

Editor-In-Chief: Tomio Yabe

**Associate Editor: Kiyohiko Igarashi
Motomitsu Kitaoka**

**Managing Editors: Kazumi Funane
Wataru Hakamata
Naoto Isono
Kazuo Ito
Kimiko Itoh
Kiyoshi Kawai
Atsushi Kobayashi
Akihiro Nishioka
Takahiro Noda
Wataru Saburi
Ryuichiro Suzuki**

**Editorial Board: James R. Ketudat Cairns
Jay-Lin Jane
Štefan Janeček
Seung-Taik Lim
Thomas W. Okita
Kwan-Hwa Park
Jack Preiss
Birte Svensson**

**Advisory Board: Haruhide Mori
Ken Tokuyasu**

Editorial Secretary: Yoko Machida

Instructions for Authors

(Revised June 7, 2018)

- 1. Policy:** The Journal of Applied Glycoscience publishes papers in the broad field of general and applied glycoscience. The manuscript to be submitted must be a report of original research that has not been published and is not under review elsewhere.
- 2. Ethical responsibilities of authors:** This journal will follow the COPE guidelines on how to deal with potential acts of misconduct.
- 3. Types of contributions:** Papers are limited to three types: Regular papers, Notes, and Reviews.
 - 1) Regular papers must be reports in final form and complete in themselves.
 - 2) Notes may be short research reports describing a new experimental method, an especially interesting finding, or other material that may not be suitable for publication as a Regular paper.
 - 3) Reviews are articles that offer general discussion of a subject.
- 4. Manuscript preparation:** Manuscripts must be written in English and be prepared in accordance with the "Instructions for Manuscript Preparation."
- 5. Publication fee:** No publication fee will be applied if the corresponding author is a member of the Japanese Society of Applied Glycoscience. If the corresponding author is not a member, 10,000 Japanese yen (JPY) will be charged as a publication fee.
- 6. Length of papers:** Papers should be six printed pages for Regular papers, three printed pages for Notes, 10 printed pages for Reviews. To encourage more concisely written articles, authors are required to pay a page charge (members: 15,000 JPY/page; non-members: 20,000 JPY/page) in excess of these pages. Approximately 100 lines of manuscript are equivalent to one printed page, and one figure or table is generally equivalent to 20 lines.
- 7. Color charge:** Authors will be charged 50,000 JPY/page if figures and/or tables are printed in color. Color printing is provided at the request of authors. The editor may request that authors prepare figures and/or tables in color.

8. Supplemental information: Supplemental information can be added as Supplementary Materials. The supplemental information of an accepted manuscript is generally available to the public through the Internet, at the Journal's Web site. The existence of supplemental information must be indicated in the text (e.g., "Fig. S1; see J. Appl. Glycosci. Web site"). Movies must be saved in a format that is viewable with free software for Windows and Macintosh. Materials whose copyright belong to a third party are not acceptable as supplemental information.

9. Copyright: Copyrights of manuscripts published in the Journal of Applied Glycoscience belong to the Japanese Society of Applied Glycoscience. For publication, all authors must transfer the copyright to the Society. The copyright covers the exclusive and unlimited right to reproduce and distribute the article in any form. It also covers translation rights for all languages.

10. Submission: The author should submit Journal's submission site (<https://mc.manuscriptcentral.com/jsag>) and upload all of your manuscript files following the instructions given on the screen. The manuscript for submission should include the items listed in the Instructions for Manuscript Preparation. The file, accompanied by the submission form and a scan of the executed and signed copyright transfer form (available as a PDF file at the Journal's submission site), as well as the file of supplemental information.

11. Disclosure of potential conflicts of interest: Authors must disclose all relationships or interests that could have direct or potential influence or impart bias on the work. In addition, interests that go beyond financial interests and compensation (non-financial interests) that may be important to readers should be disclosed. The corresponding author will include a summary statement in the text of the manuscript in a separate section before the reference list, that reflects what is recorded as the potential conflict of interest disclosure form(s) in the submission site.

12. Experiment and research with humans and animals: Papers involving experiment and research with human must describe the appropriate institutional ethics committee's prior approval, and the informed written consent from all human subjects involved in the experiment and research. Also, experiment and research with animals or with genetically manipulated organisms must have been performed in accordance with the legal requirements of the relevant local or national guidelines and regulations, and procedures must not cause experimental animals any unnecessary suffering.

