

Canadian Journal of Medical Laboratory Science

Guidelines for Authors of Scientific Feature Articles

Introduction

The Canadian Journal of Medical Laboratory Science (CJMLS) is a quarterly publication, with two issues per year dedicated to publishing scientific-based feature articles. These articles are submitted by members of the medical laboratory community and are peer-reviewed before publishing.

This booklet gives both instructions and advice for authors intending to submit original scientific reports to the CJMLS. Essential elements discussed include:

- 1) **Structure:** The conventional format, consisting of Abstract, Introduction, Materials and/or Methods, Results, Discussion, Conclusions, References, is preferred.
- 2) **Conflict of Interest:** Conflict of interest: All actual and potential/perceived conflicts or biases must be clearly acknowledged, as should all funding sources.
- 3) **Copyright** permission must be obtained for the (rare) reproduction of previously published material.
- 4) **Results:** Statistical methods should be appropriately referenced. Discussion in text should not duplicate results presented in Tables. Raw data should be presented as seldom as possible.
- 5) **References:** Use of the “Vancouver style” is mandatory, and several examples for correct presentation are given.

Those who wish to present their scientific work for publication in CJMLS are asked to adhere to the following guidelines, thus minimizing editorial changes and speeding publication.

This journal uses the widely accepted “Uniform requirements for manuscripts submitted to biomedical journals” (known as “the Vancouver style”), developed in 1978 by the International Committee of Medical Journal Editors. The fifth edition of these guidelines was published in 1997 in both English^{1,2} and French^{3,4}. The editors of the participating journals have since then updated them from time to time on their web sites, and one of the most helpful is that of the National Library of Medicine⁵ of the USA.

Range of Material

Normally considered for publication in the CJMLS are:

- Scientific studies, method and/or instrument evaluations relating to medical laboratory science or practice;

- Studies relating to laboratory management or organization;
- Case studies or reports that feature the role of the laboratory in diagnosis and treatment;
- Discussion of new developments in medical laboratory technology, e.g. principles of new methods or instruments, new statistical methods or computer techniques, use of information theory;
- Technical notes or tips detailing variations of methods, useful devices, problems and solutions, or observations on unusual findings;
- Letters to the Editor on matters of scientific or technical interest, or comments on previously published material;

Articles on other aspects of medical laboratory technology (such as education, law, politics, ethics, communication) will normally be considered for publication in the **non-scientific** section of CJMLS, as will Letters to the Editor on other than strictly scientific matters.

Submission of Manuscripts

- Submit a copy of your manuscript in either English or French, as an electronic Microsoft Word file via email to editor@csmls.org.
- Include separate artwork files for every graph or image included in your manuscript. (see file formats accepted).
- Include a covering letter, formally requesting the article be considered for publication, containing any necessary permission that might be required to publish (as in the case where the author is employed by a government agency or in the armed services), and affirming that the material has not been published elsewhere.
- Photos must be submitted in high-resolution (300 dpi or higher) digital form. Both black and white or colour is acceptable.

In the rare case where prior publication has occurred in whole or in part but secondary publication is being sought (e.g. in matters of safety^{1,3}), enclose a copy of the previous paper along with the covering letter and manuscript.

The CSMLS will not release material for reproduction without prior consent of the author(s).

Conflict of Interest

The Scientific and Education Review Committee expects that authors will reveal any potential conflict of interest, whether it be financial, institutional or personal, so that reviewers and readers can assess potential effects. As examples, authors should consider and disclose (1) connections with any private or public company or individual whose product(s) (or those of a competitor) are discussed in the article being submitted, and (2) formal or informal consultancies for which return in kind has been or may be received. Sources of funding, supplies and advice should be specified under Acknowledgements as stated below.

Format of Manuscripts

Typeface: Body Text- Garamond Regular 11pt
 Headlines- Garamond Bold 12 pt

Margins: 3cm (1.2in) each side

Line Spacing: Double spaced

Files: Microsoft Word, including separate native files for all images and charts included (see file formats accepted)

A PDF proof should be submitted for content verification. This will ensure that content is complete and all images are correctly accounted for. This copy will be for initial proofing only. All edits will be done and resubmitted in the digital Word file.

Title page

List the title, author's name and qualifications, city and province on a separate sheet. In the case of multiple authors, identify the one who will check proofs and handle reprint requests. Order of authorship is a joint decision of the authors, and authorship credit must be based on substantial participation^{1,3}. If an author has changed employment since completion of the work, the new workplace should be indicated in a footnote. For publication purposes, please include an alternate short title.

