the “a” proton and the shielded one as the “b” proton, as in “H-10a” and “H-10b”, respectively. If two proton or carbon signals in an NMR spectrum appear at the same chemical shift but are still distinguishable, an additional decimal place (three for ¹H NMR data and two for ¹³C NMR data) may be used to designate the resonance in question. Carbon-13 NMR data should be reported to the nearest 0.1 ppm with the number of attached protons designated using the C, CH, CH₂, and CH₃ notation.

Authors must emphasize any unexpected, new, and/or significant hazards or risks associated with the reported work. This information should be in the experimental details section of the Article, Note, or Rapid Communication.

### Associated Content

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<td>2.19, m</td>
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<td>3.98, m</td>
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<td>71.0, CH</td>
<td>3.97, m</td>
<td>34</td>
<td>41.2</td>
<td>2.02, m</td>
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<td>41.1, CH</td>
<td>2.07, m</td>
<td>43</td>
<td>82.6</td>
<td>5.17, d (11.2)</td>
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<td>82.5, CH₂</td>
<td>5.18, d (11.2)</td>
<td>1, 36, 38, 44</td>
<td>132.1</td>
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<tr>
<td>38</td>
<td>131.4, C</td>
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<td></td>
<td>134.6</td>
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<td>37, 44</td>
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<td>0.89, t</td>
<td>39, 40</td>
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<td>12.7, CH₂</td>
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<td>44</td>
<td>11.3, CH₂</td>
<td>1.54, s</td>
<td>37, 38, 39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NH (1) 7.69 brd (9.1) | 10 | 7.66 brd (9.1)
NH (2) 6.75 brd (8.8) | 25 | 6.70 brd (8.8)

*HMBC correlations, optimized for 0 Hz, are from proton(s) stated to the indicated carbon.

1 Signal partially obscured.
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- Nomenclature of Inorganic Chemistry, Recommendations, 1990; Blackwell Scientific
- Nomenclature of Organic Chemistry, Sections A–F and H; Pergamon Press: Elmsford, NY,
  1979.
- Compendium of Macromolecular Nomenclature; Blackwell Scientific Publications: Oxford,
- Biochemical Nomenclature and Related Documents, 2nd ed.; Portland Press, Ltd.: London,
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- Color art (RGB mode): 300 dpi

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4. A perspective diagram (perhaps prepared by ORTEP, PLUTO, or similar programs) that gives the atom-numbering scheme if it is not unambiguous from the remainder of the paper. If the figure is a stereoview, it should be provided reduced to correct size, about 55–60 mm between images.

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## Appendix 2: Preparing Graphics

### Resolution

Digital graphics pasted into manuscripts should have the following minimum resolutions:

- Black and white line art, 1200 dpi
- Grayscale art, 600 dpi
- Color art, 300 dpi

### Size

Graphics must fit a one- or two-column format. Single-column graphics can be sized up to 240 points wide (3.33 in.) and double-column graphics must be sized between 300 and 504 points (4.167 in. and 7 in.). The maximum depth for all graphics is 660 points (9.167 in.) including the caption (allow 12 pts. For each line of caption text). Lettering should be no smaller than 4.5 points in the final published format. Helvetica or Arial fonts work well for lettering. Lines should be no thinner than 0.5 point.

### Color

Color may be used to enhance the clarity of complex structures, figures, spectra, and schemes, etc., and color reproduction of graphics is provided at no additional cost to the author. Graphics intended to appear in black and white or grayscale should not be submitted in color.

### Type of Graphics

**Table of Contents (TOC)/Abstract Graphic**
Consult the Guidelines for Table of Contents/Abstract Graphics for specifications. Our team of subject-matter experts and graphical designers can also help generate a compelling TOC graphic to convey your key findings. Learn more about our Graphical Abstract service.

Figures

A caption giving the figure number and a brief description must be included below each figure. The caption should be understandable without reference to the text. It is preferable to place any key to symbols used in the artwork itself, not in the caption. Ensure that any symbols and abbreviations used in the text agree with those in the artwork.

Charts

Charts (groups of structures that do not show reactions) may have a brief caption describing their contents.

Tables

Each table must have a brief (one phrase or sentence) title that describes the contents. The title should be understandable without reference to the text. Details should be put in footnotes, not in the title. Tables should be used when the data cannot be presented clearly in the narrative, when many numbers must be presented, or when more meaningful inter-relationships can be conveyed by the tabular format. Tables should supplement, not duplicate, information presented in the text and figures. Tables should be simple and concise.

Schemes

Each scheme (sequences of reactions) may have a brief caption describing its contents.

Chemical Structures

Chemical structures should be produced with the use of a drawing program such as ChemDraw.

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