13. Review process: This journal uses ScholarOne Manuscripts to peer review manuscript. Any manuscript not prepared in accordance with the "Instructions for Authors" or the "Instructions for Manuscript Preparation" will be returned to the author prior to the review process. During that process, the editorial committee selects an editor for the manuscript, and that editor consults two or more referees to evaluate the manuscript and judge it for acceptance or rejection and to provide comments. The corresponding author should provide a list of more than three possible referees who are free of any conflict of interest; he or she may also provide names of persons who should be excluded from consideration as a referee. The authors' referee suggestions notwithstanding, the editorial committee retains the right to choose referees, and the names of the referees shall remain confidential; the editorial committee also makes the final decision regarding acceptance or rejection. The acceptance date is the date on which the editorial committee decides upon acceptance. If the manuscript is returned to the corresponding author for revisions following the review process, he or she should revise the manuscript within three months; if the corresponding author does not revise the manuscript within that period, the manuscript is automatically withdrawn from consideration. If the revised manuscript is resubmitted beyond the

(continue to inside backcover)

deadline or is considerably different from the original manuscript, it will be considered a new submission.

14. **English editing:** It is recommended that authors whose native language is not English have their manuscripts checked by a native speaker of English prior to submission. The author should indicate on the submission form whether any English-language editing of the manuscript has been performed. In cases where the content of the manuscript is acceptable for publication in the Journal but the quality of its English is not sufficient, the editorial office may have the manuscript edited, upon approval from the authors. In such a case, an English-language editing fee will be charged to the authors.
15. **Advance publication:** Manuscripts that have been accepted for publication will soon after be made available online (as a PDF file) on J-STAGE, as an advance publication. If the authors do not wish to have advance publication, they should notify the editorial office. A digital object identifier (DOI) number will be issued at this stage.
16. **Final manuscript:** Following acceptance, the corresponding author will be asked to submit the final manuscript for printing by the editorial office.
17. **Proof review by author:** The corresponding author is asked to correct only the first proof. At this stage, only printing-error corrections are allowed.
18. **Publication:** The accepted manuscript is published with a bibliography according to the Journal's topic schedule.
19. **Invited article:** The editorial committee may invite an author to submit a Review article. Invited Review articles need not adhere to the page-limit numbers described in section 5 above. In addition, publication fees, page charges, and color charges will not be charged to the author.
20. **Inquiry:** Any inquiry should be sent by e-mail.
Editorial Office
Editorial Secretary: Yoko Machida
Journal of Applied Glycoscience
Center for Academic Publications Japan
2-4-16 Yayoi, Bunkyo-ku, Tokyo 113-0032, Japan
E-mail: applglycosci@capj.or.jp
Tel. +81-3-3817-5821 Fax. +81-3-3817-5830

Instructions for Manuscript Preparation (Revised May 20, 2018)

1. **Before starting:** Please check the guide for ScholarOne authors before making a submission in Journal's submission site (<https://mc.manuscriptcentral.com/jsag>).
2. **Typing:** The text should be approximately 12 points, and there should be 25 lines per page with margins of approximately 30 mm on the top, bottom and each side of A4-size pages. To allow for ease of reference during the reviewing process, line numbers should be added to the left margin, and page numbers should be added to the bottom-center of all pages. The font should be Times New Roman or Times. For special characters, a Unicode of the font used or Symbol font should be used. Do not use Asian two-byte fonts such as Japanese, Chinese, or Korean.
3. **Style:** The manuscript should be arranged as follows: title page, abstract, and key words, text, acknowledgments, references, tables, figure legends, and figures.
 - 1) Title page: The first page of each manuscript must contain the following information:
 - (1) Article type: Specify whether the manuscript is a Regular paper, Note, or Review

- (2) Running title, not to exceed 80 characters (including spaces)
- (3) The full title of the manuscript
- (4) Full names and affiliations of the authors: Please prepare these in accordance with the following example. The corresponding author should be indicated with an dagger (†).

Masafumi Hidaka,^{1,2} Mamoru Nishimoto,² Motomitsu Kitaoka,² Takayoshi Wakagi,¹ Hirofumi Shoun,¹ and Shinya Fushinobu^{1,†}
¹*Department of Biotechnology, The University of Tokyo (1-1-1 Yayoi, Bunkyo-ku, Tokyo 113-8657, Japan)*

²*National Food Research Institute, National Agriculture and Food Research Organization (2-1-12 Kannondai, Tsukuba, Ibaraki 305-8642, Japan)*

- (5) The phone number, fax number, and e-mail address of the corresponding author should be presented as follows:

†Corresponding author (Tel. +81-XX, Fax. +81-XX [or Tel. & Fax. +81-XX], E-mail: xxx@yyy.zz.jp, ORCID ID)