Summary or Abstract

In 200 words or less, summarize the main content on the second page. List a maximum of three key words, used by readers and indexing services to cross-index the paper. Select key words from the reference book "Medical Subject Headings" (MeSH) published annually by Index Medicus⁷ and found in most medical libraries, as well as online in the "MeSH Database" at the U.S. National Library of Medicine's Medline (Entrez-PubMed) web site⁸. The abstract will be translated and published in both English and French. The remainder of the paper will be published in the language in which it was submitted.

Style

Unless the topic does not lend itself to the basic format, use the sequence: Abstract or Summary; Introduction; Methods; Results; Discussion; Conclusions; Acknowledgements; References. Begin each section on a separate page, and indent paragraphs. Use sub-headings to clarify sections in long articles. Make factual clear statements in concise English or French, preferably in the active rather than the passive voice. Define special terms and non-standard abbreviations clearly at their first mention in the text.

Follow the requirements of the Vancouver style for description of methods. For apparatus and kits include the manufacturer's name and city at first mention in the text, and designate registered trademarks with the appropriate symbol ("R" or "TM" in either full-size type or in superscript). In the Results section, statistical treatment of the results should always be included, clearly explained and adequately referenced. On the rare occasions that raw data need to be presented so that outliers can be discussed, tables should include specimen numbers or similar identification. Use terms such as "random", "significant", "normal" and "variance" only within their strict statistical meaning. Data in graphs or tables should not be repeated in the text, except to emphasize important points.

Acknowledgements

Credit any and all assistance from grants and/or commercial sources, in addition to personal thanks and appreciation to individuals who aided the performance and/or reporting of the study.

References

Manuscripts must follow the Vancouver style as detailed below; those that do not will be returned to the author for the necessary changes.

Tables

Tables should be placed within the body of the paper wherever possible. Number consecutively (Arabic numerals, not Roman) according to citation in the text, and title concisely. Place table number, title and caption on top of table. Use footnotes to explain abbreviations and column headings.

File & Image Format requirements:

- **Text and simple tables** should be created and saved in **Microsoft Word or Excel**.
- Digital photos are preferred.
- **Figures, Graphics and images** should be provided in the original file that generated the object and supplied as a separate file in one of the following formats:
- **Adobe Illustrator**- (for vector art) Saved as .ai or .eps. Any text included within the image should be Garamond or Arial. Please note that text will be formatted to meet internal style standards.
- **Adobe Photoshop**- (for bitmap images) Saved as 300dpi, CMYK or Greyscale, .ps, .eps, .tif, .jpg
- **Adobe Acrobat** – Saved as 300dpi, CMYK or Greyscale image, .pdf
- **Figure** number, title and caption should be placed at bottom of figure.

Please Avoid :

- images in RGB colour mode
- scanned images to create a digital file
- using clip-art
- embedding images in files
- using display fonts in your files

Submission of digitized photos is preferred.

The author(s) must obtain written permission to reproduce any table or figure from previously published material, from both the original author and publisher. This written permission must accompany the manuscript.

References

Give references for all scientific papers, books, articles, manufacturer's instructions, etc.

that are cited. Number them consecutively in order of first mention in the text, using Arabic numerals either in full-size type in brackets or in superscript without brackets. Where more than six authors are named, list only the first six and add et al. (the accepted Latin abbreviation for *et al*, “and others”). This phrase may be in upright type or italicized. The issue number is not required for most journals.

Use standard abbreviations for titles of journals, as published annually in the List of Journals Indexed in Index Medicus⁷. (Note that the CJMLS is not included in this List, but with standard abbreviations would appear in references as “Can J Med Lab Sci”). Standard abbreviations for journal titles can also be found online in the “MeSH Database” at the U.S. National Library of Medicine’s Medline web site⁸. Avoid “personal communication” and “unpublished observation” in the text, unless these are already in written form and likely to be published. Check primary references where possible to ensure accuracy and to avoid perpetuating errors that may have been entered in previously published citations.

Examples of how to refer to different types of publications are given below. More examples can be found in References 1 and 3.

- **For journal articles**

Callum JL, Kaplan HS, Merkley LL, Pinkerton PH, Fastman BR, Romans RA, et al. Reporting of near-miss events for transfusion medicine: improving transfusion safety. *Transfusion*. 2001; 41:1204-11.

(Note the required order: Author(s). Title of article. Journal Year; Volume number: page numbers.)