- (6) A complete list of abbreviations used more than twice in the text
 - (7) Any necessary footnotes
- 2) Abstract and key words: The abstract should be no longer than 250 words for Regular papers and Reviews. The abstract for Notes should contain fewer than 150 words. After the abstract, four to 6 key words should be given.
 - 3) Text: Major headings are in bold capitals and the text follows on the next line. Minor headings are italicized and followed by a period and the text follows on the same line.
Regular papers consist of the INTRODUCTION, MATERIALS AND METHODS, RESULTS, and DISCUSSION as major headings. The RESULTS and DISCUSSION sections may be merged as RESULTS AND DISCUSSION. The MATERIALS AND METHODS section may be placed after the DISCUSSION section as EXPERIMENTAL. In Notes, no major headings are used in the text; if necessary, EXPERIMENTAL may be used in Notes. The section styles for Reviews are not defined.
 - 4) Acknowledgments: ACKNOWLEDGMENTS may be placed after the text as a major heading, if necessary.
 - 5) References: References should be numbered in the text in superscript as ¹⁾, ²⁾³⁾, or ⁴⁾⁵⁾⁶⁾ and listed in the order of their appearance in the text. Follow the style shown in the examples below. The reference list starts with the major heading REFERENCES. To cite articles that are in press, digital object identifiers (DOIs) should be provided, if available. Citations of unpublished results, papers in preparation, and Web sites should be included in the text in parentheses, but not in the reference list.

〈Examples〉

Citation of journal articles

- 1) H. Chaen: Studies on novel enzymes for synthesis of trehalose from starch. *J. Appl. Glycosci.*, **44**, 77-82 (1997).
- 2) J.D. McCarter and S.G. Withers: 5-Fluoro glycosides: a new class of mechanism-based inhibitors of both α - and β -glucosidases. *J. Am. Chem. Soc.*, **118**, 241-242 (1996).
- 3) A. Kumagai, S. Tada, K. Nozaki, M. Mizuno, T. Kanda, S. Suzuki, K. Kusumoto, T. Sasaki, Y. Kashiwagi, and Y. Amano: Enzymatic production of glucosylxylose using a cellobiose phosphorylase-yeast combined system. *J. Appl. Glycosci.*, in press, DOI: 10.5458/jag.jag. JAG-2010_008.

Citation of book chapters

- 4) A.H. Young: Fractionation of starch. in *Starch: Chemistry and Technology*, R.L. Whistler, J.N. BeMiller, and E.F. Paschall, eds., 2nd Ed., Academic Press, New York, pp. 249-283 (1984).

Citation of book chapters in annually issued books with serial

volume numbers

- 5) K.B. Hicks: High-performance liquid chromatography of carbohydrates. *Adv. Carbohydr. Chem. Biochem.*, **46**, 17–72 (1988).
- 6) M.R.J. Salton: Chemistry and function of amino sugars and derivatives. *Annu. Rev. Biochem.*, **34**, 143–174 (1965).
- 7) L. Lehle and W. Tanner: Synthesis of raffinose-type sugars. *Methods Enzymol.*, **28**, 522–530 (1972).

Abstracts of conferences

- 8) Y.L. Chen and N.A. Morrison: Unique functional properties of microfibrillar cellulose. in *Abstract Book of XIX International Carbohydrate Symposium*, AP 111, San Diego, CA (1998).

Patents

- 9) Nihon Shokuhin Kako Co., Ltd., M. Muramatsu, T. Nakakuki, S. Kainuma, and T. Miwa: Production Method of Branched Fructooligosaccharides, *U.S. Patent* 5,334,516 (1994).

6) Tables: Tables are prepared as text data. They must be numbered with Arabic numerals (e.g., “Table 1”) according to their sequence in the text. Each table must be prepared and submitted on a separate page. Horizontal lines should be used to separate components in rows, but vertical lines should not be used to separate columns. Each table should have a brief and self-explanatory title. Any explanation essential to the understanding of the table (e.g., abbreviations) should be given as a footnote beneath the table.

7) Figures: Figures are prepared as files. The editorial office accepts PPT, PPTX, PDF, TIF, JPG, and EPS files. For other formats, please inquire with the editorial office when submitting the final manuscript. Figures must be numbered with Arabic numerals (e.g., “Fig. 1”) according to their sequence in the text. Each figure should be submitted on a separate page. Figures should be in the desired final size and should match the size of either the column width (80 mm) or the printing area (175 mm). The editorial office may ask authors to revise a figure if its resolution is not sufficiently high for printing.

8) Figure legends: Figure legends containing the title and explanation are prepared as text data on a separate page. One blank line or more should be inserted between the legend of a figure and the one that follows. If the authors wish to have a color figure printed in gray scale, they should make this stipulation here; otherwise, the manuscript will be reviewed “as is,” and the figure will be printed in color at the authors’ expense.

9) Supplemental information: Supplemental information can be added as Supplementary Materials. The supplemental information of an accepted manuscript is generally available to the public through the Internet, at the Journal’s Web site. The existence of supplemental information must be indicated in the text (e.g., “Fig. S1; see J. Appl. Glycosci. Web site”). Movies must be saved in a format that is viewable with free software for Windows and Macintosh. Materials whose copyright belong to a third party are not acceptable as supplemental information.

4. Numbers and formulae: Formulae should be prepared on one line, if possible, (e.g., $v = k_{cat}[E]_0[S]/(K_m + [S])$). If necessary, formulae are numbered as (1) (2) and each number is given at the right end of the same line of each formula. Large numbers should be divided at every third digit, as in “123,456,789.”

5. Descriptions: The SI system should be used for all scientific and laboratory data.

1) Units: length: m, Å; area: m²; volume: L (liter); mass: g, mol; time: year(s), month(s), week(s), day(s), h, min, s; temperature: °C, K; concentration: M (molar = mol/L), %, ppm, ppb; energy: cal, J; gravity: G; force: N, dyn, kgf (= G × N); pressure: Pa,

kgf/cm²; power: W; current: A; electric potential: V; resistance: Ω; viscosity: Pa·s, BU (Brabender unit); radioactivity: Bq, cpm, R; angle: ° (degree), ′ (minute), ″ (second); sedimentation coefficient: S (Svedberg unit = 10¹³ s). Others: I₂ g/100 g (iodine affinity), U (enzyme activity, μmol/min), and mesh (size of particles).

2) Names of compounds: Basically according to IUPAC rules. Abbreviations of natural amino acids, nucleic acids, and co-enzymes that are commonly used may be used without definition. For abbreviations of amino acids, one-letter abbreviations can be used only to show peptide sequence (such as D263). Otherwise, three-letter abbreviations should be used.

3) Names of enzymes: Use trivial or systematic names. If the article is discussing the character of the enzyme, its accepted name and EC number, as recommended by the Nomenclature Committee of the International Union of Biochemistry and Molecular Biology (Enzyme Nomenclature, <http://www.chem.qmul.ac.uk/iubmb/enzyme/>) should be used.

4) Scientific names of living organisms: Use full binominal name at the first appearance (e.g., *Aspergillus niger* and *Manihot esculenta* Crantz). From the second appearance, the name should be abbreviated (e.g., *A. niger* and *M. esculenta*), as long as such abbreviations do not cause confusion.

5) Deposit of data: Before submitting the manuscript, new DNA and peptide sequences must be deposited to certain public databases such as DDBJ; new atomic coordinates must be deposited to certain public databases, such as PDB and CCDC. Accession numbers should be provided in the MATERIALS AND METHODS section.

Notice about photocopying:

The Japanese Society of Applied Glycoscience authorizes Japan Academic Association for Copyright Clearance (JAC) to manage the reproduction rights of copyrighted works in this publication on behalf of our rightsholders. If you wish to copy any of works for commercial purposes, you must obtain prior permission from JAC to use copyrighted content.

Japan Academic Association for Copyright Clearance (JAC)
Nogizaka Bldg. 9-6-41, Akasaka, Minato-ku, Tokyo
107-0052, Japan
Fax: +81-3-3475-5619
Email: info@jaacc.jp

For the use of copied content in the outside of Japan.
Please contact appropriate reproduction rights organisation (RRO) which has a bilateral agreement with JAC for permission to use copyrighted content (Details are here: <https://www.ifrro.org/members/japan-academic-association-copyright-clearance>), if you wish to use content from other areas, contact JAC directly.

For any reprinting, translation or similar act, please contact The Japanese Society of Applied Glycoscience directly.

Published by:

The Japanese Society of Applied Glycoscience
c/o Mainichi Academic Forum Inc.
1-1-1 Hitotsubashi, Chiyoda-ku, Tokyo 100-0003, Japan
URL: http://jsag.jp/index_e.html
E-mail: jsag@mynavi.jp

Typesetter and printer:

Shobi Printing Co., Ltd.
Dai Nippon Printing Co., Ltd.

©The Japanese Society of Applied Glycoscience

Open Access Statement

Journal of Applied Glycoscience (JAG) is loyal to open access for academic work.

All the Regular Papers, Note, and Review published in this journal are free to access immediately from the date of publication. The Japanese Society of Applied Glycoscience do not charge any fees for any reader to download articles and reviews for their own scholarly use.

JAG also operates under the Creative Commons Licence CC-BY-NC. This allows for the reproduction of articles, free of charge, for non-commercial use only and with the appropriate citation information. All authors publishing with JAG accept these as the terms of publication.