If the original reference is in a language other than English, it should be quoted in the original language; the title may be translated in parentheses if desired.

If a journal starts pagination afresh with each issue, the issue number (in brackets) is essential, and should follow the volume number:

World Health Organization. Cholera, 2001. *Wkly Epidemiol Rec*. 2002; 77(31):257-64.

These practices are acceptable even if continuous pagination is used.

- **For committee or corporate authors**

UK National External Quality Assessment Scheme for Immunochemistry Working Group. National guidelines for analysis of cerebrospinal fluid for bilirubin in suspected subarachnoid hemorrhage. *Ann Clin Biochem*. 2003; 40:481-8.

- **For books and other monographs:**

Personal author(s)

Le, C'T. *Introductory biostatistics*. Hoboken (NJ): Wiley-Interscience; 2003.

(Note the sequence: Author(s). Title of book. Place of publication: Publisher’s name; year of publication).

- **Corporate author**

Institute of Medicine. HIV and the blood supply. An analysis of crisis decision-making. Washington (DC): National Academy Press; 1995.

- **Editor, compiler, chairman as author**

Nichols JH, editor. Point of care testing. New York: Marcel Decker, Inc.; 2003.

- **Chapter in book**

Nachamkin I. Campylobacter and Arcobacter. In: Murray PR, Baron EJ, Jorgensen JH, Pfaller MA, Tenover FC, White O, editors. Manual of clinical microbiology. 8th ed. Vol. 1. Washington (DC): ASM Press; 2003. p. 902-14.

- **Agency publication**

Canadian Institute for Health Information. Health personnel trends in Canada: 1995 to 2004. Rev. July 2006. Ottawa: CIHI; 2006.

- **Journal article in electronic format (paginated)**

Morgan SG, Bassett KL, Wright JM, Evans RG, Barer, ML, Caetano PA et al. "Breakthrough" drugs and growth in expenditure on prescription drugs in Canada. BMJ [serial online]. 2005; 331:815-16. [cited 2 Jun 2006]. Available from: <http://www.bmj.com/cgi/reprint/331/7520/815>

- **Journal article in electronic format (non-paginated)**

Nap RE, Andriessen MP, van der Werf, TS. Pandemic influenza and hospital resources. Emerg Inf Dis [serial online]. 2007 13(11):[8 screens]. [cited 27 Nov 2007]. Available from <http://www.cdc.gov/eid/content/13/11/1714.htm>

- **Monograph in electronic format**

Reeves JRT, Maibach H, Scheinberg RS. CDI, clinical dermatology illustrated: a regional approach [monograph on CD-ROM]. Version 2.0b. San Diego: Continuing Medical Education Association Multimedia Group; 1995.

- **Web Page**

Use references from internet sparingly in the case of impermanent or rapidly changing sites.

American Association for Clinical Chemistry. Lab tests online. [online]. 2007. [cited 27 Nov 2007]. Available from: <http://www.labtestsonline.org/>

Units

Use of Système International (SI) Units is mandatory⁹, with a few exceptions as follow:

- Hydrogen ion concentration and pH: Expression of hydrogen ion concentration in nanomoles per litre (nmol/L) or as pH will both be accepted.
- Partial pressures: Pressures (PCO₂, PO₂) may be stated either in SI units as kilopascals (kPa) or in millimetres of mercury (mm Hg x 0.133 = kPa).

- Enzyme assays:

1. Enzyme units: The CJMLS prefers enzyme activities expressed as the International Unit (micromoles of substrate changed per minute per litre of sample), provided conditions of the assay method are specified in the text or by a suitable reference. The katal (moles of substrate changed per second), similarly method-dependent, has not gained wide usage. Authors will be asked to convert data submitted in katals to International Units.

2. Method-related (classical) units: In enzyme assays where the molecular weight of the substrate is not known (e.g. certain protein assays), use the arbitrary units but include the definition by the method's author.

3. Substrate units: Use moles per litre (mol/L) or standard subunits thereof (mmol/L, nmol/L, etc.) The decimal point may be indicated by a period placed on the line. The use of a comma as the decimal marker, as currently seen in European journals, is not accepted as the comma in North America is still in use to divide large numbers into groups of three.

Abbreviations

Standard abbreviations as listed in the Council of Science Editors (CSE) style manual¹⁰ do not require definition. Use non-standard abbreviations as seldom as possible, and ensure full definition in the text immediately preceding first use of the short form.

Abbreviations of concentrations should not be only partly in abbreviated form; e.g. millimoles per litre is abbreviated mmol/L, not mmoles/L.

Nomenclature

- Enzymes:

The International Union of Biochemistry and Molecular Biology (IUBMB) (formerly the International Union of Biochemistry) provides a document containing recommendations for the proper name and classification number (EC number) of enzymes^{11,12} that should precede the enzyme's trivial name and/or recognized standard abbreviation at first mention in the text or as a footnote. Since 1992, there have been regular updates, the printed version in five Supplements of the European Journal of Biochemistry from 1992 to 1999¹³, and more frequently online at web sites maintained by the International Union of Biochemistry and Molecular Biology (IUBMB), in consultation with the International Union of Pure and Applied Chemistry (IUPAC), for enzyme nomenclature¹⁴, and biochemistry nomenclature¹⁵.

- Chemicals, numbers

Use full names rather than formulae for chemical elements and compounds (e.g. "sodium hydroxide" rather than "NaOH"). Single digit numbers anywhere in a sentence, and any number beginning a sentence should be given in words rather than digits (e.g. "Thirty-one tests were done", not "31 tests were done"). Express wavelengths in nanometres, infra-red radiations by wave-number, and temperatures in degrees Celsius.

- Microbiology nomenclature

Use italics (or underlining) to express the full names of micro-organisms or parasites (e.g. *Escherichia coli*). Use normal type for the genus or common name (e.g. staphylococcus).

- Blood group terminology

Use standard conventions¹⁶. In immunohematological studies, use normal type for phenotypes, and italics (or underlining) for genotypes. Clearly define and reference any scoring system used to report antibody or other titres.

- Hematology nomenclature

Use abbreviations such as ERC and LKS for erythrocytes and leukocytes only in results of cell counts, not in the text. Use SI units consistently for submultiples (hemoglobin g/L, mean corpuscular volume fL, mean corpuscular hemoglobin pg).

- Specialty nomenclature

Many active research areas have special scientific conventions that are evolving rapidly, for example in naming the location of recently discovered gene mutations, cell lines, generic drugs, etc. The CSE style manual¹⁰ cites several specialty publications dealing with the accepted scientific nomenclature, symbols and abbreviations for the respective areas of study.

Reprints

All authors will receive automatically five copies of the issue in which their paper appears. Additional reprints may be ordered in the form of electronic copies from the Canadian Society of Medical Laboratory Science.

Special arrangements for a large number of reprints can be made by consulting the CSMLS office at 1-800-263-8277 or info@csmls.org.

Please contact CSMLS with any questions regarding submission requirements.

Thank you for submitting your work to the Canadian Journal of Medical Laboratory Science.

References

1. International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *Can Med Assoc J*. 1997;156:270-7.
2. International Committee of Medical Journal Editors. Additional statements from the International Committee of Medical Journal Editors. *Can Med Assoc J*. 1997; 156:571-4.
3. Comité international des rédacteurs de revues médicales. Exigences uniformes pour les manuscrits présentés aux revues biomédicales. *Can Med Assoc J*. 1997;156:278-85.
4. Comité international des rédacteurs de revues médicales. Énoncés supplémentaires du Comité international des rédacteurs de revues médicales. *Can Med Assoc J* 1997; 156:575-8.
5. International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals[online]. 2007. [cited 13 Oct 2007]. Available from: http://www.nlm.nih.gov/bsd/uniform_requirements.html.
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8. List of Journals Indexed in Index Medicus. Bethesda (MD): National Library of Medicine; Also available from: National Library of Medicine (Entrez PubMed) [online]. 2007. [cited 17 Sept 2007]. <http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed>
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11. International Union of Biochemistry and Molecular Biology, Nomenclature Committee. Enzyme nomenclature: recommendations 1992. San Diego (CA): Academic Press; 1992.
12. International Union of Biochemistry and Molecular Biology, Nomenclature Committee. Biochemical nomenclature and related documents: a compendium. 2nd ed. London: Portland Press; 1992.
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15. International Union of Biochemistry and Molecular Biology. Recommendations on biochemical & organic nomenclature, symbols & terminology, etc. [online]. 2006. [cited 16 Jul 2007]. Available from: <http://www.chem.qmul.ac.uk/iubmb/>
16. Garraty G, Dzik W, Issitt PD, Lublin DM, Redi ME, Zelinski T. Terminology for blood group antigens and genes - historical origins and guidelines in the new millennium. *Transfusion*. 2000 40(4):477-89.